

Standard/Regulation Information

Safety Requirements for Self-Retracting Devices ANSI Z359.14-2012 Rev.12/30/2013

On August 20, 2012, a new ANSI standard for self retracting devices (SRD's) went into effect. This new standard supersedes the requirements for SRD's (including SRL's with and without retrieval) found in ANSI Z359.1 and Z359.4.

The new standard addresses advancements in the design of SRD's, including those retracting devices used in leading edge applications where the line may contact a sharp edge, plus updates in testing criteria, product performance, device classifications and inspections.

Which products are affected by the new Standard?

The standard applies to all types of self retracting devices (SRD's). This includes the traditional self retracting lifelines (SRL's) plus SRL's with retrieval (SRL-R's) and SRL's that are rated for leading edge applications (SRL-LE's).

Important Sections in the New Standard

The important sections of the standard which are new or different than the past SRD information found in ANSI Z359.1 and Z359.4 include the following:

Self Retracting Device Classifications

Devices are classified according to dynamic performance. Most devices will be grouped in Class B. The arrest distance is the total vertical distance required to arrest a fall, including the deceleration distance and the activation distance. This affects the required clearance for a retractable unit.

- Class A= Maximum arrest distance of 24 inches. Average arresting force not to exceed 1350 lbs.
- Class B= Maximum arrest distance of 54 inches. Average arresting force not to exceed 900 lbs.

Visual Indicator

- SRD's shall include a visual fall indicator. Typically this is built into the snap hook or area near the snap hook. The fall indicator helps provide a positive indication of a fall. External energy absorbers may also be utilized as visual indicators.

Leading Edge

- For the first time, a leading edge test for SRD's is included in the standard. Specific test criteria must be met in order for devices to be labeled for leading edge work (where the lifeline can come in contact with a sharp edge during fall arrest).

Average Arresting Force

- A new force measurement is required. The average arresting force is, as the name implies, an average of the measured forces during dynamic testing. Every data point over 500 lbs. during the arrest period is averaged. The average arresting force more closely represents what the attached user and the anchorage point are subjected to, compared to the maximum arresting force which includes all of the onetime spikes or peaks in the force measurement. This same type of average arresting force is used with energy absorbing lanyards per ANSI Z359.13.
For the purpose of anchorage strength selection, the average arresting force may be used. The average arresting force will be marked on the label of the device.

Inspection Requirements

- New inspection requirements in ANSI Z359.14 include having the end user performing more frequent competent person inspections. The frequency of the inspections is based on the type of use and conditions of use.

The following inspection requirement information is from ANSI Z359.14:

Type Of Use	Application Examples	Conditions Of Use	Inspection Frequency Competent Person
Infrequent to Light	Rescue and confined space, factory maintenance	Good storage conditions, indoor or infrequent outdoor use, room temperature, clean environments	Annually
Moderate to Heavy	Transportation, residential construction, utilities, warehouse	Fair storage conditions, indoor and extended outdoor use, all temperatures, clean or dusty environments	Semi-annually to annually
Severe to Continuous	Commercial construction, oil and gas, mining	Harsh storage conditions, prolonged or continuous outdoor use, all temperatures, dirty environment	Quarterly to semi-annually

Note: originally the ANSI Z359.14 standard required factory authorized inspections (FAI) for SRD's. The frequency was based on the type and conditions of use. The ANSI committee is currently working on removing the FAI requirement. Completion of this change is expected in early 2014. FAI is not a requirement on Capital Safety self retracting devices.

Summary of major points of the new ANSI standard:

ANSI Z359.14-2012 replaces ANSI Z359.1 and Z359.4 with new, updated requirements for self retracting devices.

New classifications (arrest distance), new arresting force measurements (average arresting force) and new competent person inspection frequency criteria is included in the standard.

Leading edge test criteria is included in the standard and is now a formal classification for self retracting devices. Leading edge rated devices will have specific information on the label and in the user instruction manual.

Effective date for new standard: August 20, 2012