

CSA Standards for Self-Retracting Lifelines

Like their USA counterparts, self-retracting lifelines destined for the Canadian fall protection market are manufactured and tested to rigorous standards to ensure their reliability and performance when they are needed the most. SRLs destined for the USA market are driven by ANSI's Z359.14-2014 *Requirements for Self-Retracting Devices for Personal Fall Arrest & Rescue Systems*, and those destined for Canada adhere to CSA's Z259.2.2-2017 *Self-retracting devices* standard.

Although many of the performance and testing parameters between the two standards are similar, there are several differences that deserve extra attention.

SRL Classifications

CSA defines four classes of SRL:

- a) SRL - Overhead anchor, non-leading edge compatible
- b) SRL-R - Same as SRL with integral rescue mechanism
- c) SRL-LE - Foot-level anchor, leading edge compatible
- d) SRL-LE-R - Foot-level anchor, leading edge compatible with integral rescue mechanism

Maximum and Average Arrest Force

CSA does not maintain Class A or Class B SRL designations as found in ANSI Z359.14-2014. All CSA-compliant SRLs, regardless of classification, shall have a maximum arrest force of no greater than 1,800 lbf., and an average arrest force of no greater than 1,350 lbf.

Arrest Distance

All CSA-compliant SRLs, regardless of classification, shall have a maximum arrest distance (not including free fall) of 47". The total arrest distance is composed of activation distance (fall arrester travel along lifeline or SRL lifeline payout) and deceleration distance (vertical distance traveled by test mass before onset of arrest forces until downward vertical travel ceases).

Locking Performance

Locking distance is the amount of downward vertical travel of the test mass permitted by the SRL until the internal braking system engages.

Once braking is engaged, the SRL must hold the test mass for a minimum of one minute. Maximum arrest distance shall be:

- a) 24" for SRLs with a working length of 20' or less; and
- b) 36" for SRLs with a working length of 20' or greater

Test Mass

The test mass for all dynamic tests shall be the maximum rated mass of the SRL or 310 lbs, whichever is greater. The current test mass specified by ANSI is 282 lbs. for dynamic performance tests and 300 lbs. for dynamic strength tests.

Compliance Testing

Unlike ANSI compliance testing, which may be performed by third-party labs or by the manufacturer under witness by a professional engineer, manufacturers must submit samples directly to the CSA Group for testing.

Revalidation (Repair)

In addition to regular worker and competent person inspections, all repairable, CSA-compliant SRLs must be revalidated by the manufacturer based on the on the following use schedule:

- a) Infrequent to light - at least every 5 years
- b) Moderate to heavy - at least every 2 years
- c) Severe to continuous - at least annually

Additional Information

For more information regarding Pure Safety Group's CSA - compliant self-retracting devices, please contact:

Andre Pelland
Senior Compliance Manager
andre.pelland@puresafetygroup.com