TOTAL TOOL

FALLTECH®

NAVIGATING THE NEW ANSI.14 STANDARD

Total Tool & FallTech are here to ensure your fall protection equipment is ANSI.14-compliant.

STANDARD UPDATES

On June 17, 2021, ANSI/ASSP approved the new 2021 revision of Z359.14, Safety Requirements for Self-Retracting Devices (SRDs) for Personal Fall Arrest and Rescue Systems. This revision supersedes the 2014 version and will go into effect on August 1, 2023. This is an important date for both manufacturers and end users when it comes to ANSI compliance while using self-retracting devices.

At a high level, the 2021 changes to the ANSI/ASSP Z359.14 standard are designed to:

1. Simplify types and classes of SRDs so end users can quickly identify a compliant product's capabilities.
2. Increase factors of safety on multiple components and tests.
3. Introduce a new testing regime for personal SRDs or SRL-Ps (those worn on the back, connected to the full body harness), including specific tests to address product issues that led to a manufacturer recall.
4. Further standardize labels and markings to make clear an ANSI-compliant product's capabilities.

SRD TYPES & CLASSES

Since ANSI first began classifying SRDs in 2012, FallTech has repeatedly received questions or encountered end users who misunderstand the meaning of SRD classifications. Such misunderstandings could lead to a serious injury or death.

In the previous revisions of Z359.14, SRDs were organized by type (SRL, SRL-R for devices with rescue/retrieval functions, or SRL-LE for devices with leading edge capability) and class (Class A or Class B). The intent was to organize SRDs by features in "type" and then by their overhead performance capability by "class." However, the Class A/B performance was commonly applied to non-overhead anchorage situations, which led to improper fall clearance calculations, potentially causing serious injury or death.

Both types and classes have been overhauled in 2021: "types" are SRL, SRL-P for personal devices meant to be installed on the user's full body harness, or SRL-R for devices with rescue/retrieval functions, and "classes" are Class 1 or Class 2. Rather than dictating overhead performance, the SRD class now dictates the acceptable anchorage locations. Class 1 devices are suitable for at or above dorsal D-ring anchorage locations. Class 2 devices are suitable for above, at, or up to 5 feet below the dorsal D-ring anchorage locations AND must be leading edge rated. So, if you or your customer's jobsite has edge exposures and you need a leading edge SRL or SRL-LE, you will be looking for a Class 2 device in compliance with ANSI/ASSP Z359.14-2021! Coincidentally with the type and class changes, Z359.14-2021 also introduced standard overhead performance criteria for all SRDs as well as standardized class labeling. Now a worker can quickly identify the correct device for the hazards faced in their work zone.

In both the 2012 and 2014 revisions of Z359.14, overhead performance criteria was defined by SRD class: Class A or Class B. In 2021, overhead performance was standardized across all SRDs. The performance requirements are summarized in the table below:

	"OLD" ANSI/ASSP Z359.14-2014		"NEW" ANSI/ASSP Z359.14-2021
SRD CLASS	CLASS A	CLASS B	CLASS 1 & CLASS 2
MAXIMUM ARREST FORCE	1,800 POUNDS		1,800 POUNDS
AVERAGE ARREST FORCE*	1,350 POUNDS*	900 POUNDS*	1,350 POUNDS*
MAXIMUM ARREST DISTANCE	24 INCHES	54 INCHES	42 INCHES

*Note: During hot, cold and wet conditioned tests, average arrest force limit is increased.

STANDARDIZED LABELING

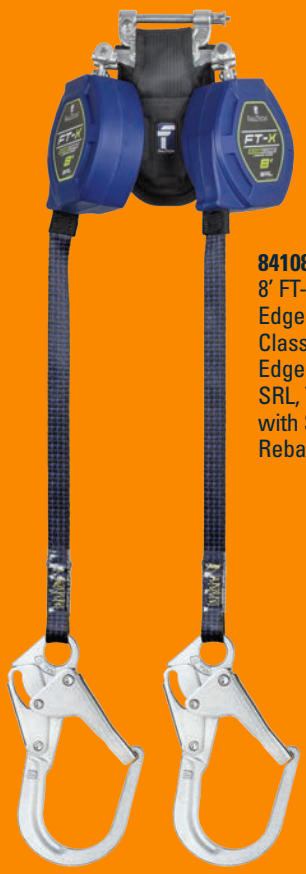
All ANSI/ASSP Z359.14-2021 compliant SRDs will have one of the markings below consistent with its class:

Class 1
Anchor at or above dorsal D-ring

In addition to the Class 1 and Class 2 standard labels, all Class 2 SRLs must include a full fall clearance table or diagram on the physical product, not just in the user instruction manual. This places critical fall-clearance information directly on the product, where it is most easily accessible by the end user or Competent Person.

Class 2
Anchor above or below dorsal D-ring

ANSI.14-COMPLIANT SRDs



84108TP3
8′ FT-X™ EdgeCore™ Class 2 Leading Edge Personal SRL, Twin-leg with Steel Rebar Hooks

84108TP5
8′ FT-X™ EdgeCore™ Class 2 Leading Edge Personal SRL, Twin-leg with Aluminum Rebar Hooks

SCAN HERE TO SHOP ALL ANSI.14-COMPLIANT EQUIPMENT.

721560LE
FT-R™ Class 2 Leading Edge SRL with 60′ Galvanized Steel Cable

721530LE
FT-R™ Class 2 Leading Edge SRL with 30′ Galvanized Steel Cable

721520LE
FT-R™ Class 2 Leading Edge SRL with 20′ Galvanized Steel Cable

PARTIAL INVENTORY SHOWN. CONTACT YOUR REP FOR A FULL LIST OF ANSI.14-COMPLIANT SRDs AVAILABLE AT TOTAL TOOL.

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PRODUCT TESTING PROGRAM EXPANSION

The 2021 version of Z359.14 includes a significant expansion to the volume and severity of testing required to comply with the standard. Most of these changes are intended to improve safety factors and address specific known hazards or applications of SRDs. While the testing of the products mainly affects manufacturers and test labs, it's important to understand how these changes may impact the way in which these devices are deployed and used in the field.

IMPORTANT CHANGES TO ANSI Z359.14

1. Performance criteria has changed for all compliant SRDs when tested in overhead anchorage applications.
2. Requirements for **hot, cold,** and **wet** conditioned testing are the same, but the number of tests is increased.
3. The test mass for all dynamic drop tests has increased to 310 lbs. from the previous 282 lbs. This change was made so a test mass equal to the ANSI maximum allowable user capacity, including clothes, tools, gear, etc.
4. Static strength testing load was increased to 3,600 lbs. from the previous 3,000 lbs. With this change, all compliant SRDs will now have a true 2:1 safety factor.
5. New static test to ensure the locking mechanism on SRDs that do not use an internal brake can withstand a minimum load of 1,800 lbs.
6. New dynamic test to ensure that SRDs with an internal brake have sufficient reserve lifeline in the event of a fall while the SRD's line constituent is fully paid out or deployed.
7. SRL-Ps have several new, specific tests:
   a. 6-foot free fall dynamic performance test.
   b. Twin or dual-leg devices will be dynamically tested with both leg-end connectors attached to ensure proper deployment of energy absorbers and provide warning if arrest forces may exceed 1,800 lbs.
   c. Tie-back or wrap-back SRL-Ps have additional static testing to validate the strength of the tie-back section when secured around an anchorage.
   d. Custom connectors for SRL-Ps have additional testing requirements.

Contact your local Total Tool rep to learn how you can ensure your fall protection equipment is ANSI.14-compliant.

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02.23