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

GB 25974.1-2026

Replacing GB 25974.1-2010

**Powered support for coal mine - Part 1: General technical
specification**

煤矿用液压支架 第1部分：通用技术条件

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Table of Contents

1	Scope
4	Requirements
4.1	General Requirements
4.1.1	Pedestrian walkway
4.1.2	Dust suppression and leak prevention device
4.1.3	Protection of Hydraulic Components
4.1.9	Structural Dimensions
4.2	Appearance Quality
4.4	Sealing performance
4.5	Support performance
4.6	Adaptability
4.8	Structural Strength
4.8.2	Strength of non-main structural components
4.10	Hydraulic Components
4.11	Materials
4.11.1	Steel
5	Test Methods
5.1	Test Conditions
5.1.1	Test Requirements
5.1.2	Test Apparatus and Conditions
5.5	Sealing performance
5.6	Support performance
5.7	Adaptability

1 Scope

GB 25974.1-2026 is the Chinese national standard on powered support for coal mine - part 1: general technical specification, in the field of mining and minerals. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 27 February 2026 by the State Administration for Market Regulation; Standardization Administration of China, and takes effect on 1 March 2027. Classification: ICS 73.100, CCS D97. 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 defines the terminology for hydraulic supports used in coal mines, specifies their requirements, marking, packaging, transportation, storage, use, and maintenance, and establishes inspection procedures. The test rules describe the corresponding test methods. This document applies to the research, design, production, and testing of hydraulic supports for coal mines (hereinafter referred to as supports).

4.1.1 Pedestrian walkway

4.1.1.1 The width of the pedestrian walkway within the basic support structure shall not be less than 0.6m and the height shall not be less than 0.4m.

4.1.1.2 When in use, the bracket should not have any protruding parts that would obstruct walking within pedestrian range.

4.1.1.3 Anti-slip measures that comply with coal mine safety regulations should be taken for the surfaces to be stepped on.

4.1.1.4 When working in inclined coal seams, there should be devices that comply with coal mine safety regulations to ensure pedestrian safety.

4.1.2 Dust suppression and leak prevention device

4.1.2.1 The basic support structure should be equipped with a dust suppression device.

4.1.2.2 The structure of the support should provide safe protection for pedestrian passages and prevent gangue from entering the working face space from the roof and goaf.

4.1.3 Protection of Hydraulic Components

4.1.3.1 When the support is working as specified, its structural components shall not cause damage to the hydraulic components on the support.

4.1.3.2 Protective devices should be provided at the connection points of the main inlet and outlet pipelines of the support to prevent the pipeline joints and accessories such as U-pins from falling off.

4.1.4 Anti-scraping device When the mining height is greater than or equal to 3m, the basic support should be equipped with side guard plates. The length of the side guard plates should be determined based on the coal seam conditions and equipment requirements of the working face. Once the supporting conditions are determined, the side guard plate must be locked when it is in operation and when it is retracted, and the side guard jack should be equipped with a safety valve.

4.1.5 Anti-tipping and anti-slip When the working face inclination angle is greater than 15° , the hydraulic support should take measures to prevent tipping and slipping; when the inclination angle is greater than 25° , measures should be taken to prevent coal (gangue) from escaping and being scraped. Measures to prevent injuries caused by plate conveyors.

4.1.6 Lifting Point The entire support frame and its main components should be equipped with lifting points, and the structure of these lifting points should be able to withstand a static load of four times the lifting weight; the lifting points should have permanent supports. (For example, by welding) Clearly mark the lifting weight at the lifting points of the entire frame.

4.1.7 Advanced protection devices When the support frame is used in a mining face with a height greater than 3m or a broken roof, protective devices such as telescopic beams or side guards should be installed.

4.1.8 Assembly performance Similar components of the bracket should be interchangeable and should not be assembled by selection.

4.1.9 Structural Dimensions

4.1.9.1 The height deviation between the minimum and maximum height of the bracket is $\pm 50\text{mm}$.

4.1.9.2 The width deviation between the minimum and maximum width of the bracket is $\pm 20\text{mm}$.

4.1.10 Pressure Display A device that can display the pressure in the piston chamber of the column should be installed on the bracket.

4.1.11 Hazard Assessment A hazard assessment should be conducted on the support structure, and measures should be taken to eliminate or reduce various potential hazards. The support structure is prone to [problems/risks] during operation, installation, and maintenance. See Appendix A for details of the hazards and dangerous situations that may occur.

4.2 Appearance Quality

4.2.1 The outer surface of the bracket shall be painted, and the paint layer shall be uniform and free from defects such as missed coating, blistering, peeling, and cracks.

4.2.2 Exposed welds shall comply with the provisions of MT/T 1273-2025.

4.2.3 The appearance of castings shall conform to the requirements of GB/T 11352.

4.2.4 The appearance of forgings shall conform to the requirements of GB/T 12361.

4.2.5 Exposed coatings shall comply with the provisions of GB/T 25974.2-2010.

4.3 Operational Performance The movement of each component of the support should be accurate, flexible, and free from jamming or interference. Each component should be undamaged when it reaches its limit.

4.4 Sealing performance

4.4.1 When the piston chamber of the column and front beam jack is at 90% of the rated working pressure, the pressure should not drop within a specified time.

4.4.2 The column should have good sealing performance. After the piston extends outward, its extension stroke should remain stable under specified conditions, and the retraction amount should not exceed [a certain limit]. Exceeding 2mm (ignoring the effect of temperature).

4.4.3 The front beam jack should have good sealing performance. After the piston rod extends, its extension stroke should remain stable under specified conditions, and the retraction... The amount should not exceed 2mm (not considering the effect of temperature).

4.4.4 Under the rated fluid supply pressure, and in accordance with the specified operation of the support, no external leakage should occur in any hydraulic component.

4.5 Support performance

4.5.1 Under rated liquid supply pressure, the initial support force of the support should not be less than 95% of the rated initial support force at its test height, or the piston chamber pressure of the column. The force should be no less than 95% of the rated hydraulic pressure.

4.5.2 When the support reaches its rated working resistance, the pressure in the piston chamber of the column should not exceed 110% of the rated opening pressure of the column safety valve. Less than 90% of the rated opening pressure.

4.5.3 The opening pressure of the safety valve in the working chamber of the front beam jack and the balance jack should not exceed 110% of its rated working pressure, and the safety valve should be closed. The closing pressure should not be less than 90% of the rated working pressure.

4.6 Adaptability

4.6.1 When the moving mechanism is in the retracted position, the amount by which the connecting hole between the connector and the matching conveyor is raised, for thin coal seam supports or those equipped with a bottom lifting mechanism. The support bracket for the seat device should be no less than 100mm, and other brackets should be no less than 200mm; the drop of the connecting hole should not be less than for all types of brackets. 60mm.