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

GB/T 21385-2025

Replacing GB/T 21385-2008

Metal-seated ball valves

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Foreword

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 21385-2008 "Metal-Sealed Ball Valves". Compared with GB/T 21385-2008, the only changes are structural adjustments and editing. Aside from the gender changes, the main technical changes are as follows:

a) The scope of application has been changed and weight requirements have been added (see Chapter 1, Chapter 1 of the.2008 edition);

b) The terms and definitions for "one-way seal" and "two-way seal" have been removed (see

3.3 in the.2008 edition);

c) A typical structural diagram of a high-temperature fixed ball valve has been added (see Figure 3);

d) The requirements for pressure-temperature ratings have been changed (see 5.1,.2008 edition of 5.1);

e) Increased strength requirements for shell connections (see 5.6.1);

f) The requirement for gaskets between housing connections has been removed (see 5.6.3 in the.2008 edition);

g) Increased requirements for valve seat sealing pairs (see 5.7);

h) The connection requirements for the packing gland have been changed (see 5.9,

5.8 in the 2008 edition);

i) Anti-static requirements have been added (see 5.13);

1 Scope

GB/T 21385-2025 is the Chinese national standard covering the ball valve that seals metal on metal instead of on a soft seat - the coating and lapping of ball and seat, the higher torque that follows, the allowable leakage rate, and the service in hot, abrasive or particle-laden flow where a soft seat would not survive. Issued on 31 October 2025, it has been in force since 1 May 2026, replacing GB/T 21385-2008.

This document specifies the structural types, technical requirements, materials, test methods, inspection rules, markings and nameplates, and anti-corrosion features of metal-sealed ball valves. Protection, packaging, storage and transportation. This document applies to nominal sizes DN15~DN800 and nominal pressures PN16~PN400, and nominal sizes NPS~NPS32 and... Nominal pressure Class 150~Class 2500, applicable temperature -29°C~550°C, applicable media include gas, liquid, gas-solid, gas-liquid, and solid-liquid mixtures. Design, production and inspection of flanged, welded or threaded metal-sealed ball valves for gas-solid-liquid multiphase flow.

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

70.1 Socket head cap screws

GB/T 196 Basic Dimensions of Ordinary Threads

GB/T 197 Tolerances for Standard Threads

GB/T 228.1 Metallic materials - Tensile testing - Part