



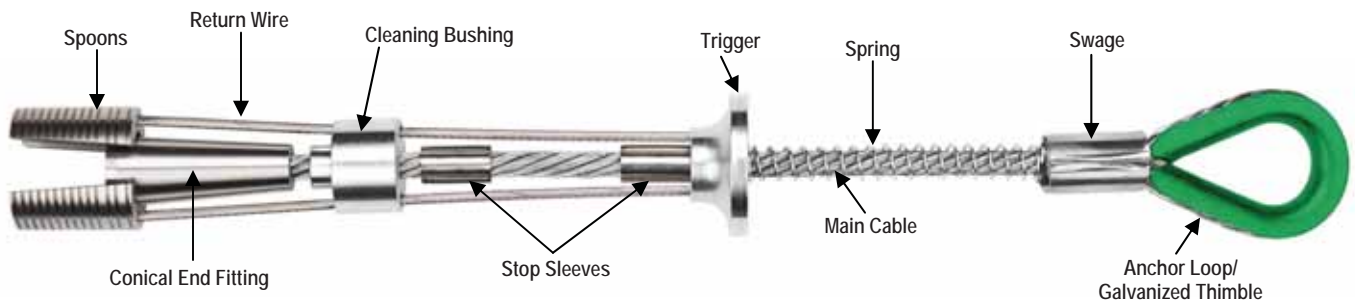
by Honeywell

# Miller Grip™ Friction Bolt Anchorage Connector — Model #494

**Portable/Reusable Anchorage Connector  
DESIGNED FOR USE WITH A 39mm FRICTION ROCK BOLT**

## IMPORTANT!!

All persons using this equipment must read, understand and follow all instructions. Failure to do so may result in serious injury or death. Users should be familiar with pertinent regulations governing this equipment. All individuals who use this product must be properly trained in its use. If a fall occurs, the Miller Grip must be disposed of according to the manufacturer's instructions.



The Miller Grip Friction Bolt Anchorage Connector Model #494 is designed for:

- single-user fall protection anchorage applications
- Miller approved horizontal and vertical lifeline anchorage applications

### Specifications

Model No.:	494
Compatible Friction Bolt Size:	39mm (1-1/2 in)
Maximum Capacity:	400 lbs (181.4kg)
Minimum Tensile Strength:	10,000 lbs (44kN)
Compliance:	OSHA & ANSI Z359.1

**For use by ONE PERSON ONLY\***

**\*May be used for two persons in Miller approved lifeline anchorage applications only**

**Color Coded with Bright Green Thimble to Indicate "FALL PROTECTION USE ONLY"**

### Materials

Main Cable:	7x19 Galvanized Cable
Swage, Stop Sleeves, Spoons:	304 Stainless Steel
Trigger:	6061 T-6 Aluminum
Cleaning Bushing:	Zinc Plated Steel
Spring:	Zinc Plated Spring Steel
Swage:	Zinc Plated Copper
Return Wire:	1x19 Galvanized Cable
Thimble:	Polyurethane

**MADE IN THE USA**

## WARNING!!

- All warnings and instructions shall be provided to authorized persons/users.
- Proper precautions should always be taken to remove any obstructions, debris, material, or other recognized hazards from the work area that could cause injuries or interfere with the operation of the system.
- Always inspect unit according to manufacturer's instructions prior to each use. Do not use this device if any components are damaged, cracked, broken, or deformed. Do not use the device if it does not operate smoothly and properly.
- All equipment should be inspected by a qualified person on a regular basis.
- To minimize the potential for accidental disengagement, a competent person must ensure system compatibility.
- Fall arrest systems used with the anchorage connector must be rigged in accordance to regulatory requirements. (All instructions and warnings provided with the components of the personal fall arrest system must be read, understood, and followed.)
- Ensure that the anchor point, in combination with the connecting device, is at a height that limits free fall distance to 6 feet (1.8m) or less.

## WARNING!!

- Use the proper method of coupling to anchorage.
- Do not use incompatible connectors with this device. Use only Miller approved connectors/connecting devices, such as auto-locking snap hooks and carabiners. Always ensure that connectors are fully closed and locked when in use. (Refer to separate instructions supplied with the connecting device.)
- Always work directly under the anchor point to avoid a swing-fall injury.
- Always check for obstructions below the work area to make sure potential fall path is clear and allow adequate fall clearance below the work surface.
- The authorized person/user shall have a rescue plan and the means at hand to implement it when using this equipment.
- Remove unit from service if subjected to fall arrest forces. This product is not designed to be repaired or altered in any way.
- Never use fall protection equipment for purposes other than those for which it was designed.
- Equipment must not be exposed to environmental hazards and chemicals which may produce a harmful effect.
- Do not allow equipment to come in contact with anything that will damage it, including, but not limited to, sharp, abrasive, rough or high-temperature surfaces, welding, heat sources, electrical hazards, or moving machinery.
- Do not expose the equipment to any hazard which it is not designed to withstand. Consult the manufacturer in cases of doubt.
- Pregnant women and minors must not use this product.

## Installation and Use of Miller Grip Model 494

Miller Grip Model #494 is designed to be used for fall protection applications only. It is not to be used in any other anchoring situation. Only trained and competent personnel should install and use this equipment. The device may be installed in horizontal, vertical or overhead/ceiling surfaces. It may also be used in Miller approved horizontal and vertical lifeline systems.

The structure that this product is anchored to must be capable of supporting 5,000 lbs. (22.2 kN) per user attached; or be designed, installed and used, under the supervision of a qualified person, as part of a complete personal fall arrest system which maintains a safety factor of at least two. Anchorage requirements based on ANSI are as follows:

- For fall arrest systems, anchorages must withstand a static load of 5,000 lbs. (22.2kN) for non-certified anchorages or two times the maximum arresting force for certified anchorages.
- When more than one personal fall arrest system is attached to an anchorage, the above anchorage strengths must be multiplied by the number of personal fall arrest systems attached to the anchorage.

The Miller Grip Anchorage Connector is designed for use with Miller approved components. Substitution or replacement with non-approved component combinations or subsystems or both may affect or interfere with the safe function of each other and endanger the compatibility within the system. This incompatibility may affect the reliability and safety of the total system.

A safe anchor point is established when the Miller Grip Friction Bolt Anchorage Connector (#494) is inserted into a friction bolt with an outside diameter of 39mm (1-1/2 in). Follow manufacturer's instructions for proper installation of friction bolt.

### IMPORTANT!

**Remove all dirt and debris from inside the friction bolt before placing this unit. Use the friction bolt anchor cleaning bushing to clean the inner walls and blow the hole out with compressed air prior to inserting the friction bolt.**

The Miller Grip Friction Bolt Anchor shown inserted 4" (101.6mm) into the friction bolt.



**WARNING: The spoons must not rest on the split section of the friction bolt.**

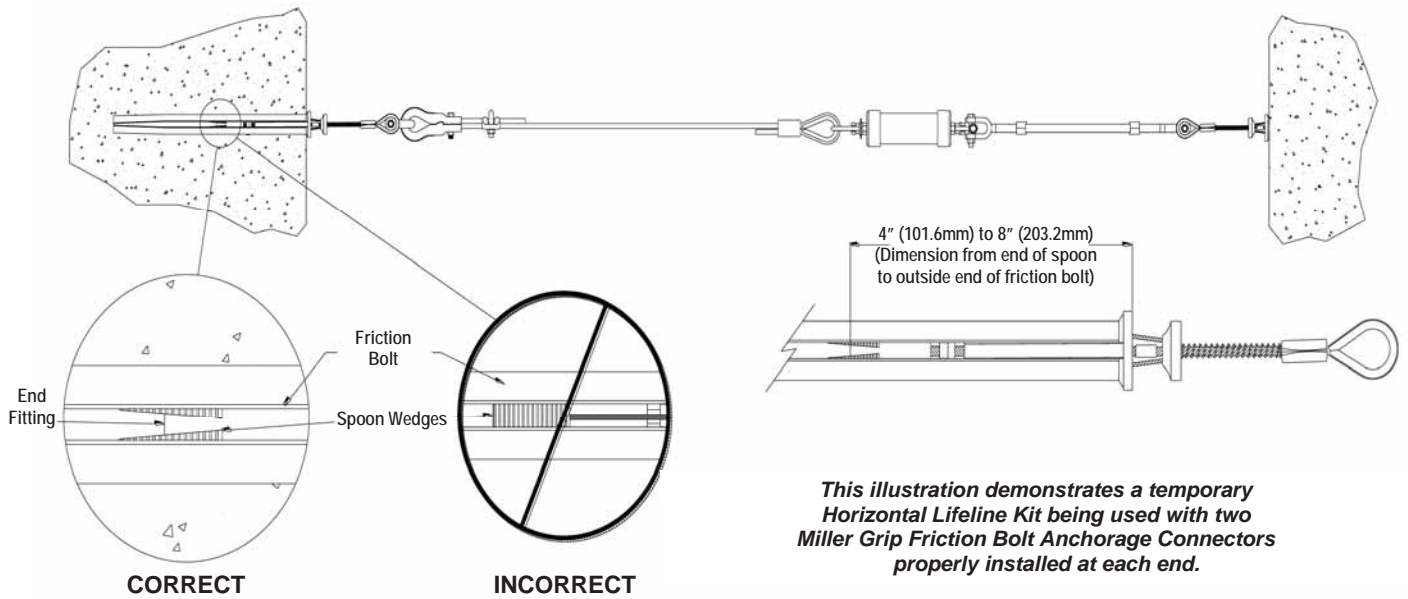
When placing a Miller Grip Friction Bolt Anchor, place your thumb inside the anchor loop and your first two fingers around the trigger. Retract the trigger until the spring bottoms out. With your other hand, pinch the two spoons between your thumb and index finger. **IMPORTANT:** Hold the trigger fully retracted while inserting the unit into the friction bolt. Both spoons must be evenly placed side by side at the bottom of the hole. **DO NOT** force the unit into the hole. Insert the unit slowly and gently.

### Proper Placement Guidelines

- The friction bolt anchor must be inserted 4" (101.6mm) to 8" (203.2mm).
- Make sure the unit is in a straight section of the friction bolt.
- Place the spoons so they rest on the inner walls of the friction bolt and not on the split section.
- Give a slight tug on the anchor loop to set in place [5-10 lbs (2.3-4.5kg)].
- You must be able to see and have access to the cleaning bushing from outside the friction bolt. Do Not place in a bent section of the friction bolt or to where the cleaning bushing is not visible.
- The friction bolt must be embedded into the substrate. Do Not use the anchor in a friction bolt that is sticking out of the substrate or is in a cavity without the substrate supporting the friction bolt. Friction bolt must be properly installed.

Connecting devices used in conjunction with the Miller Grip Anchorage Connector must be attached to the anchor loop only.

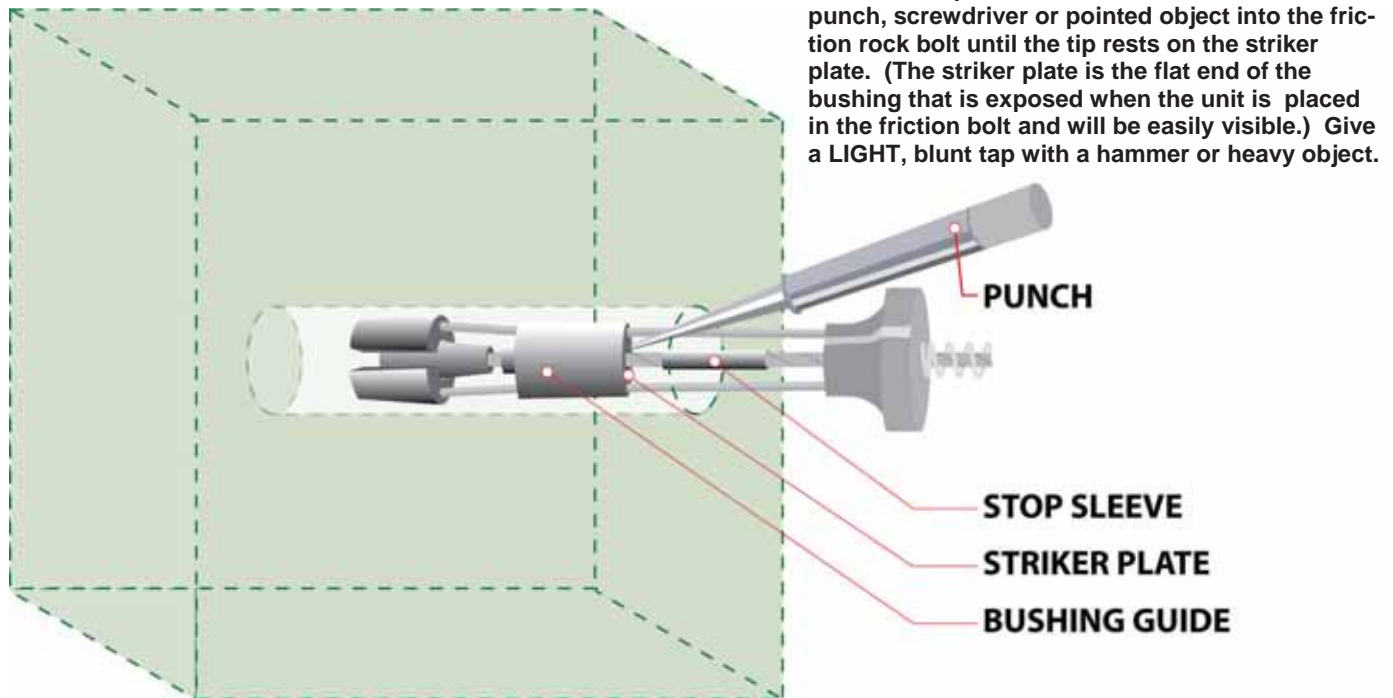
## Temporary Horizontal Lifeline Application



When using the Miller Grip Friction Bolt Anchor within a Miller approved Temporary Horizontal Lifeline System, the maximum number of users is two (2) simultaneously. System capacities are based on the maximum user's weight (including tools, clothing, etc.) of 400 lbs. (181.4 kg). Miller Fall Protection requires the use of a Miller full-body harness and shock-absorbing lanyard or self-retracting lifeline/fall limiter that limits fall arrest forces with the horizontal lifeline system. All instructions and warnings provided with the body wear, connecting device and horizontal lifeline system, must be read and understood before using the equipment.

To meet the requirements set forth in OSHA 1926.502, the Temporary Horizontal Lifeline must be "installed and used as follows: (i) as part of a complete personal fall arrest system which maintains a minimum safety factor of two; and (ii) under the supervision of a qualified person." The horizontal lifeline system must include an inline energy absorber that is designed to keep the forces on each anchorage connector to a maximum of 3,789.5 lbf. (16.9kN). This force requires that the anchorage connectors and the substrate to which they are attached must be capable of supporting 7,579 lbf. (33.7kN) in the direction of pull. The Miller Grip Friction Bolt Anchor has been tested and rated for 10,000 lbs. (44kN) to meet OSHA's requirement for the system.

### Removal:



**Inspection:**

1. Make sure unit is straight and operates smoothly.
2. Make sure the label is affixed to unit.
3. Make sure trigger stop is not bent or damaged.
4. Make sure cables are not kinked, frayed or damaged.
5. Make sure metal components are not damaged.
6. Make sure metal spoons and conical end fitting operate smoothly and no metal burrs have occurred.

**Storage and Cleaning:**

1. Blow off unit after each use with compressed air.
2. Store in clean dry environment.
3. Store in secure locked area.
4. Store and put away at the end of each work day, unless anchor is being used as part of a temporary horizontal lifeline system. The mining industry can be a highly abusive environment. It is important that you take proper care of the anchorage connector and store it in the friction bolt anchor container when not in use.
5. Do not pile any objects on top of unit during storage.
6. Keep unit free of grease, oils and dirt.
7. Never lend your unit to other workers.

**Disposal:**

1. Dispose of unit after any fall has occurred.
2. Dispose of unit if cable becomes kinked or bent.
3. Dispose of unit if trigger stop is bent or damaged.
4. Dispose of unit if trigger action is rough or sticky.
5. Dispose of unit if return wire becomes bent or frayed.
6. Proper disposal requires the unit's spoons be cut off the return wires and thrown away.

**LABELING**

The following label must remain affixed to this product.

**MILLER**  
by Honeywell  
**Model # 494**  
**39mm**  
Do not remove label

( US Patents 6,729,821 / 7,011,281 / 7,357,363 )

All persons using this equipment must read, understand and follow all instructions. Failure to do so could result in serious injury or death.

Refer to the instruction manual supplied with this product for the proper installation procedures. Inspect before each use. In addition, a competent person must inspect at least annually. Use only with Miller approved connectors or connecting devices. If a fall occurs, remove this anchor and the entire fall protection system from service.

This product meets OSHA 1926.502 & ANSI Z359.1 requirements.

Lot # XXX / Mfg: M/YR  
**10,000 lbs. / 44kN**  
Max Capacity:  
400 lbs. (181.4kg)  
ANSI Z359.1 - 310 lbs. (140.6kg)

**Materials:**  
Stainless steel, aluminum, zinc plated steel and copper, 7x19 galvanized wire rope.

**WARNING:** This anchor must be used in 39mm friction rock bolts only! It is the responsibility of the end user to make sure the friction rock bolt can withstand the 10,000 lbs. strength required by this anchor. Avoid hazards such as thermal, electrical and chemical sources. Avoid sharp edges and abrasive surfaces.

**INSPECTION AND MAINTENANCE LOG**

DATE OF MANUFACTURE: \_\_\_\_\_ MODEL NO.: \_\_\_\_\_ DATE PURCHASED: \_\_\_\_\_

Date	Inspection Items Noted	Corrective Action	Name of Inspector	Signature