

ICS 13.220.20

CCS C84



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

GB 8181-2025

Fire nozzles

消防水枪

Issued on: August 1, 2025

Implemented on: August 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. This document replaces GB 8181-2005 "Fire-fighting Nozzles". Compared with GB 8181-2005, except for structural adjustments and editorial changes, the main changes are The technical changes are as follows:

- Changed the terms and definitions (see Chapter 3, Chapter 3 of the.2005 edition);
- Changed the classification of low-pressure DC spray guns with adjustable spray angle

(see 4.1.3,

4.1.3 of the.2005 edition);

--- Changed the basic parameter requirements for fire hoses (see 5.1,

5.1 of the.2005 edition);

--- Changed the operating torque requirements and test methods (see 5.3.7, 6.3.7, 5.3.6, 6.2 of the.2005 edition);

--- Added quality requirements and test methods for DC spray guns (see 5.4, 6.4);

--- Added reciprocating operation requirements and test methods (see 5.5, 6.5);

--- Changed the drop resistance requirements and test methods (see 5.13, 6.13, 5.11, 6.8 of the.2005 edition);

--- Added hot air aging resistance performance requirements and test methods (see 5.15, 6.15);

1 Scope

GB 8181-2025 is the Chinese mandatory standard for fire nozzles, the branch pipes carried on every appliance and installed in every hose reel and landing valve cabinet in the country. A nozzle is a simple object with an unforgiving specification: it must deliver a stated flow at a stated pressure with a stated reach, it must change between jet and spray under one hand while the firefighter holds the reaction force, and it must survive being dropped, dragged and frozen. The standard sets the classification and model designation, then the performance requirements: the basic parameters of nominal pressure, flow and reach, the jet and spray patterns and the transition between them, the reaction force, the operating torque, the water tightness and hydrostatic strength, the corrosion and impact resistance, the low temperature behaviour, and the requirements on the coupling and on the materials. It then gives the test methods, the inspection rules and the marking, packaging, transport and storage. It is a GB standard without the recommended suffix: compliance is mandatory in China. It takes effect on 1 August 2026.

This document defines the terms and definitions of fire hoses, specifies the classification and model, performance requirements, inspection rules and markings, and instruction manuals. and packaging requirements, and describes the test methods. This document applies to the design, manufacture and maintenance of fire hoses with a working pressure of 0.20MPa~4.0MPa and a flow rate of no more than 16L/s. acceptance. This document does not apply to pulse air pressure spray guns.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 197 General thread tolerances

GB/T 1173 Cast aluminum alloys

GB/T 1176 Cast copper and copper alloys

GB/T 3452.1-2005 O-rings for hydraulic and pneumatic applications - Part

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Fire hose fire nozzle A jet hose gun that uses water as the fire extinguishing medium and is carried and operated by one or more persons.

Note. Water guns, hereinafter referred to as water guns, usually consist of an interface, a gun body, a switch and a nozzle or a device that can form different forms of jets.

3.2 solid stream Water jet with a substantial core section.

3.3 spray stream The average particle size of the water droplets is not greater than 1 mm, the jet edge angle is greater than 0°, and the water jet does not have a substantial core section.