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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 5135.18-2026

Replacing GB/T 5135.18-2010

Automatic sprinkler systems - Part 18: Pipe supports and hangers for fire protection systems

自动喷水灭火系统 第18部分：消防管道支吊架

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1 Scope

GB/T 5135.18-2026 is the Chinese national standard covering the hangers that hold a sprinkler main up - the load they must take including the surge when the system operates, the seismic bracing, the materials and the fixings into the structure. It replaces GB/T 5135.18-2010 and takes effect on 1 April 2027. It was issued on 31 March 2026 and takes

effect on 1 April 2027, replacing GB/T 5135.18-2010. The document is under the responsibility of the National Fire and Rescue Administration. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document defines the terminology for fire pipe supports and hangers (hereinafter referred to as "supports") in automatic sprinkler systems and specifies the classification of supports and hangers. The document describes the class, model designation, requirements, inspection rules, markings, instructions for use, and packaging, transportation, and storage requirements, along with the corresponding test methods. This document applies to the design, manufacture, and inspection of fire pipe supports and hangers in automatic sprinkler systems; it also applies to water supply pipe supports in other systems. The hanger can also be used in accordance with this document.

4 Classification

4.1 According to the load-bearing method of the supports and hangers on the fire protection pipes, they are divided into.

a) Supported fire-fighting pipe hangers (referred to as pipe supports), denoted by the symbol Z;

b) Suspended fire-fighting pipe supports (referred to as pipe hangers), denoted by the symbol D.

4.2 According to the structural composition, they are divided into.

a) Standard fire protection pipe supports and hangers (symbols omitted);

b) Seismic-resistant fire-fighting pipe supports, denoted by the symbol S.

5.Model Numbering The model designation rules consist of the fire pipe support and hanger code, the applicable maximum pipe outer diameter, the classification code, and the company-defined product characteristic code. The composition and compilation method are as follows:

6.1 Appearance and Markings

6.1.1 Appearance Supports and hangers should be clearly marked, and the surfaces of all components should be smooth and free from processing defects, dents, and scratches. Coatings or platings should be uniform in color and free from peeling. Defects such as drops, bubbles, and scratches.

6.1.2 Marking The markings on the supports and hangers should be clear and not easily detached, and the content of the markings should comply with the provisions of 9.1.

6.2 Specifications The maximum applicable outer diameter of fire-fighting pipes for the pipe supports corresponds to nominal pipe diameters of 20mm, 25mm, 32mm, and 40mm. 50mm, 65mm, 80mm, 90mm, 100mm, 125mm, 150mm,.200mm, 250mm, 300mm.

6.3 Materials

6.3.1 The bolts and nuts used for supports and hangers shall comply with the provisions of GB/T 3098.

6.3.2 The anchor bolts used for supports and hangers shall comply with the provisions of JG/T 160.

6.3.3 The main load-bearing components of seismic bracing shall comply with the provisions of GB/T 6728, GB/T 3091 and GB/T 9944.

6.3.4 The coatings or platings on the surface of the components shall comply with the following requirements.

a) The thickness of the zinc plating layer on the outer surface should not be less than 12.7 μm, and the thickness of the zinc plating layer on the inner surface should not be less than 7.6 μm;

b) When hot-dip galvanizing is used, the thickness of the galvanized layer should not be less than 55 μm;

c) When using zinc-chromium coating, the coating thickness should not be less than 8.6 μm;

d) When epoxy spraying is used, the coating thickness should not be less than 70 μm.

6.4 Building connection components

6.4.1 Dimensional tolerances shall conform to the "medium m" specification in GB/T 1804-2000.

6.4.2 Conduct the test according to the test method specified in 7.3, and test the pipes corresponding to the maximum nominal pipe diameter to which the supports and hangers are applicable as specified in Table 1. Under the test load for 1 minute, the building connection components should show no obvious deformation, breakage, or other damage, and the connection to the building structure should be secure, without loosening or slippage. Desquamation and other phenomena.

6.4.3 When using sheet metal as a building connection component in seismic-resistant supports and hangers, the sheet metal thickness should not be less than 5mm.

6.5.1 Screw

6.5.1.1 When the support and hanger uses screws as the main load-bearing components,

the screw dimensions shall conform to the provisions of Table 1.

6.5.1.2 The screw shall be tested according to the test method specified in 7.3, and the maximum nominal pipe diameter to which the supports and hangers are applicable shall be specified in Table 1. The test load should be maintained for 1 minute, and there should be no breakage or obvious deformation or other damage.

6.5.2 Flat steel

6.5.2.1 Dimensional tolerances shall conform to the "medium m" specification in GB/T 1804-2000.

6.5.2.2 The thickness of the flat steel should not be less than 3mm.

6.5.2.3 When the thickness of the flat steel is less than

4.8 mm, the test shall be conducted according to the test method specified in 7.3, and the supports and hangers specified in Table 1 shall be applicable. The test load should be

1.5 times the maximum nominal diameter of the pipe, and held for 1 minute. There should be no breakage or obvious deformation or other damage.

6.5.2.4 When the thickness of the flat steel is not less than

4.8 mm, the test shall be conducted according to the test method specified in 7.3.The supports and hangers specified in Table 1 are suitable. The pipe should be held under the test load corresponding to the maximum nominal diameter of the pipe for 1 minute, and there should be no breakage or obvious deformation or other damage.

6.5.3 Channel steel, steel pipes, and steel cables

6.5.3.1 The dimensional tolerances of channel steel and the length tolerances of steel pipes shall conform to the "medium m" specification in GB/T 1804-2000, and the outer diameter of the steel pipes... The permissible deviations of the wall thickness shall comply with the provisions of GB/T 3091, and the nominal diameter and permissible deviations of the steel cable shall comply with the provisions of GB/T 9944.

6.5.3.2 When channel steel or steel pipe is used as the main load-bearing component in seismic-resistant supports and hangers, the material thickness shall not be less than 2mm.

6.5.3.3 Conduct the test according to the test method specified in 7.3, and the maximum nominal pipe diameter to which the supports and hangers are applicable as specified in Table 1. The test load should be maintained for 1 minute, and there should be no breakage or obvious deformation or other damage.

6.5.4 Connector The test shall be conducted according to the test method specified in 7.3, and the test shall be conducted for the maximum nominal pipe diameter to which the supports and hangers specified in Table 1 are applicable. The load should be maintained for