



020-12101

## EVO 3/8" Detachable Cable Sleeve



Always verify the latest revision of the Safewaze Manual is being utilized. Visit the Safewaze website, or contact Customer Service, for updated manuals.

### APPLICABLE SAFETY STANDARDS

When used according to instructions, the Safewaze EVO 3/8" Detachable Cable Sleeve meets OSHA 1926.502, 1910.140, and 1910.66 regulations. Applicable standards and regulations depend on the type of work being done and may include state-specific regulations. Refer to local, state, and federal requirements for additional information on the governing of occupational safety regarding Personal Fall Arrest Systems (PFAS).

#### WARNING:

The manufacturer's instructions must be provided to users of this equipment. The user must follow the manufacturer's instructions for each component of the system. The user must read and understand these instructions before using this equipment. Manufacturer's instructions must be followed for proper use and maintenance of this equipment. The user must understand how to safely and effectively use the EVO 3/8" Detachable Cable Sleeve and all equipment used in conjunction with the sleeve. Alterations to this product, misuse of this product, or failure to follow instructions may result in serious injury or death. Avoid moving machinery, sharp and/or abrasive edges, and any other hazard that could damage or degrade the component.

Do not throw away instructions!  
Read and understand instructions before using equipment!

#### IMPORTANT:

- Please refer to this manual for essential instruction on the use, care, or suitability of this equipment for your application. Contact Safewaze for any additional questions.
- Only Safewaze, or entities authorized in writing by Safewaze, may make repairs to Safewaze fall protection equipment.
- Record all important product information below prior to use. Documentation of all Competent Person annual inspections is required in the Inspection Log.

### INTRODUCTION

Thank you for purchasing a Safewaze EVO 3/8" Detachable Cable Sleeve. This manual must be read and understood in its entirety and used as part of an employee training program as required by OSHA or any applicable state agency. This manual and any other instructional material must be available to the user of the equipment. Every user must be trained in the inspection, installation, operation, and proper usage of the product.

### SPECIFICATIONS

The Safewaze EVO 3/8" Detachable Cable Sleeve is designed to be used as part of a Personal Fall Arrest System (PFAS) with Safewaze Ladder Climb Systems and any 3/8" cable.

- Capacity: ANSI 130 to 310 lb. (59-141 kg), OSHA 420 lb. (191 kg) including any tools, clothing, accessories, etc.
- Item Weight: 1.6 lb. (0.7 kg)
- MBS: 3,600 lb. (16 kN)
- AAF: 1,350 lb. (6 kN)
- MAF: 1,800 lb. (8 kN)
- Activation Force: 450 lb. (2 kN)
- Max Deployment Length: 36 in. (91 cm)
- Materials: Aluminum (cover plate), stainless steel (base/internals), nylon webbing (energy absorber), YCM plated steel (carabiner)

### USER INFORMATION

Date of First Use: \_\_\_\_\_ Trainer: \_\_\_\_\_

Serial Number: \_\_\_\_\_ User: \_\_\_\_\_

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### WORKER CLASSIFICATIONS

Read and understand the definitions of those who work in proximity of, or may be exposed to, fall hazards:

**Qualified Engineer:** "Qualified Engineer" means a person with a Bachelor of Science in Engineering degree from an accredited college or university. They are able to assume personal responsibility for the development and application of engineering science and knowledge in the design, construction, use, and maintenance of their projects.

**Qualified Person:** "Qualified Person" means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated their ability to solve or resolve problems relating to the subject matter, the work, or the project.

**Competent Person:** "Competent Person" means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

**Authorized Person:** "Authorized Person" means a person approved or assigned by the employer to perform a specific type of duty or duties, or to be at a specific location or locations, at the jobsite.

It is the responsibility of a Qualified Person or Engineer to supervise the jobsite and ensure safety regulations are complied with.

### LIMITATIONS

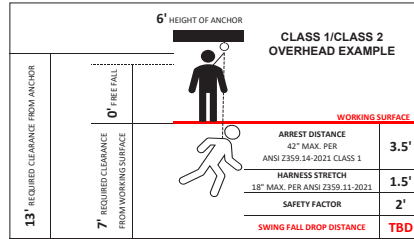
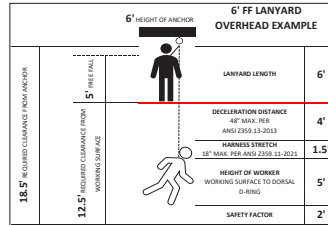
Always select a personal fall arrest system and anchor point location that limits free fall and swing fall as much as possible. A free fall of more than 6 ft. could cause excessive arrest forces that could result in serious injury or death.

Structures for the attachment of the EVO 3/8" Detachable Cable Sleeve shall support a minimum 5,000 lbs. (22 kN) or be designed with a safety factor of two to one by a Qualified Person.

**Fall Clearance:** There must be sufficient clearance below the anchorage connector to arrest a fall before the user strikes the ground or an obstruction. When calculating fall clearance, account for all applicable factors. A Competent Person must reference the entire system's components to calculate Fall Clearance.

#### FALL CLEARANCE DIAGRAMS

\*These diagrams are examples of fall clearance calculations ONLY.



**Swing Falls:** Prior to installation or use, make considerations for eliminating or minimizing all swing fall hazards. Swing falls occur when the anchor is not directly above the location where a fall occurs. Always work as close to, or in line with, the anchor point as possible. Swing falls significantly increase the likelihood of serious injury or death in the event of a fall.

#### SWING FALL



### ANCHORAGE INSTALLATION LOCATION

A Qualified Person or Engineer must conduct an analysis of the workplace and ensure the anchorage location is capable of withstanding loads from a fall. An anchorage location selected for a Personal Fall Arrest System (PFAS) must have a strength capable of sustaining a static load applied in the direction permitted by the PFAS of at least:

- 5,000 lbs. (2267.9 kg) for non-certified anchorages, or
- Two times the maximum arresting force for certified anchorages, or
- 3,100 lbs. for Rescue applications.

When more than one fall arrest system is attached to an anchorage, the strengths set forth in one of the above shall be multiplied by the number of systems attached to the anchorage.

### ALLOWED ANCHOR APPLICATIONS

**\*This product is designed for a single user. Only one PFAS should be attached to the EVO 3/8" Detachable Cable Sleeve at a time.**

**Personal Fall Arrest:** Safewaze Anchors are designed as an anchor point to support a maximum of 1 PFAS when utilized for fall protection applications. The structure to which the anchor is attached must withstand loads applied in the directions permitted by the system of at least 5,000 lbs. (22 kN) or be designed with a safety factor of two to one. Maximum allowable free fall is based on the connector used.

**Restraint:** Safewaze Anchors are authorized for use in Restraint applications. The structure to which the anchor is attached must withstand loads applied in the directions permitted by the system of at least 1,000 lbs. NO free fall is permitted. Restraint systems may only be used on surfaces with slopes up to 4/12 (vertical/horizontal). For Restraint applications, the allowable attachment points to the harness are Dorsal, Front/Sternal, Side, and Shoulder D-rings.

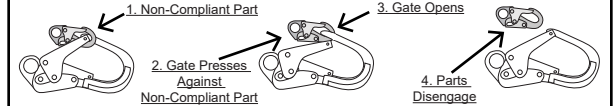
**Work Positioning:** Safewaze Anchors are authorized for use in Work Positioning applications. Work Positioning allows a worker to be supported during suspension while freeing both hands to conduct work operations. The structure to which the Anchor is attached must withstand loads applied in the directions permitted by the system of at least 3,000 lbs. Maximum allowable free fall is 2 ft. For positioning applications, the allowable attachment points to the harness are the Side D-rings.

**Rescue/Confined Space:** Safewaze Anchors are authorized for use in Rescue/ Confined Space applications. Rescue systems are utilized to safely recover a worker from a confined location or after exposure to a fall. Composition of rescue systems can vary based upon the type of rescue involved. The structure to which the anchor is attached must withstand loads applied in the directions permitted by the system of at least 3,100 lbs. NO free fall is permitted for rescue scenarios. For confined space scenarios, maximum allowable free fall is based on the PFAS used. For these applications, the allowable attachment points to the harness are Dorsal, Front/Sternal, and Shoulder D-rings.

### COMPATIBILITY OF COMPONENTS/CONNECTORS

- Safewaze equipment is designed for, and tested with, associated Safewaze components or systems. If substitutions or replacements are made, ensure all components meet the applicable ANSI requirements. Read and follow manufacturer's instructions for all components and subsystems in your PFAS. Not following this guidance may jeopardize compatibility of equipment and possibly affect the safety and reliability of the system.
- Connectors are compatible with connecting elements when they have been designed to work together in such a way that their sizes and shapes do not cause their gate mechanisms to inadvertently open regardless of how they become oriented.
- Connectors (hooks, carabiners, and D-rings) must be capable of supporting at least 5,000 lbs. (22 kN).
- Connectors must be compatible with the anchorage or other system components.
- Do not use equipment that is not compatible. Non-compatible connectors may unintentionally disengage (Figure 3).
- Connectors must be compatible in size, shape, and strength.
- Self-locking snap hooks and carabiners are required by OSHA guidelines.
- Some specialty connectors have additional requirements. Contact Safewaze if you have any questions about compatibility.

#### UNINTENTIONAL DISENGAGEMENT



Using a connector that is undersized or irregular in shape (1) to connect a snap hook or carabiner could allow the connector to force open the gate of the snap hook or carabiner. When force is applied, the gate of the hook or carabiner presses against the non-compliant part (2) and forces open the gate (3). This allows the snap hook or carabiner to disengage (4) from the connection point.

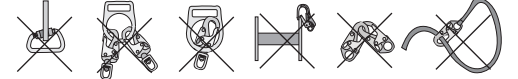
### MAKING CONNECTIONS

Snap hooks and carabiners used with this equipment must be double locking and/or twist lock. Ensure all connections are compatible in size, shape, and strength. Do not use equipment that is not compatible. Ensure all connectors are fully closed and locked.

Safewaze connectors (hooks, carabiners, and D-rings) are designed to be used only as specified in each product's manual. See Figure 4 for examples of inappropriate connections. Do not connect snap hooks and carabiners:

- To a D-ring to which another connector is attached.
- In a manner that would result in a load on the gate (with the exception of tie-back hooks).
- In a false engagement, where features that protrude from the snap hook or carabiner catch on the anchor, and without visual confirmation seems to be fully engaged to the anchor point.
- To each other.
- By wrapping the web lifeline around an anchor and securing to lifeline, except as allowed for tie-back models.
- To any object which is shaped or sized in a way that the snap hook or carabiner will not close and lock, or that roll-out could occur.
- In a manner that does not allow the connector to align properly while under load.

#### INAPPROPRIATE CONNECTIONS



Large throat snap hooks must not be connected to standard size D-rings or similar objects which will result in a load on the gate if the hook or D-ring twists or rotates, unless the snap hook complies with ANSI Z359.12 and is equipped with a 3,600 lb. (16 kN) gate.

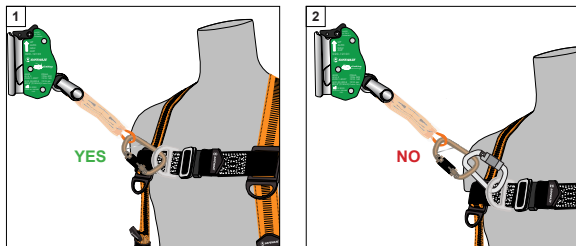
A diagram of a climbing rope assembly. A green cable sleeve is at the top, connected to an orange energy absorber, which is connected to a silver carabiner. Labels A, B, and C are in boxes with arrows pointing to each component respectively.

A	Cable Sleeve
B	Energy Absorber
C	Carabiner

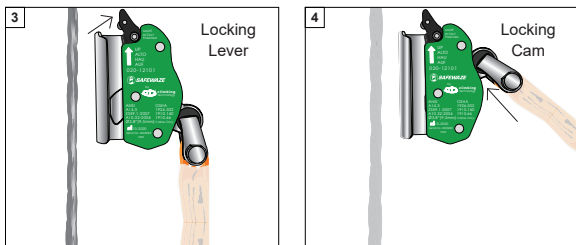
Prior to installing a Safewaze EVO 3/8" Detachable Cable Sleeve, a Competent Person must ensure the intended installation location is capable of withstanding loads from a fall. All components of the PFAS, ladder system, and cable should be undamaged and safe for climbing operations. Cable must be 3/8" in diameter.

1. Connect the 020-12101 carabiner directly to the sternal D-ring of the full body harness (FBH) (Figure 1).

\*Note: **Never** attach the product's carabiner to another carabiner that is connected to the FBH's sternal D-ring (Figure 2).

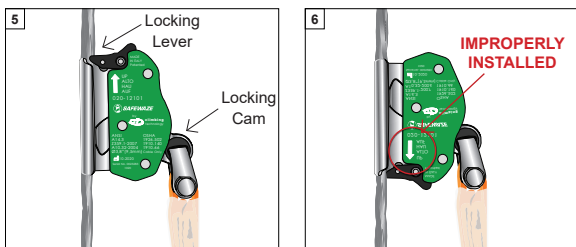


2. At the same time, rotate both the Cable Sleeve's locking lever and locking cam lever upwards to clear the cable slot (Figures 3 & 4).

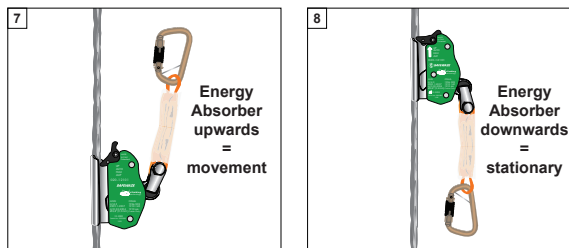


3. Place the Cable Sleeve onto the vertical cable so the cable is seated in the cable slot and release the locking lever and locking cam lever to complete attachment to the vertical cable (Figure 5).

\*Note: Ensure the reference arrow etched into the housing is pointed upwards (Figure 6).

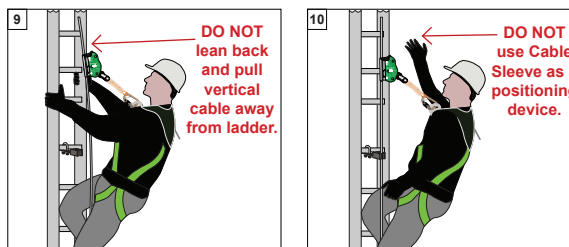


-Climbing operations can begin once properly installed. With the Energy Absorber in an upward orientation relative to the Cable Sleeve, the 020-12101 will trail along the cable as the user ascends the ladder (Figure 7). If the Energy Absorber is oriented at a downward angle relative to the Cable Sleeve, the 020-12101 will remain stationary (Figure 8).



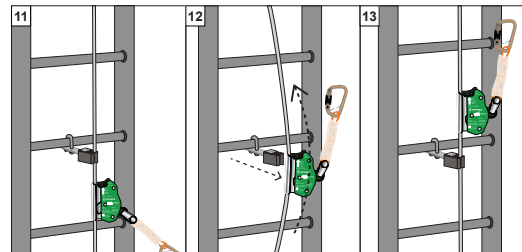
-When ascending a ladder with the 020-12101, the user must maintain 3 points of contact with the ladder assembly. The user should climb in as straight of an orientation as possible. The user should not lean outward from the ladder assembly when climbing (Figure 9). This action puts tension on the vertical cable which inhibits proper operation of the Cable Sleeve.

-If the user must remain in a stationary position on the ladder, a positioning lanyard can be utilized. **Never** attempt to use the vertical cable and Cable Sleeve as a positioning device (Figure 10).



-If the ladder is equipped with cable guides, the user must pull the vertical cable free from the cable guide when they reach a point where the Cable Sleeve is just below the cable guide (Figures 11 and 12). Once the vertical cable is free of the cable guide, the user can slide the Cable Sleeve to a point above the cable guide and then push the vertical cable back into the cable guide to continue climbing operations (Figure 13).

\*Note: **Never** remove the Cable Sleeve from the vertical cable or from the FBH's sternal D-ring at any point while climbing the ladder system.





























- Safewaze products shall be inspected prior to each use by the user and at least annually by a Competent Person other than the user.
- Competent Person inspections must be recorded in the Inspection Log included in this manual and on the inspection grid label on the product.
- Severity of conditions during use of the product may necessitate increased frequency of documented inspections.
- Prior to each use, inspect the product for deficiencies or damage including, but not limited to, sharp edges, rough edges, deformations, corrosion, pits, burrs, chemical exposure, extreme heat exposure, and damaged, missing, or illegible labels.
- If any deficiencies or defects are found, the product must IMMEDIATELY be removed from service.

- Users should consult with their doctor to verify ability to safely absorb the forces of a fall arrest event. Fitness level, age, and other health conditions can greatly affect an individuals ability to withstand fall arrest forces. Women who are pregnant and individuals considered minors must not use any Safewaze equipment.
- Units that are exposed to fall arrest forces must be IMMEDIATELY removed from service and destroyed.
- A preplanned rescue procedure in the event of a fall is required. The rescue plan must be specific to the project. The rescue plan must allow for employees to rescue themselves or be promptly rescued by alternative means.
- A Competent Person must conduct an analysis of the workplace and anticipate where workers will be conducting their duties, the route they will take to reach their work, and the existing and potential fall hazards they may be exposed to. The Competent Person must choose the fall protection equipment to be utilized.
- Equipment designated for fall protection must never be used to lift, hang, support, or hoist tools or equipment unless specifically certified for such use.

- Prior to installation, store the product in a cool, dry area where it will not be exposed to extreme light, extreme heat, excessive moisture, or possibly corrosive chemicals or materials.
- The product can be cleaned with water and mild soap if necessary. The user should remove all dirt, possible corrosives, and contaminants from the product prior to, and after, each use. Never use any type of corrosive substance to clean the unit. Excess water should be blown out with compressed air. Hardware can be wiped off with a clean, dry cloth. Do not store product if wet or damp. Allow product to fully dry before being stored.

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INSPECTION  
FORM

Inspection Date:	Inspector:	Pass/Fail:  	Comments/ Corrective Action:
		 	
		 	
		 	
		 	
		 	
		 	
		 	
		 	
		 	
		 	
		 	
		 	

Please contact Customer Service at (800) 230-0319 for questions.