



ANSI Standards for Self-Retracting Devices

Z359.14-2021 SRD Types & Classes Update



WE KNOW WHAT'S AT STAKE.

ANSI Standards Body & Development Process

ANSI/ASSP Z359 standards are developed through a consensus process involving a representative group of users, manufacturers—including MSA—and other stakeholders. The actual Z359 family of standards were created by the American Society of Safety Professionals (ASSP) as secretariat under criteria provided by ANSI. The adoption of ANSI standards by employers, while best practice, is completely voluntary.

Originally published in 2012 and updated in 2014, ANSI Z359.14 defined both types and classes of Self Retracting Devices (SRD). The latest edition of Z359.14, published in July 2021, included several changes. Several of these key changes are outlined below.

Why Were These Updates Put Into Effect?

The foreword of ANSI Z359.14-2021 explains the rationale for the recent updates: *“Since the publication of ANSI Z359.14-2012, personal self-retracting devices have proliferated considerably, as have SRL-LEs. Additionally, these two classifications have merged and personal SRL-LEs have become a very highly influential component of commonly utilized personal fall arrest systems. As a result, it has become clear that a more focused set of requirements have become necessary to ensure higher factors of safety are achieved in this highly influential class of product.*

“These products and the practice of foot-level tie-off is controversial due to the increased risk of injury to the users of such equipment as a result of likely contact with the structure or structural edge as well as the considerable increase in fall clearance required.”

“In an effort to focus users of these devices on the most effective practices relative to fall arrest, the ANSI Z359.14 committee has redefined the types and classes and has established more stringent requirements for all self-retracting devices with the objective of increasing overall factors of safety.”

What Has Changed?

Here are a few of the key changes you may notice when it comes to Self-Retracting Devices:

TYPES

SRD “Types” are simply a way of helping the manufacturer determine what type of tests they should perform based on the SRD design. Previously, types of SRDs included SRL, SRL-R, and SRL-LE. The 2021 updates have added a new type of SRD and removed another from this previous list.

ADDED



Type SRL-P

A device compact enough and approved by the manufacturer to be worn on a full-body harness.

REMOVED



Type SRL-LE

Now a type SRL—defining Leading Edge is covered in the following section about the new classes of SRDs



CLASSES

Previously, classes of SRDs were separated as Class A and Class B. Class A and Class B were designations for overhead anchored SRDs (*not leading edge*) and were most commonly used to help describe the deceleration distances and forces associated with the ANSI drop tests.

In the 2021 revision to Z359.14, Classes are now used to describe products for overhead only products (*Class 1*) and leading edge rated products (*Class 2*). These classes ultimately explain how much free fall the unit can handle and if it has been tested for a fall event over an edge.

NEW

Classes are separated as Class 1 and Class 2.

Class 1

Overhead tie-off only.

Class 2

Overhead or foot-level tie-off with freefall of no more than 6 ft. (1.8 m) over an edge.

REMOVED

Classes A & B

Classes A and B have been removed.

Note: Class 2 devices were previously described as self-retracting devices with leading-edge capability (SRL-LE) in earlier publications of this standard. This description has been removed and the new classes were created, in part, due to a conflict with the definition of leading edge work in OSHA Title 29 CFR, Subpart M, which states that “Leading edge means the edge of a floor, roof, or formwork for a floor or other walking/working surface (such as the deck) which changes location as additional floor, roof, decking, or formwork sections are placed, formed, or constructed. A leading edge is considered to be an ‘unprotected side and edge’ during periods when it is not actively and continuously under construction.” Furthermore, it was determined that it would be helpful if all devices, regardless of type, were qualified and selected according to their energy capacity and ability to contend with the degree of free fall associated with their manner of use.

PERFORMANCE REQUIREMENTS

There are no longer multiple performance requirements depending on class. Now, all SRDs must comply with the following limits.

**1800 lb.
816 kg**

Maximum Arrest Force

1800 lb. (816 kg)

**1350 lb.
612 kg**

Average Arrest Force

<1350 lb. (612 kg)

**42 in.
1 m**

Maximum Arrest Distance

42 in. (1 m)
(in overhead tie-off configuration)

Note: Maximum Arrest Distance for foot-level tie-off does not have a stated limit and must be included in labeling and instructions.

OTHER NEW REQUIREMENTS

SRL-P Dual Connection

The pin-type connector typically used to connect twin SRL-P units to the user's harness must now meet specific loading requirements not previously detailed in this standard, thus adding consistency to products being offered on the market.



New Warning Card for Class 2 SRDs

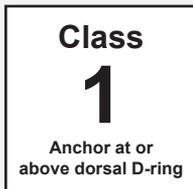
The following warning card will be required to be included with each Class 2 SRD. This helps to emphasize the importance of the hierarchy of controls for Fall Protection.

WARNING: This Class 2 self-retracting device, when attached to a foot-level anchorage, poses significant risk of injury. The user, the competent person and/or qualified person should all acknowledge that normal use of this device MAY NOT PREVENT A SERIOUS INJURY.

Failure to follow all manufacturer's instructions and warnings may result in serious injury or death.

New Class Designation Icons

The following icons will be required to be included on the device, 1" (25 mm) for SRLs and SRL-Rs and ½" (13 mm) for SRL-Ps. Additionally, for Class 2 SRLs the standard requires clearance charts. Both on the product itself and in the user manual. The design of the clearance chart is determined by the manufacturer.



1" (25 mm) Square Icons

Black text on white background



White text on black background



½" (13 mm) Square Icons

Black text on white background



White text on black background

The deadline for manufacturers to comply with the latest Z359.14 edition is August 1, 2023.

Visit [MSAsafety.com](https://www.msasafety.com) for more information about MSA's full selection of self-retracting devices.

Note: This Bulletin contains only a general description of the products shown. While product uses and performance capabilities are generally described, the products shall not, under any circumstances, be used by untrained or unqualified individuals. The products shall not be used until the product instructions/user manual, which contains detailed information concerning the proper use and care of the products, including any warnings or cautions, have been thoroughly read and understood. Specifications are subject to change without prior notice. MSA is a registered trademark of MSA Technology, LLC in the US, Europe, and other Countries. For all other trademarks visit <https://us.msasafety.com/Trademarks>.

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