

GUARDIAN

FALL PROTECTION



Product Name: EcoAnchor

Part #: 30801

Instruction Manual

Do not throw away these instructions!

Read and understand these instructions before using equipment!

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Introduction

Thank you for purchasing a Guardian Fall Protection EcoAnchor. 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 and any other included instructions must be made available to the user of the equipment. The user must understand how to safely and effectively use the EcoAnchor, and all fall safety equipment used in combination with the EcoAnchor.

User Information	
Date of First Use:	_____
Serial #:	_____
Trainer:	_____
User:	_____

Applicable Safety Standards

When used according to instruction specifications, this product meets or exceeds all applicable EN 795 standards for fall protection. Applicable standards and regulations depend on the type of work being done, and also might include state-specific regulations. Consult regulatory agencies for more information on personal fall arrest systems and associated components.

Worker Classifications

	Understand the following definitions of those who work near or who may be exposed to fall hazards.
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Qualified Person: A person with an accredited degree or certification, and with extensive experience or sufficient professional standing, who is considered proficient in planning and reviewing the conformity of fall protection and rescue systems.

Competent Person: A highly trained and experienced person who is ASSIGNED BY THE EMPLOYER to be responsible for all elements of a fall safety program, including, but not limited to, its regulation, management, and application. A person who is proficient in identifying existing and predictable fall hazards, and who has the authority to stop work in order to eliminate hazards.

Authorized Person: A person who is assigned by their employer to work around or be subject to potential or existing fall hazards.

It is the responsibility of a Qualified or Competent person to supervise the job site and ensure all applicable safety regulations are complied with.

Product Specific Applications

	Use of equipment in unintended applications may result in serious injury or death. Maximum 1 attachment per connection point.
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Personal Fall Arrest: EcoAnchor may be used to support a MAXIMUM 1 PFAS for use in Fall Arrest applications. Structure must withstand loads applied in the directions permitted by the system of at least 5,000 lbs. Maximum free fall is 6', or up to 12' if used in combination with equipment explicitly certified for such use. Applicable D-ring: Dorsal.



Restraint: EcoAnchor may be used in Restraint applications. Restraint systems prevent workers from reaching the leading edge of a fall hazard. Always account for fully deployed length of lanyard/SRL. Structure 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). Applicable D-rings: Dorsal, Chest, Side, Shoulder.



Work Positioning: EcoAnchor may be used in Work Positioning applications. Work Positioning systems allow a worker to be supported while in suspension and work freely with both hands. Structure must withstand loads applied in the directions permitted by the system of at least 3,000 lbs. Maximum allowable free fall is 2'. Applicable D-rings: Side, Shoulder.

For all applications: worker weight capacity range (including all clothing, tools, and equipment) is 130-220 lbs.

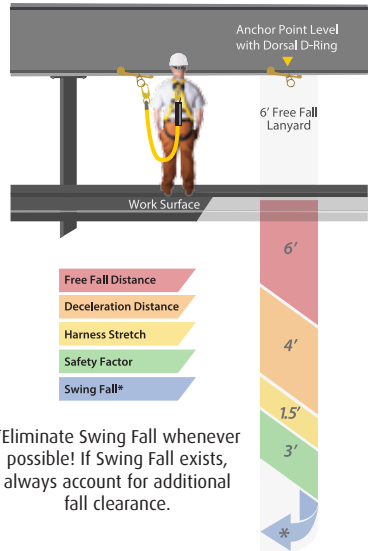
Limitations

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 a MINIMUM 3' safety factor, deceleration distance, user height, length of lanyard/SRL, and all other applicable factors.

Diagram shown is an example fall clearance calculation 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 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.

Fall clearance calculation shown based on standing worker falling directly in-line with anchor point. Always consider potential swing fall and other hazards when calculating fall clearance.



*Eliminate Swing Fall whenever possible! If Swing Fall exists, always account for additional fall clearance.

Compatibility: When making connections with EcoAnchor, eliminate all possibility of roll-out. Roll-out occurs when interference between a hook and the attachment point causes the hook gate to unintentionally open and release. All connections must be selected and deemed compatible with EcoAnchor by a Competent Person. All connector gates must be self-closing and self-locking, and withstand minimum loads of 3,600 lbs. See the following for examples of compatible/incompatible connections:

Connector closed and locked to D-ring. **OK.**



Connector to integral lanyard. **NO.**

Two connectors to same D-ring. **NO.**



Connector directly to webbing. **NO.**

Incompatible or irregular application, which may increase risk of roll-out. **NO.**



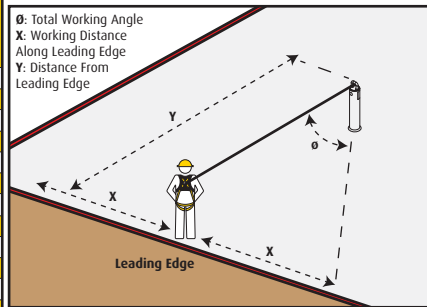
Connector directly to horizontal lifeline. **NO.**

Two or more snap hooks or carabiners connected to each other. **NO.**



This chart details allowable working zones required to reduce risk of swing falls and improper side loading. ALWAYS adhere to information specified by chart.

Anchor Distance From Leading Edge (Y)	Working Distance Along Roof Edge (Either Direction) (X)	Working Angle From Perpendicular (θ)
6'	8'	53°
10'	9' - 9"	45°
15'	11' - 7"	38°
20'	13' - 3"	33°
25'	14' - 6"	30°
30'	16'	28°
35'	17' - 2"	26°
40'	18' - 3"	24°
45'	19' - 4"	23°
50'	19' - 10"	21°
55'	21' - 4"	21°
60'	22' - 3"	21°



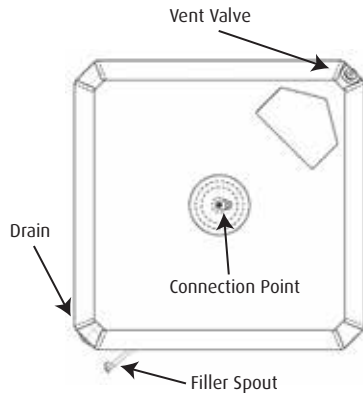
For example, if the anchorage connector is 6' from the leading edge (Y), the working distance (X) is 8' in each direction from the perpendicular, which translates to a 53° working angle.

Components and Specifications

Materials: Fire-resistant neoprene

Empty: 18 lb.; Full: 948 lbs.

Dimensions: 4' 4" (Length) x 4' 4" (Width) x 7.9" (Height)



Installation and Use

Prior to use, plan your system:

1. All PFAS equipment must be selected and deemed compatible with EcoAnchor by a Competent Person.
2. Eliminate or minimize all swing fall hazards.
3. Ensure structure on which EcoAnchor is to be placed, and on which work is to be performed, is free of all hazards, including, but not limited to, debris, rot, rust, sharp or abrasive edges and surfaces, and hazardous materials.
4. EcoAnchor may be installed on roof pitches up to 5°. ONLY install on concrete, tarmac, felt and mineral, EPDM membrane, or felt and chippings (loose chippings must be removed). Consult Guardian with any questions regarding other potential compatible substrates.
5. EcoAnchor must be installed AT LEAST 10' from leading edges of all fall hazards.
6. If EcoAnchor is used in Fall Arrest applications, ensure lanyard/SRL used in combination with EcoAnchor is permitted for use over Leading Edges.
7. EcoAnchor is a temporary anchorage connector only. When not in use, drain all water from EcoAnchor and store in a clean, dry location.

Wind load rating: 80 MPH.

DO NOT USE if potential exists for exposure to wind gusts greater than 80 MPH.



WARNING

NEVER install where there is a risk of frost or freezing conditions, or on surfaces contaminated with algae, oil, grease, or other lubricants.

Installation:

1. Remove EcoAnchor from carrying bag, and unfold.
2. Place EcoAnchor at selected installation location. Do not position in areas where water accumulates. Always maximize amount of contact area with substrate. Installation of EcoAnchor does not require penetration of substrate.
3. Position EcoAnchor so that Vent Valve is at highest point, and Drain is at lowest point. Vent Valve allows air to escape, and prevents over-pressurizing. Incorrect positioning can result in trapped air and under-filling, making the anchor unsafe for use.



4. Place hose over Filler Spout with Rubber Stopper removed. Filler Spout is compatible with hoses with an outside diameter between 5/8" - 3/4". Fill with cold water only. Filling is complete when water begins to flow from the diagonally opposite Vent Valve. To detach hose, squeeze Filler Spout, remove hose, and replace Rubber Stopper.

* If intended for use in cold climates, EcoAnchor may be filled, in part, with antifreeze. NEVER exceed the ratio of 1 part antifreeze per 1 part water.

5. Attach complete and compatible PFAS to EcoAnchor Connection Point.

6. EcoAnchor may be used as a component of a complete and compatible HLL system for use in Restraint applications ONLY. Maximum 2 workers per EcoAnchor HLL system. Set-up, installation, and use of HLL system must be done under the supervision of a Qualified Person.

7. If EcoAnchor is left filled and in position for more than 24 hours, it must be inspected each working day for leakage by ensuring the material near Vent Valve is taut. If necessary, refill EcoAnchor until water comes out of the Vent Valve.

8. To remove EcoAnchor from installation location, first drain all water by unscrewing cap of Drain.

9. If outside of bag is wet, allow to fully dry prior to storing.

10. To store, fold twice lengthwise, carefully expelling any remaining air. Then, roll lengthwise until compressed into a small roll, and secure with fitted straps. Finally, place EcoAnchor into storage bag.

Maintenance, Cleaning, and Storage

If EcoAnchor fails inspection in any way, immediately remove it from service, and contact Guardian to inquire about its return or repair.

Cleaning after use is important for maintaining the safety and longevity of EcoAnchor. Remove all dirt, corrosives, and contaminants from EcoAnchor before and after each use. If EcoAnchor cannot be cleaned with plain water, use mild soap and water, then rinse and wipe dry. NEVER clean EcoAnchor with corrosive substances.

When not in use, store equipment where it will not be affected by heat, light, excessive moisture, chemicals, or other degrading elements.

Inspection

Prior to EACH use, inspect EcoAnchor for deficiencies, including, but not limited to, corrosion, deformation, pits, burrs, rough surfaces, sharp edges, cracking, rust, paint buildup, excessive heating, alteration, and missing or illegible labels. IMMEDIATELY remove EcoAnchor from service if defects or damage are found, or if exposed to forces of fall arrest.

Ensure that applicable work area is free of all damage, including, but not limited to, debris, rot, rust, decay, cracking, and hazardous materials. Ensure that selected work area will support the application-specific minimum loads set forth in this instruction manual. Work area MUST be stable.

At least every 6 months, a Competent Person other than the user must inspect EcoAnchor. **Competent Person inspections MUST be recorded in inspection log in instruction manual and on equipment inspection grid label. The Competent Person must sign their initials in the box corresponding to the month and year the inspection took place.**

During inspection, consider all applications and hazards EcoAnchor have been subjected to.

Inspection Log

Date of First Use: _____.

Product lifetime is indefinite as long as it passes pre-use and Competent Person inspections. User must inspect prior to EACH use. Competent Person other than user must complete formal inspection at least every 6 months. Competent Person to inspect and initial.

This inspection log must be specific to one EcoAnchor. Separate inspection logs must be used for each EcoAnchor. All inspection records must be made visible and available to all users at all times.

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If equipment fails inspection IMMEDIATELY REMOVE FROM SERVICE.

Safety Information

WARNING

Failure to understand and comply with safety regulations may result in serious injury or death. Regulations included herein are not all-inclusive, are for reference only, and are not intended to replace a Competent Person's judgment or knowledge of federal or state standards.

Do not alter equipment. Do not misuse equipment.

Workplace conditions, including, but not limited to, flame, corrosive chemicals, electrical shock, sharp objects, machinery, abrasive substances, weather conditions, and uneven surfaces, must be assessed by a Competent Person before fall protection equipment is selected.

The analysis of the workplace must anticipate where workers will be performing their duties, the routes they will take to reach their work, and the potential and existing fall hazards they may be exposed to. Fall protection equipment must be chosen by a Competent Person. Selections must account for all potential hazardous workplace conditions. All fall protection equipment should be purchased new and in an unused condition.

Fall protection systems must be selected and installed under the supervision of a Competent Person, and used in a compliant manner. Fall protection systems must be designed in a manner compliant with all federal, state, and safety regulations. Forces applied to anchors must be calculated by a Competent Person.

Unless explicitly stated otherwise, the maximum allowable free fall distance for lanyards must not exceed 6'. No free fall allowed for non-LE SRLs. Class A SRLs must arrest falls within 24"; Class B SRLs must arrest falls within 54".

Harnesses and connectors selected must be compliant with manufacturer's instructions, and must be of compatible size and configuration. Snap hooks, carabiners, and other connectors must be selected and applied in a compatible fashion. All risk of disengagement must be eliminated. All snap hooks and carabiners must be self-locking and self-closing, and must never be connected to each other.

A pre-planned rescue procedure in the case of a fall is required. The rescue plan must be project-specific. The rescue plan must allow for employees to rescue themselves, or provide an alternative means for their prompt rescue. Store rescue equipment in an easily accessible and clearly marked area.

Training of Authorized Persons to correctly erect, disassemble, inspect, maintain, store, and use equipment must be provided by a Competent Person. Training must include the ability to recognize fall hazards, minimize the likelihood of fall hazards, and the correct use of personal fall arrest systems.

NEVER use fall protection equipment of any kind to hang, lift, support, or hoist tools or equipment, unless explicitly certified for such use.

Equipment subjected to forces of fall arrest must immediately be removed from use.

Age, fitness, and health conditions can seriously affect the worker should a fall occur. Consult a doctor if there is any reason to doubt a user's ability to withstand and safely absorb fall arrest forces or perform set-up of equipment. Pregnant women and minors must not use this equipment.

Physical harm may still occur even if fall safety equipment functions correctly. Sustained post-fall suspension may result in serious injury or death. Use trauma relief straps to reduce the effects of suspension trauma.

Labels

