

JB

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

JB/T 7255-2007

Replacing JB/T 7255-1994

Water ring vacuum pumps and compressors

水环真空泵和水环压缩机

(English Translation)

Issued on: August 28, 2007

Implemented on: February 1, 2008

**Issued by: Ministry of Industry and Information Technology of the
People's Republic of China**

Table of Contents

Contents

Foreword I

1 Scope

2 Normative References

3 Terms and Definitions

4 Types and Basic Parameters

4.1 Types

4.2 Basic parameters

5 Specifications

5.1 Performance

5.2 Driver

5.4 Critical speed

5.5 Balance

5.6 Vibration

5.7 Noise

5.8 Pressure parts

5.9 External force and torque of inlet and outlet

5.10 Inlet and outlet flanges

5.11 Cover plate (or side cover) and distributor for air suction and discharge

5.12 Impeller

5.13 Shaft and shaft sleeve

5.14 Assembly of shaft sleeve

5.15 Bearing

5.16 Shaft seal

5.17 Coupling

5.18 Foundation

5.19 Materials

5.20 Castings quality

6 Test Methods

6.1 Chemical analysis and mechanical property test of materials

6.2 Hydraulic test

6.3 Performance test

6.4 Vibration measurement

6.5 Noise measurement

6.6 Balance test

7 Inspection Rules

7.1 Type inspection

7.2 Delivery inspection

8 Guarantee

9 Marking, Packaging, Transportation and Storage

9.1 Marking

9.2 Packaging and transportation

9.3 Storage

Table 1 Basic Parameters of Single Stage Water Ring Vacuum Pumps

Table 2 Basic Parameters of Two Stage Water Ring Vacuum Pumps

Table 3 Basic Parameters of Single Stage Water Ring Compressors

Table 4 Basic Parameters of Two Stage Water Ring Compressors

1 Scope

This standard specifies types and basic parameters, specifications, test methods, inspection rules, guarantee, marking, packaging, transportation and storage of water ring vacuum pumps and compressors (hereinafter referred to as "pumps").

This standard is applicable to water ring vacuum pumps and compressors for suction or transportation of gas free of solid particles, insoluble in water, of temperature generally from -10°C to 40°C.

Liquid ring pumps use non-aqueous liquid as working solution may made reference to this standard.

2 Normative References

The following normative documents contain provisions which, through reference in this text, constitute provisions of this standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies.

GB/T 1348 Spheroidal Graphite Iron Castings

GB/T 2100 Corrosion-resistant Steel Castings for General Applications (GB/T 2100-2002, eqv ISO 11972:1998)

GB/T 4662 Rolling Bearings - Static Load Ratings (GB/T 4662-2003, ISO 76:1987; ISO 76:1987/AMD.1:1999, IDT)

GB/T 4879 Rustproof Packaging

GB/T 6391 Rolling Bearings - Dynamic Load Ratings and Rating Life (GB/T 6391-2003, ISO 281:1990; ISO 281:1990/AMD.1:2000; ISO 281:1990/AMD.2:2000, IDT)

GB/T 9239.1-2006 Mechanical Vibration - Balance Quality Requirements for Rotors in a Constant (Rigid) State - Part 1: Specification and Verification of Balance Tolerances (ISO 1940-1:2003, IDT)

GB/T 9439 Grey Iron Castings

GB/T 11352 Carbon Steel Castings for General Engineering Purposes (GB/T 11352-1989, neq ISO 3755:1991)

GB/T 13306 Plates

GB/T 13384 General Specifications for Packing of Mechanical and Electrical Product

GB/T 13929 Methods of Testing for Water-ring Vacuum Pumps and Compressors

JB/T 4127.1 Specification for Mechanical Seals

JB/T 4127.3 Technical Requirement on Product Reception of Mechanical Seal

JB/T 4297 Painting Specification for Pumps

JB/T 8097 Methods of Measuring and Evaluating Vibration of Pumps

JB/T 8098 Methods of Measuring and Evaluating Noise of Pumps

3 Terms and Definitions

For the purposes of this document, the following terms and definitions apply.

3.1 suction capacity

Suction capacity of water ring vacuum pump refers to the gas volume, in m³/min, get through the pump inlet within unit time, at specified degree of vacuum of the inlet and outlet atmospheric pressure of 1013.25 hPa