



CERTIFIED to CSA Z259.2.2-2017





# UNDERSTANDING THE CHANGES TO THE CSA Z259.2.2-17 STANDARD FOR SELF-RETRACTING DEVICES (SRDs)

This summary highlights the changes to the CSA Z259.2.2 standard when comparing it to previous versions of this standard. For complete details on the CSA Z2592.2-17 standard, we encourage you to purchase a copy of the published standard from CSA.

What standard does it supersede? CSA Z259.2.2, previous editions implemented in 1998 and 2014.

#### **Design Requirements**

- All SRDs will require a fall arrest indicator
- Changes to the materials section to upgrade the type of materials that can be used for an SRD
- Added a clause for UV degradation
  - Provision for integral connectors to meet CSA Z259.12 Class 1
- Provision for SRL-LE and SRL-LE-R to include some type of energy absorber within the system
- Added a clause for SRL-R mode (manual)
- Added a clause for SRD-R mode (powered)
- Subsequent fall arrest: an SRD must be able to arrest another fall after the initial fall has taken place and the load was removed from the SRD

## Markings and Instructions were updated:

Markings and instructions were updated to reflect the new design requirements such as maximum deployment distance.

#### New classes of SRDs

#### 1. Class SRL

A Class SRL device shall be suitable for applications where:

- i) it is anchored at an elevation which limits the free fall to the activation distance of the device; and
- ii) the extracted device cannot bear against an edge or surface during fall arrest.

#### 2. Class SRL-R

A Class SRL-R device shall be a Class SRD device that is provided with an integral means for assisted rescue.

**Note:** Assisted rescue via raising or lowering the rescue subject.

#### 3. Class SRL-LE

In addition to applications for Class SRL devices, a Class SRL-LE device shall be suitable for applications where one or more of the following conditions are met:

- i) it is anchored lower than the elevation of the dorsal d-ring on the worker's full body harness; and
- ii) the extracted device can bear against an edge or surface during fall arrest.

#### 4. Class SRL-LE-R

- Self-retracting device with leading edge and integral rescue capabilities
- A Class SRL-LE-R device shall be suitable as both Class SRD-LE and Class SRD-R.

#### What has been removed

One major change was to remove the classifications of Type 1, Type 2, and Type 3 and replace them with new SRD classes.

## Periodic inspection and revalidation

The re-certification requirement has gone through an extensive change. It is no longer called "re-certification"; instead, it is called "revalidation". The previous versions of the standard required that Type 2 and Type 3 units be re-certified two years after the date of manufacture and annually thereafter.

## Summary of new revalidation clause

- All SRDs are subject to revalidation based on the table below
- The SRD must be sent to the manufacturer or authorized repair centre
- A competent person must determine the revalidation frequency for each application
- The current revalidation is based on the use of the SRD. See below for examples
- All SRDs shall have periodic inspections and revalidations in accordance with Table 1 in CSA Z259.2.2 standard.

# Modification to the Leading Edge test and testing requirements, and instructions for use

- The test edge material is very sharp metal with an edge radius of 0.009" (0.25 mm) or less.
- An energy absorber is required and must be integral to the SRD device or device.
- A Class SRL-LE must successfully complete two new tests additional to the requirements for Class SRD
  - One test includes a 5-foot (1.5 m) drop over the leading edge at a 30% outward rigging.
  - The second uses a 5-foot (1.5 m) drop at the same plane but with movement along the leading edge to simulate someone walking along the edge and falling.
- LE SRDs must provide the following information on the label or in the instruction manual:
  - Minimum setback distance from edge
  - Deployment factor (Dm)
  - Maximum deployment
  - Average arrest force

# **SELF-RETRACTING DEVICES (SRDs)**

## Choosing the Right Self-Retracting Device



There are different styles of SRDs that can be used for different applications. It is important to consider the specific application when choosing an SRD. Knowing the type of work environment, where the attachment point of the SRD is located on the job site, what the worker will be doing at heights and the required location of the fall protection will be crucial information to choosing the correct SRD. Below are questions to consider when choosing the appropriate location of the edge and where a fall hazard exists that could cause the device to come into contact with the edge; for example, when working over structural steel or in high-rise concrete buildings under construction with open flooring.

## Will the Installation of the SRD be Overhead (Vertical) or at Horizontal/Foot-Level (LE)?



## Horizontal/Foot-Level (LE)

- If there is no anchorage point overhead to connect an SRD, you
  will likely be connecting at foot level or horizontally, also known as
  leading edge (LE) application.
- A leading edge can be described as any sharp edge commonly found on a work site with which a cable or webbing connection could come into direct contact during a fall.
- An SRD-LE device is an SRD that has enhanced design features for use in leading edge applications and must always be used for any leading edge application.

## Allowable Edges on your SRD-LE device?

- CSA Z259.2.2 standard only requires leading edge testing over a steel sharp edge with radius of 0.25 mm (0.0098") to classify an SRD as leading edge approved. (Identified by the global sharp edge symbol below)
- CSA Z259.2.2 standard does not cover testing over additional materials commonly found on many job sites, such as concrete edges, wood edges, paneled rounded fascia.
- It is important to be aware of additional edge materials that the device might come in to contact with and verify if the SRD-LE can be used in that application with the manufacturer.



Global Sharp Edge symbol– Radius as sharp as 0.25 mm (0.0098")



#### Vertical (non-LE)

If the installation will be overhead or at shoulder level, you should determine the minimum fall clearance requirement on the job site to help identify the correct class of SRD you should be using.

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**Sharp Steel Edges** 



Sharp Edge Conditions



**Sharp Edge Conditions** 

# **WORKING ON THE EDGE**

If you work in a leading-edge environment, you have several unique risks to keep in mind when choosing fall protection equipment. Exposure to fall hazards when working near a drop-off edge or ledge and increased risk of device failure in a sharp edge condition are different from typical fall protection needs. PeakWorks® offers an SRD Leading Edge (LE) series that are certified to the new CSA standard.

- PeakWorks® leading-edge self-retracting devices are certified to the most up-to-date CSA Z259.2.2 standard.
- PeakWorks® offers a series of leading-edge products that have been designed without the need for external shock absorbers. This means that less distance needs to be added to total fall arrest calculations.
- All PeakWorks® leading-edge self-retracting devices are clearly marked to ensure that the correct SRD is used for leading-edge applications.
- Some units are lightweight and can be mounted on a worker's harness for better mobility and range of motion. PeakWorks® leading-edge self-retracting devices are tested for both overhead and horizontal applications including perpendicular edge and lateral offset tests.
- These test protocols ensure that if a worker falls over a steel sharp edge, the SRD will successfully arrest the fall.
- PeakWorks® SRD-LEs have had additional testing to cover other edge styles and materials (contact PeakWorks for additional information).



Global Sharp Edge Symbol Radius as sharp as 0.25 mm



Failure due to sharp edge conditions

# **SELF-RETRACTING DEVICES (SRDs)**

## Peakworks SRD-LE Clear Advantage



#### One Device for Both Applications

- PeakWorks offers a series of devices that are certified as CSA Z259.2.2 in vertical non-LE applications as well as leading edge certified for use in horizontal applications. One product works for most applications
- Reduces inventory duplication and safety investment costs

## **Deceleration System**

- Unlike most SRD-LE devices in the market, some of PeakWorks SRD-LE devices do not require an external shock pack in order to meet the leading-edge standards due to the exclusive internal braking system
- This translates to shorter arresting distances in both vertical and horizontal orientation

## **Allowable Edges**

- PeakWorks SRD-LE devices have had additional testing over multiple leading-edge materials commonly found on job sites, such as concrete edges, wooden beams, paneled rounded fascias, and trapezoidal sheet metal
- Contact a PeakWorks representative for information on additional material testing

## Dyneema® Webbing vs Cable

- PeakWorks SRD-LE units are up to 32% lighter than competitors' SRD-LE of equivalent length
- Thin webbing accommodates smaller housing design
- Outstanding versatility for use on multiple surface materials
- Dyneema® webbing is a proven LE-rated material



V845633040LE

PeakWorks understands the importance of calculating the fall clearance, which is why we created an app for calculating fall clearances. Visit the App Store today to download it.







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V845722012LE





# **LEADING EDGE SELF RETRACTING DEVICES**

# Compact Single-Leg Web (LE)—Class SRL & Class SRL-LE

- Approved for use in vertical and horizontal applications
- Tested and approved for foot-level tie-off
- Third-party certified to CSA Z259.2.2 and ANSI Z359.14 Class B
- Hi-viz green Dyneema® webbing device has been sharp-edge tested over a 0.25 mm (0.0098") radius sharp edge
- Attachment point is a swivel eye on housing
- Features a sewn-in indicator on the device itself for maximum safety

	SRL-75105-6LE	SRL-80302-12LE	SRL-80302-18LE
Maximum Deployment Overhead	0.31 m (12 in)	0.37 m (15 in)	0.49 m (19 in)
Maximum Deployment LE Applications	1.20 m (48 in)	1.44 m (57 in)	1.92 m (76 in)
Average Arrest force	4.12kN (926 lbf)	4.12kN (926 lbf)	4.12kN (926 lbf)

PRODUCT NO.	MODEL NO.	Device Type	Length	Capacity	Single/ Twin	Hook Style
V845622006LE	SRL-75105-6LE	Dyneema® Webbing 0.8 in wide x 0.07 in thick (20 mm wide x 1.75 mm thick)	6 ft. (1.8 m)	310 lbs. (141 kg)	Single	Snap Hook
V845722012LE	SRL-80302-12LE	Dyneema® Webbing 0.8 in wide x 0.07 in thick (20 mm wide x 1.75 mm thick)	12 ft. (3.6 m)	310 lbs. (141 kg)	Single	Snap Hook
V845722018LE	SRL-80302-18LE	Dyneema® Webbing 0.8 in wide x 0.07 in thick (20 mm wide x 1.75 mm thick)	18 ft. (5.4 m)	310 lbs. (141 kg)	Single	Snap Hook



## LEADING EDGE SELF-RETRACTING DEVICES

## Compact Twin-Leg Web (LE)—Class SRL & Class SRL-LE

- Approved for use in vertical and horizontal applications
- Tested and approved for foot-level tie-off
- Third-party certified to CSA Z259.2.2 and ANSI Z359.14 Class B
- Hi-viz green Dyneema® webbing device has been sharp-edge tested over a 0.25 mm (0.0098") radius sharp edge
- Attachment points include a swivel on the housing with connection pin for mounting below the dorsal D-ring
- Twin SRD comes with regular snap hook, steel ladder hook, or aluminum form hooks
- Features a sewn-in indicator on the device itself for maximum safety

	SRL-70502-6LE	SRL-70602-6LE	SRL-74854-7.5LE
Maximum Deployment Overhead	0.31 m (12 in)	0.31 m (12 in)	0.31 m (12 in)
Maximum Deployment LE Applications	1.20 m (48 in)	1.20 m (48 in)	1.20 m (48 in)
Average Arrest force	4.12kN (926 lbf)	4.12kN (926 lbf)	4.12kN (926 lbf)

PRODUCT NO.	MODEL NO.	Device Type	Length	Capacity	Single/ Twin	Hook Style
V845625006LE	SRL-70502-6LE	Dyneema® Webbing 0.8 in wide x 0.07 in thick (20 mm wide x 1.75 mm thick)	6 ft. (1.8 m)	310 lbs. (141 kg)	Twin	Snap Hook
V845626006LE	SRL-70602-6LE	Dyneema® Webbing 0.8 in wide x 0.07 in thick (20 mm wide x 1.75 mm thick)	6 ft. (1.8 m)	310 lbs. (141 kg)	Twin	Aluminium Form Hooks
V8456277-5LE	SRL-74854-7.5LE	Dyneema® Webbing 0.8 in wide x 0.07 in thick (20 mm wide x 1.75 mm thick)	6 ft. (1.8 m)	310 lbs. (141 kg)	Twin	Steel Ladder Hook



Snap Hook (3/4" (19 mm) Gate Opening)



Steel Ladder Hook (2" (51 mm) Gate opening)



Form Hook (2-1/2" (64 mm) Gate Opening)





V845625006LE



V845626006LE



V8456277-5LE

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V845633010LE









# **LEADING EDGE SELF-RETRACTING DEVICES**

## Single-Leg Cable (LE)—Class SRL & SRL-LE

- Approved for use in vertical and horizontal applications
- Tested and approved for foot-level tie-off
- Third-party certified to CSA Z259.2.2 and ANSI Z359.14 Class B
- Aluminum housing for maximum durability
- 5.5 mm (0.21") diameter galvanized cable device has been sharp-edge tested over a 0.25 mm (0.0098") radius sharp edge
- Attachment point is a swivel eye on housing
- Carabiner included for attachment to anchor point
- Features swivel snap hook with load indicator built into the snap hook

	10 FT SRD	20 FT SRD	40 FT SRD	60 FT SRD
Maximum Deployment Overhead	0.43 m (17 in)	0.67 m (26 in)	0.37 m (15 in)	0.55 m (22 in)
Maximum Deployment LE Applications	1.68 m (66 in)	2.64 m (104 in)	1.44 m (57 in)	2.16 m (85 in)
Average Arrest force	4.12kN (926 lbf)	4.12kN (926 lbf)	4.12kN (926 lbf)	4.12kN (926 lbf)

PRODUCT NO.	MODEL NO.	Device Type	Length	Capacity	Single/ Twin	Hook Style
V845633010LE	SRL-73302-10LE	Galvanised Steel Cable 0.21 in (5.5 mm)	10 ft. (3.0 m)	310 lbs. (141 kg)	Single	Swivel w/ Carabiner
V845633020LE	SRL-73302-20LE	Galvanised Steel Cable 0.21 in (5.5 mm)	20 ft. (6.1 m)	310 lbs. (141 kg)	Single	Swivel w/ Carabiner
V845633040LE	SRL-73302-40LE	Galvanised Steel Cable 0.21 in (5.5 mm)	40 ft. (12.2 m)	310 lbs. (141 kg)	Single	Swivel w/ Carabiner
V845633060LE	SRL-73302-60LE	Galvanised Steel Cable 0.21 in (5.5 mm)	60 ft. (18.3 m)	310 lbs. (141 kg)	Single	Swivel w/ Carabiner



# **SELF-RETRACTING DEVICES**

## Rescue/Recovery SRD—Class SRL-R

- 3-Way Rescue and Retrieval SRL-R
- Transition from SRD mode to rescue and retrieval mode in seconds
- Designed to be an integral part of a confine space system
- Can be mounted to a PeakWorks tripod or davit system with a 3-way bracket (sold separately)
- Aluminum housing for maximum durability
- Features swivel snap hook with load indicator built into the snap hook
- 5.5 mm (0.21") diameter galvanized cable device
- Average arrest force: 8kN (1350 lbf)
- A maximum deployment for overhead of 0.80 m (32 in) (60 ft unit) /1.10 m (43 in) (96 ft unit)

PRODUCT NO.	MODEL NO.	Device Type	Length	Capacity	Single/ Twin	Hook Style	Rescue/ Recovery
V845643060	SRL-73303-60	Galvanised Steel Cable 0.21 in (5.5 mm)	60 ft. (18.3 m)	310 lbs. (141 kg)	Single	Swivel Snap Hooks	Yes
V845643096	SRL-73303-96	Galvanised Steel Cable 0.21 in (5.5 mm)	96 ft. (29.3 m)	310 lbs. (141 kg)	Single	Swivel Snap Hooks	Yes
V8460		Tripod Mounting Bracket for Peak Works 7' Confined Space Tripod with Chain and Pulley					







V845643060



V845643096







# **SELF-RETRACTING DEVICES**

# Compact Arc Flash Single-Leg Web—Class SRL

- Approved for use in vertical only
- $\bullet \quad \text{Third-party certified to the ASTM F887 Arc Flash standard \& CSA Z259.2.2 and ANSI Z359.14 Class B}\\$
- Hi-viz green Dyneema® webbing device
- Attachment point is a swivel eye on housing
- Features a sewn-in indicator on the device itself for maximum safety
- Average arrest force: 4.12kN (926 lbf)
- A maximum deployment for overhead of 19 in. (0.50 m)

PRODUCT NO.	MODEL NO.	Device Type	Length	Capacity	Single/ Twin	Hook Style
V845682006AR	SRL-76105-6AR	Armead Webbing, ASTM F887 Arc Flash	6 ft. (1.8 m)	310 lbs. (141 kg)	Single	Snap Hook



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