

Self-Retracting Devices (SRD)

Definition

A self-retracting device (SRD) or lifeline is a fall arrest device that performs a tethering function while allowing a worker some vertical movement (below the device) to the maximum working length of the device. SRDs are designed to arrest a fall while minimizing fall distance and impact force. SRDs provide shorter fall distances compared to a greater distance from an energy-absorbing lanyards.

Components

A SRD consists of a housing unit which contains a drum-wound lifeline. A snap hook is located at the end of the lifeline and connects to the rear D-ring on the worker's personal fall arrest harness. As the worker walks away from the unit, the lifeline unwinds from the drum under the tension created by the worker's movement. When tension is released (i.e., when the worker walks back towards the unit), the drum automatically retracts the lifeline back into the housing. A SRD stops a fall using a breaking mechanism similar to a car's seat belt, when a sudden increase in speed is detected (i.e., a fall) the device engages a brake or locking mechanism that arrests the worker's motion.

Some SRDs use a wire cable, which is a conductor of electricity, so that type should not be used where it would come in contact with electricity.

Types

There are three types of self-retracting devices

- **Type 1:** 1.5m to 3.0m (5-10 feet) working length, allows attachment of the housing to the body

support. Retired from service after a fall.



- **Type 2:** Greater than 3.0m (10 feet) working length, too heavy to attach to the body support. Repairable after a fall.

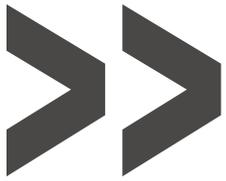


- **Type 3** Same function as a Type 2 but has a retrieval (winch) component which will allow a single attendant to raise or lower a fallen worker to a safe level.



A new CSA Standard for Self-Retracting Devices (CSA-Z259.2.2-17) came into effect on January 1, 2019. Under this new standard, classification is based on the position in which the device is approved to be used and includes the following:

- SRL: the self-retracting lifeline must be connected to an anchorage point which is higher than the D-ring on the worker's fall arrest harness.
- SRL-R: the self-retracting lifeline meets the SRL standards and also has a rescue device (winch).
- SRL-LE: the self-retracting lifeline is connected to an anchorage point lower than the D-ring on the worker's fall arrest harness, or the self-re-



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tracting lifeline can lean against a sharp edge (LE is for Leading Edge).

- SRL-LE-R: the self-retracting lifeline meets the SRL-LE standards and also has a rescue device (winch).

There are new inspection requirements based on the SRDs use and exposure for newly manufactured equipment only:

Low Frequency or Light Use: inspection performed annually with an equipment revalidation every five years (e.g., rescue, CSE work, factory maintenance).

- Moderate or Intensive Use: semi-annual inspection and equipment revalidation every 2-years (e.g., residential construction, utilities).
- Important and Continuous Use: inspection every 3 or 6 months and annual revalidation (e.g., commercial construction, mining, oil and gas).

