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**NATIONAL STANDARD OF THE
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GB/T 12244-2025

Replacing GB/T 12244-2006

Pressure reducing valves - General requirements

减压阀 一般要求

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Foreword

This document was drafted in accordance with the provisions of GB/T 1.1-2020 "Directives for standardization - Part

1.Rules for the structure and drafting of standardizing documents". This document replaces GB/T 12244-2006 "General requirements for pressure reducing valves". Compared with GB/T 12244-2006, in addition to structural adjustments and editorial modifications, the main technical changes are as follows:

- a) MODIFY the scope of application for pressure reducing valves (see Clause 1 of this document; Clause 1 of the 2006 edition);
- b) DELETE the term "direct-acting reducing valve" and its definition, and ADD the term "pressure raise value from dynamic to static after valve" and its definition (see Clause 3 of this document; Clause 3 of the 2006 edition);

- c) DELETE the ordering requirements (see Clause 4 of the 2006 edition);
- d) ADD the requirements for the pressure-temperature ratings of cast copper pressure reducing valves (see 4.1 of this document);
- e) ADD the requirements for the material of copper valves (see 4.2 of this document);
- f) ADD the requirements for flange connection dimensions and sealing face shape and dimensions of copper valves (see 4.3.8 of this document);
- g) ADD the requirements for shell wall thickness (see 4.3.9 of this document);
- h) ADD the requirements for non-destructive testing (see

1 Scope

GB/T 12244-2025 is the Chinese national standard on pressure reducing valves - general requirements, in the field of fluid systems and general-purpose components. 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 5 October 2025 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 May 2026. Classification: ICS 23.060.99, CCS J16. 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.

This document specifies the technical requirements, test methods, inspection rules, marking, packaging, and storage and transportation of pressure reducing valves. This document applies to pressure reducing valves with nominal dimensions of DN15 ~ DN1200 and nominal pressures of PN6 ~ PN160, used in pipelines for media such as gas, steam, or water.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 1047 Pipework components - Definition and selection of nominal size

GB/T 1048 Pipework components - Definition and selection of nominal pressure

GB/T 1176 Casting copper and copper alloys

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

GB/T 12220 Industrial valves - Marking

GB/T 12224 General requirements for industrial steel valves

GB/T 12225 General purpose industrial valves - Specification of copper alloy castings

GB/T 12226 General purpose industrial valves - Technical specification for gray iron castings

GB/T 12227 General purpose industrial valves - Technical specification for ductile iron castings

GB/T 12228 General purpose industrial valves - Technical specification for carbon steel forgings

GB/T 12229 General purpose Industrial valves - Technical specification for carbon steel castings

GB/T 12230 General purpose industrial valves - Specification of stainless steel castings

GB/T 12245 Methods of performance test for pressure reducing valves

3 Terms and definitions

For the purpose of this document, the terms and definitions defined in GB/T 21465 and the following apply.

3.1 pressure-reducing valve A valve that reduces the upstream pressure to a desired downstream pressure through throttling of the valve disc, and maintains a substantially constant downstream pressure using the energy of the medium itself despite changes in upstream pressure and flow rate.

3.2 upstream pressure Pressure of the medium at the valve inlet.

3.3 downstream pressure Pressure of the medium at the valve outlet.

3.4 maximum upstream working pressure Under actual operating conditions, the upper limit of the actual upstream pressure required to maintain a given downstream pressure.

3.5 maximum flow rate Provided the pressure reducing valve has its inlet at the maximum upstream working pressure, and under a given downstream pressure, the upper limit of the flow rate that can be achieved when its deviation is within the specified range.

3.6 pressure raise value from dynamic to static after valve Provided the upstream pressure of a pressure reducing valve is stable, the increase in downstream pressure before and after the valve closes when it transitions from dynamic state to a static state after valve.

3.7 pressure characteristics When the downstream flow rate is constant and the upstream pressure changes, the functional relationship between downstream pressure and upstream pressure.

3.8 flow characteristics Under steady flow conditions, when the upstream pressure is constant, the functional relationship between downstream pressure and flow rate.

4 Technical requirements

4.1 Pressure-temperature ratings The pressure-temperature ratings of steel pressure reducing valve body material shall comply with the provisions of GB/T 12224; the pressure-temperature ratings of iron pressure reducing valve body material shall comply with the provisions of GB/T 17241.1; the pressure-temperature ratings of cast copper pressure reducing valve body material shall comply with the provisions of GB/T 15530.8.

4.2 Materials The materials for carbon steel forgings, carbon steel castings, and stainless steel castings of pressure reducing valves shall comply with the provisions of GB/T 12228, GB/T 12229, and GB/T 12230; the gray iron material for pressure reducing valves shall comply with the provisions of GB/T 12226; the ductile iron material for pressure reducing valves shall comply with the provisions of GB/T 12227; the copper and copper alloy material for pressure reducing valves shall comply with the provisions of GB/T 1176, GB/T 13819, and GB/T 12225.

4.3 General requirements

4.3.1 The model designation method for pressure reducing valves shall comply with the provisions of GB/T 32808.

4.3.2 The nominal dimensions shall comply with the provisions of GB/T 1047.

4.3.3 The nominal pressure shall comply with the provisions of GB/T 1048.

4.3.4 The face-to-face dimensions of the flange connection shall comply with the provisions of JB/T 2205.

4.3.5 The nominal pressure and nominal dimensions of the flanges connecting the inlet and outlet ends of the valve body shall be consistent, unless otherwise specified in the purchase contract.

4.3.6 The flange connection dimensions and the sealing face shape and dimensions of steel pressure reducing valves shall comply with the provisions of GB/T 9124.1.

4.3.7 The flange connection dimensions and the sealing face shape and dimensions of iron