

**Instructions for E4 Retractable Web lanyards – Type 1**
Instructions for E6 Retractable Web lanyards – Type 1**IDENTIFICATION**

ALL Safety Direct energy absorbers can be identified by the color of webbing used for the backup strap in the energy absorber pack. The strap is **BLACK** for an E4 energy absorber, and either **BLUE** or **GREEN** for an E6 Energy absorber

WARNING

Failure of the user to read and understand all instructions for use of this equipment may result in serious injury or death.

It is recommended that the user complete an approved fall protection program before using the product.

There should be an approved rescue plan in effect on any work site prior to the commencement of working at heights. The rescue plan must have provision to retrieve any worker, suspended as a result of a fall arrest, without delay in order to reduce the effects of suspension trauma.

In the event of a fall arrest the maximum arrest distance will be approximately 1.0 m for the web retractor plus the deployment of the energy absorber. It can increase by up to 1.07 m (3.5 ft) on E4 energy absorbers and on E6 energy absorbers with a blue backup strap. It can increase by up to 1.75 m (5.7 ft) on E6 energy absorbers with a green backup strap.

The total fall distance should be calculated using the maximum arrest distance plus the maximum deployment of the energy absorber plus an allowance for the stretch of the harness and the slippage of the D-ring, to ensure that there is sufficient clearance to the surface below the worksite.

General Instructions

All warning labels and instructions must be understood and followed by the user before using the product.

All users must understand the relevant regulations and usage standards for fall protection, pertaining to this product, in the jurisdiction in which it is being used.

Only trained and competent personnel should use these products.

All fall protection equipment must be visually inspected by the worker prior to each use to ensure that the webbing will pay out and retract during normal movement, and that the device locks up when the webbing is extracted from the device at speed. The prior to use inspection should also include but not be limited to the Locking Snap Hook and the Carabiner to ensure that they lock automatically.

All fall protection equipment must be inspected by a competent person on a regular basis (at least annually).

Fall protection equipment must not be altered or modified in any way.

To reduce the possibility of accidental release, a competent person must ensure that all the system components are compatible.

Any equipment exhibiting deterioration, damage or deformation must be removed from service immediately and inspected by a competent person before being returned to service.

All equipment subjected to a fall arrest or fall incident must be removed from service immediately and be tagged for further inspection to determine the disposition of the equipment.

The retractable web lanyard should be used with a swivel hook in order to eliminate twisting of the webbing which could result in the webbing jamming in the housing instead of it retracting, and creating a potential freefall situation that the device is not designed to withstand.

Usage Instructions

The retractable web lanyard is designed to protect a single worker and has a maximum load rating of 140 kg (310 lb) with an E6 energy absorber **OR** 115 kg (254 lb) with a E4 energy absorber, and has a maximum deployed length of 2.4 m. (8 ft.) plus an additional 1.4 m (4.5 ft.) for the E4 energy absorber or an E6 energy absorber with a blue back up strap. This creates a potential maximum deployed distance of 3.8 m (12.5 ft.).

For a retractable web lanyard with a energy absorber with a green back up strap the maximum load rating is 140 kg (310 lb). The web retractor has a maximum deployed length of 2.4 m. (8 ft.) plus an additional 1.8 m (6 ft.) for the E6 energy absorber. This creates a potential maximum deployed distance of 4.2 m (14 ft.).

In the event of a fall arrest the suspended worker should be rescued without delay in order to minimize the effects of suspension trauma.

For Fall Arrest applications the locking snap hook adjacent to the Energy Absorber Pack must be attached to the Dorsal (rear) D-ring of an approved full body harness and visual confirmation of the locking of the gate on the snap hook must be obtained. The carabiner must be connected to an approved overhead anchor with a rating of 22.2 kN (5,000 lb) or as specified in the regulations of the jurisdiction in which it is being used.

The anchorage point for the device should be above the attachment point to the full body harness. The use of an anchorage point below the attachment point to the full body harness could result in a free fall condition that the device is not designed to withstand and could result in catastrophic failure of the device.

Failure to follow these instructions could result in catastrophic failure of the lanyard in the event of a fall arrest situation.

Wherever possible the anchorage should be chosen so as to be directly above the work site in order to reduce or eliminate the possibility of a swing fall.

When selecting the anchorage ensure that there is sufficient clearance to the surface below to allow for the following:

- 1) Deployment of the energy absorber.

- 2) Stretch of the full body harness.
- 3) Slippage of the Dorsal D-ring on the full body harness.
- 4) Stretch of the anchorage means if applicable.

The retractable web lanyard is not designed to be used in situations where a gradual subsidence of the surface beneath the worker can occur i.e. in grain, sand, gravel or other granulate material. Under these conditions the retractable web lanyard may not lock up as designed.

The webbing should not be extracted from the device, and its retraction limited since this will create a situation in which a free fall is highly probable and which the device is not designed to withstand.

The webbing extracted from the device should not be allowed to contact any sharp edges or hot surfaces as the load carrying ability of the webbing may be compromised and premature failure of the webbing could occur.

The retractable web lanyard is designed as a one-time use device and in the event that it is involved in a fall arrest situation it must be removed from service immediately and destroyed.

Inspection

All lanyards should be inspected by the user before each use and a function test carried out to ensure that the device locks up when the webbing is extracted sharply, and the device should be visually inspected by a competent person, other than the user, on an annual basis or sooner. A record of these inspections should be kept in a log.

When an inspection reveals any defects the lanyard must be removed from fall arrest service immediately and be tagged to preclude any further use. The lanyard should not be returned to service until it has been reworked or repaired by the manufacturer.

The lanyard should be removed from service immediately if an inspection reveals any of the following:

- a) that the lanyard has been subjected to fall arrest service.
- b) that the lanyard has been subjected to fall arrest service and the energy absorber has been partially deployed.
- c) there is evidence of any corrosion or deformation of the hardware connectors and components, including cracks, sharp edges, chemical attack, excessive heat exposure or alteration in any way.
- d) if a function test shows that the device does not lock up automatically when the webbing is pulled sharply.
- e) if the original labeling on the lanyard has been removed or is illegible.
- f) the lanyard material has become adulterated with paint, bitumen, solvent or other chemical reagent.
- g) the webbing material used to manufacture the lanyard is compromised, including but not limited to any spliced terminations or stitch patterns, cuts, tears, abrasion, burns, knots, kinks or excessive wear.
- h) the interior housing of the device exhibits any cracking or looseness

Any lanyard removed from service and awaiting inspection should be tagged to indicate that it should not be used until it has been inspected and approved for further fall protection service.

Only persons or organizations authorized in writing by Safety Direct Ltd. shall make repairs to lanyards.

Care and maintenance

Maintenance of the lanyard should be carried out in accordance with the instructions provided by Safety Direct Ltd.

All lanyards should be stored in a clean, dry environment, with limited exposure to the following:

- 1 sunlight and UV radiation

- 2 excessive heat
- 3 harmful fumes
- 4 corrosive chemicals or environments

If necessary the webbing of the lanyard can be cleaned by the use of a mild soap solution and warm water and a sponge. Care should be taken to ensure that the retractor housing of the lanyard is not submersed in water when cleaning the lanyard. The use of harsh detergents or chemical solvents is not recommended. After washing, rinse the lanyard in clean water, and hang the lanyard to air dry away from direct heat and then carry out a further inspection. After washing any hardware should be function tested and a light lubricating oil can be applied if necessary.

The web retractor housing is sealed and cannot be serviced or repaired.

Product Design Parameters.

Web Retractor

Maximum Arrest Distance: 1.0 m.

E4 Energy Absorber

Average Arresting Force (F_{avg}) as per CSA Z259.11-05: 2.65 kN.
Maximum Elongation (X_{max}) as per CSA Z259.11-05: 1.24 m.

E6 Energy Absorber with BLUE Backup Strap

Average Arresting Force (F_{avg}) as per CSA Z259.11-05: 3.97 kN.
Maximum Elongation (X_{max}) as per CSA Z259.11-05: 1.24 m.

E6 Energy Absorber with GREEN Backup Strap

Average Arresting Force (F_{avg}) as per CSA Z259.11-05: 3.25 kN.
Maximum Elongation (X_{max}) as per CSA Z259.11-05: 2.24 m.

WARNINGS

The following situations should be avoided when using lanyards:

- 1) Snap hooks should not be attached to each other directly.
- 2) Only one snap hook should be attached to each D-ring.
- 3) The snap hook should not be connected back into the body of the lanyard.
- 4) When the lanyard is not in use it should be stored in the retracted position.
- 5) Care should be taken if the extracted webbing becomes saturated. Moisture may cause the webbing to expand and may prevent the webbing from fully retracting into the housing and create a possible free fall situation.
- 6) Connecting components attached together must be compatible in order to reduce or eliminate the possibility of snap hook “roll out”.
- 7) The anchorage point should be directly overhead wherever possible to eliminate any swing fall situation.
- 8) Lanyards with E4 energy absorbers are rated for 1 person, maximum total mass 115 kg (254 lb).
- 9) Lanyards with E6 energy absorbers are rated for 1 person, maximum total mass 140 kg (310 lb). For workers with a total mass exceeding 140 kg please contact Safety Direct Ltd.

In case of any issues or interpretations arising out of the use of these products or these instructions please contact Safety Direct Ltd. for clarification.

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