

ICS 13.340.99
CCS C73



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

GB 24542-2023

Replacing GB 24542-2009

**Fall protection - Guided type fall arrester including a rigid
anchor line**

坠落防护 带刚性导轨的自锁器

Issued on: December 28, 2023

Implemented on: January 1, 2025

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

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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 24542-2009 "Self-locking device for fall protection with rigid guide rails": Compared with GB 24542-2009, except for the structure In addition to adjustments and editorial changes, the main technical changes are as follows:

- a) Changed the scope (see Chapter 1, Chapter 1 of the:2009 edition);
- b) Changed the definitions of self-locking device, rigid guide rail, steering gear and fall distance (see 3:1, 3:2, 3:4, 3:13, 3:2, 3:1,:2009 version) 3:3, 3:11);
- c) The terms and definitions of safety rope, buffer, connecting rope, opening point, opening device and sliding distance are deleted (see the:2009 version of 3:4, 3:5, 3:7, 3:8, 3:9, 3:10);
- d) Added self-locking device with rigid guide rail, buffer device, type A blocking device, type B blocking device, maximum rated load, minimum rated load Terms and definitions of fixed load, bracket and locking distance (see 3:3, 3:5, 3:7, 3:8, 3:9, 3:10, 3:11, 3:12);
- e) Change "General Provisions" and "General Requirements" to "Design and Structure" (see 4:1, 4:1 and 4:2 of the:2009 version);
- f) Increased assembly performance (see 4:2);
- g) Increased overall static performance (see 4:3:1);
- h) Increased the static performance of the buffer device (see 4:3:2);
- i) Increased the static performance of the blocking device (see 4:3:3);
- j) Deleted the static load performance of guide rails (see 4:5 of the:2009 edition);

k) Change "overall dynamic load performance" to "dynamic performance" (see 4:4, 4:4 of the:2009 version);

l) Increased working condition performance (see 4:5);

m) Changed the technical requirements for "locking performance under special circumstances" (see 4:8, 4:8 in the:2009 version);

1 Scope

GB 24542-2023 is the Chinese national standard on fall protection - guided type fall arrester including a rigid anchor line, in the field of environment and health protection, safety. 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 28 December 2023 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 January 2025. Classification: ICS 13.340.99, CCS C73. 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, permanent marking and information provided by the manufacturer of self-locking devices with rigid guide rails: Test methods and inspection rules for self-locking devices: This document applies to self-locking devices with rigid guide rails installed within an angle of 15° from the vertical:

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, the dated quotations For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document:

GB 6095 Fall protection safety belt

GB/T 10125 Artificial atmosphere corrosion test salt spray test

GB/T 23469 Fall protection connector

GB 38454 Fall protection horizontal lifeline device

3 Terms and definitions

The following terms and definitions apply to this document: 3:

1 It is attached to the guide rail and can slide along the guide rail as the user moves, triggering a braking effect when falling: 3:2 rigid guide rail rigid anchor line Use metal brackets and other devices to be fixed on ladders or other structures at certain intervals, and are rigid components used for attaching and sliding self-locking devices:

Note: The self-locking device slides on the rigid guide rail and can be locked on the rigid guide rail in the event of a fall: 3:

3 The component consisting of self-locking device (3:1) and rigid guide rail (3:2) is part of the fall protection system:

Note: The self-locking device and rigid guide rail are tested, confirmed and used as a whole: See Appendix A for the installation and composition diagram: 3:4 deflector deflector A component connected to the rigid guide rail (3:2) that can change the movement direction of the self-locking device (3:1): 3:

5 Part of the self-locking device (3:1) with rigid guide rail (3:2) that absorbs impact energy: 3:6 connector connecting element A component with a normally closed valve that connects and separates the various components of the falling system: