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

GB/T 21387-2025

Replacing GB/T 21387-2008

Axial flow check valves for water supply systems

供水系统用轴流式止回阀

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1 Scope

GB/T 21387-2025 is the Chinese national standard covering the axial flow non-return valve - the spring-loaded disc that closes before the flow reverses, which is what prevents the water hammer a swing check valve causes when a pump trips, with its pressure loss, its sealing and its endurance. Issued on 31 October 2025, it has been in force since 1 May 2026, replacing GB/T 21387-2008.

This document specifies the general requirements, technical requirements, test methods, inspection rules, marking, and packaging of axial flow check valves used in water supply systems. Loading, transporting and storing. This document applies to supplies with nominal sizes of DN50~DN2200 and nominal pressures of PN6~PN100, for media with temperatures not exceeding 65°C. Axial flow check valves are used in water systems.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 1220 Stainless Steel Bars

GB/T 1732 Test method for impact resistance of paint film

GB/T 2100 General purpose corrosion-resistant steel castings

GB/T 5210 Paints and varnishes - Pull-off adhesion test

GB/T 6739 Paints and varnishes - Determination of film hardness using the pencil method

GB/T 8923.1-2011 Visual assessment of surface cleanliness of steel surfaces before coating - Part

1.Uncoated steel surfaces Rust level and treatment level of steel surface and steel surface after complete removal of original coating.

GB/T 9124.1 Steel pipe flanges - Part 1: PN series

GB/T 9124.2 Steel pipe flanges - Part

3 Inspection Items (9)

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document replaces GB/T 21387-2008 "Axial Flow Check Valves". Compared with GB/T 21387-2008, the only changes are structural adjustments and editing. Aside from the sexual alterations, the main technical changes are as follows:

- a) The scope of application has been changed (see Chapter 1, Chapter 1 of the.2008 edition);
- b) The term "axial flow check valve" and its definition (see Chapter 3 of the.2008 edition) have been deleted, and the term "maximum water hammer pressure rise" has been added. "Value", "Quick Closing Time", "Minimum Fully Opening Velocity", and "Minimum Opening Pressure" and their definitions (see Chapter 3);
- c) A model designation system has been added (see 4.2);
- d) The structural length has been changed (see Table 1,.2008 edition);
- e) A minimum wall thickness requirement has been added (see 5.3.4);
- f) Added requirements for "opening and closing components" (see 5.4);
- g) The "Materials" requirements have been changed (see 5.6, Chapter 6 of the.2008 edition);
- h) The "Sealing Performance" requirement has been changed (see 5.8, 5.11 in the.2008 edition);
- i) The "minimum opening pressure" requirement has been changed (see 5.9, 5.4 in the.2008 version);
- j) The requirement for "flow resistance coefficient" has been changed (see 5.10,

4 Figure

4. Schematic diagram of the minimum opening pressure test system. Figure A.1 Schematic diagram of the maximum water hammer pressure rise test system

11 Figure A.2 Schematic diagram of typical water hammer wave curve during pump shut-off process of axial flow check valve

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