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SRL, SRD, PFL 101

WHAT IS A SELF-RETRACTING LIFELINE?

A Self-Retracting Lifeline, or SRL, is a device that contains a spring loaded retracting web or cable lanyard wound around an internal drum. It automatically locks and arrests the fall of a worker.

CLASS A VS CLASS B

ANSI Z359.14-2012 classifies Self-Retracting Lifelines and Personal Fall Limiters into two classes. The main differentiators between the two are stopping distance and arresting forces.

Class A

- Maximum arresting distance not to exceed 24".
- Average arresting force not to exceed 1,350 pounds or 6 kN or have a maximum peak of 1,800 pounds or 8 kN.
- After environmental conditioning (hot, cold, wet), average arresting force not to exceed 1,575 pounds or 7 kN or a maximum peak of 1,800 pounds or 8 kN.

Class B

- Maximum arresting distance not to exceed 54".
- Average arresting force not to exceed 900 pounds or 4 kN or have a maximum peak of 1,800 pounds or 8 kN.
- After environmental conditioning (hot, cold, wet), average arresting force not to exceed 1,125 pounds or 5 kN or a maximum peak of 1,800 pounds or 8 kN.



SWING FALL

SRLs are great because they allow you to work much farther away from an anchorage point, sometimes over 100 ft. The downside to this is swing falls become much more of a danger.

A swing fall occurs when an anchorage point is not directly overhead of a worker. The device will stop them in the required distance, but the worker may still swing a great distance. This potentially puts other obstacles, walls, or objects in the path for the worker to collide with.

To avoid swing falls, always stay in the safe zone, which is within 30 degrees of your anchor point. Swing falls can be avoided by using mobile anchorage points which will travel with the worker.

BODY WORN VS MOUNTED

Larger SRLs are mounted above the worker, and the lanyard runs down to connect to the user's dorsal D-ring on their harness. These come in lengths ranging from 8 ft to over 100 ft. The other option is body worn. These are compact devices which connect directly to the users harness and are much shorter, generally 6 or 8 ft. To tie-off the user connects the tether to an anchorage point. These can also be had in twin-leg configuration for 100% tie-off.

LEADING EDGE + FOOT LEVEL

Most SRLs are designed only to be mounted above the user. For cases where this is not possible, specially designed Foot Level or Leading Edge SRLs are required. ANSI classifies these as SRL-LE devices. These incorporate factors to absorb the extra energy associated with foot-level tie off, as well as more robust cables to resist breaking when run against a leading edge.



REPLACEMENT & RECERTIFICATION

Recertification can be done on some SRLs by the manufacturer to prolong the life of the unit. This can be done after the device is involved in a fall, or after the unit has been in the field for a specific period of time. Check with the manufacturer for specifications on recertification.

Other devices cannot be recertified and must be destroyed and replaced if they are involved in a fall or after a time period specified by the manufacturer.

OTHER VARIATIONS

Other potential options for SRL variations include:

- Sealed design for harsh work environments with grease, dust, and moisture.
- Rescue Devices, referred to as SRL-R by ANSI, for auto retrieval. These are common on confined space systems.
- Tie-Back for when connectors cannot secure to anchorage points.
- Arc Flash rated for working in electrical environments.

More questions? Give our Gear Experts® a call.











SWING FALL BODY WORN

MOUNTED

LEADING EDGE