

## USER INSTRUCTION MANUAL CROSS ARM STRAPS AND ANCHOR WIRE ROPE SLINGS

### THESE INSTRUCTIONS APPLY TO THE FOLLOWING MODELS:

UFA20003, UFA20004, UFA20006, UFA20010, UFA20016, UFA20024,  
UFA20030, UFA20504, UFA20506, UFA20602, UFA20602(FR), UFA20603,  
UFA20603(FR), UFA20604, UFA20604(FR), UFA21004, UFA21006, UFA710003,  
UFA710004, UFA710006, UFA710103, UFA710104 and UFA710106



This manufacturer's user instruction manual meets the requirements of ANSI Z359.18-2017. As per OSHA, this manual should be used as a part of an employee training program.

### **⚠ WARNING**

The products enumerated in this instruction manual are a part of a personal protective, work support or rescue system. It is important that the user reads and follows the manufacturer's instructions for each component of the system. This manual contains information which is important to the user's safety and should be kept in a safe place for future reference as needed. The instructions provided in this manual are meant for the use of this equipment and should be read thoroughly and understood by the user before the equipment is used. Manufacturer's instructions must be properly followed for the correct use and maintenance of this equipment. Please contact KStrong for any queries or questions regarding use of this equipment.

### **TRAINING**

In order to ensure that the user is familiar with the instructions provided in this manual, it becomes the responsibility of the user to undergo proper training on the proper inspection, use and maintenance of this equipment. It is also the employer's responsibility to ensure that all users are trained in proper use, inspection and maintenance of Fall Protection Equipment.

### **TECHNICAL SPECIFICATION**

S.No.	Model No.	Material of Construction	Minimum Breaking strength	Conformity
1	UFA20003	Polyester And Steel	5000 lbs.	ANSI Z359.18 -2017
2	UFA20004	Polyester And Steel		
3	UFA20006	Polyester And Steel		
4	UFA20010	Polyester And Steel		
5	UFA20016	Polyester And Steel		
6	UFA20024	Polyester And Steel		
7	UFA20030	Polyester And Steel		
8	UFA20504	Polyester And Steel		
9	UFA20506	Polyester And Steel		
10	UFA20602	Polyester And Steel		
11	UFA20602(FR)	Aramid And Steel		
12	UFA20603	Polyester And Steel		
13	UFA20603(FR)	Aramid And Steel		
14	UFA20604	Polyester And Steel		
15	UFA20604(FR)	Aramid And Steel		
16	UFA21004	Polyester And Steel		
17	UFA21006	Polyester And Steel		
18	UFA710003	5/16" Galvanized PVC Coated Wire Rope		
19	UFA710004	5/16" Galvanized PVC Coated Wire Rope		
20	UFA710006	5/16" Galvanized PVC Coated Wire Rope		
21	UFA710103	5/16" Galvanized PVC Coated Wire Rope		
22	UFA710104	5/16" Galvanized PVC Coated Wire Rope		
23	UFA710106	5/16" Galvanized PVC Coated Wire Rope		

## IMPORTANT INFORMATION

- It is important to inspect the equipment in accordance with the manufacturer's instructions before each use.
- Inspection of equipment should be conducted on a regular basis by a qualified person with the results recorded in the inspection log.
- DO NOT REMOVE product labels which include important warnings and information for the authorized person.  
"Authorized Person" is a person who is exposed to fall hazards during the course of their work. This individual requires formal training in the use of personal fall protection equipment and systems. The term "Authorized Person" may be used interchangeably with "User" and "End-User."
- DO NOT ALTER the equipment in any way.
- Always send the equipment back to the manufacturer, or to the persons or entities authorized in writing by the manufacturer, for any repairs if required.
- Never use any natural material like manila, cotton, etc. as part of a Fall Protection System.
- Fall protection equipment should only be used for the purpose for which it has been designed.
- This equipment should never be used for towing and hoisting or for any other purpose than its intended use.
- A competent person must ensure compatibility of the system to minimize any potential for accidental disengagement.
- Authorized persons, or users, shall be trained on all warnings and instructions provided in this manual.
- It is important for all authorized persons and users to refer to the applicable ANSI standards and to the regulations governing occupational safety.
- Take proper precautions to remove any debris, material, obstructions, etc. from the work area which could cause injury, or otherwise interfere with the functioning of the system.
- Always check for obstructions below the work area to make sure that the potential fall path is clear.
- Keep the equipment away from anything that could damage it such as sharp edges, rough or abrasive surfaces, high temperature surfaces, heat and welding sources, moving machinery, electrical hazards, etc.
- It is important to keep in mind environmental hazards when selecting fall protection equipment.
- Do not expose the equipment to chemicals, highly corrosive or caustic environments, or to direct sunlight and UV radiation which may cause UV degradation.
- Such harmful environments require a more frequent inspection and servicing program of the fall protection equipment to maintain the integrity and safety of the equipment. Contact KStrong if in doubt.
- All the synthetic material of fall protection equipment must be protected from slag, hot sparks, open flames or other heat sources.
- It is recommended that heat resistant materials are used in such applications. It is important to allow adequate fall clearance below the work surface.
- Always have a Rescue Plan ready and at hand when using this equipment.
- If a fall were to occur, then the forces of impact could affect the user. Hence it is important to consider the age, fitness level and the health condition of the user before the equipment is put to use. Consult a physician in case the user is not feeling physically fit and has doubts about his ability to safely absorb the fall arrest forces. This equipment is not meant for use by pregnant women and minors.

### **⚠ WARNING !!**

- **Immediately discard any product which is exhibiting unusual wear, deformity or deterioration.**
- **Immediately remove from service any equipment that has been subjected to a fall.**

## COMPONENT COMPATIBILITY

Component compatibility with KStrong manufactured fall protection equipment is ensured by strictly following the instructions for each type of equipment used. However, if the fall protection equipment utilizes combinations of components or sub systems that are manufactured by others, only a "qualified" or "competent" person (as defined in OSHA) can ensure the compatibility. If substitutions or replacements are made with non-approved components or sub systems, then this may severely affect the compatibility of the equipment, making the complete system unsafe for use.

## COMPATIBILITY OF CONNECTORS

To ensure the compatibility of the connectors with their connecting element, it is important to safeguard that the sizes

and shapes of the connectors and the connecting elements do not allow their gate mechanisms to open inadvertently, notwithstanding their orientation with each other. All hooks, carabiners, D-rings and other such connectors, must be capable of supporting a min. force of 5000 lbs. (23 kN). All connectors must be compatible with all system components like anchorages, etc. Never use equipment that is not compatible as this may cause the connectors to disengage unintentionally. All connectors must be compatible in shape and size. As per ANSI Z359.12 and OSHA, only self-locking snap hooks and carabiners may be used.

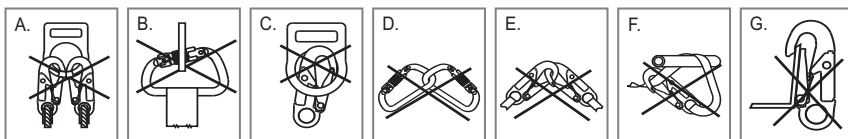
### CONNECTIONS USING CONNECTORS

Ensure that only self-locking snap hooks and carabiners are used with this equipment. All connections should be compatible in size, shape and strength. The connectors used should be suitable to each application. Ensure that they are fully closed and locked while in use.

### NEVER USE INAPPROPRIATE CONNECTIONS

While using KStrong snap hooks and carabiners, they should not be connected as below:

- Two or more connectors should never be attached to a single D-ring.
- Never attach a connector that could result in a load on its gate.
- Connectors should not be connected in a false engagement. It should be visually confirmed that the connector is fully engaged to the anchor point. Avoid conditions that allow for features that protrude from the connectors to catch on the anchor, giving a false sense of being connected.
- Connectors should not be connected to each other.
- Connectors should not be connected directly to the webbing or to the rope lanyard or tie back, unless specifically allowed by the manufacturer.
- Connectors should not be connected to any object which does not allow the connector gate to close or lock. Anchor shapes that allow roll out to occur should never be used for connection. If the anchor, to which the snap hook or carabiner is attached, is undersized or irregular in shape, then this allows for the gate of the connector to come in contact with the anchor, thereby causing the connector to open up and possibly disengage from the anchor. This is known as roll out of the connector.



- Do not use connectors on an anchorage object as shown in figure G.

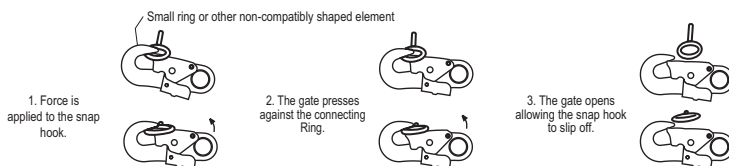
### **▲ WARNING**

Large throat opening snap hooks should not be connected to standard size D-rings or similar objects. This is because if the hook or D-ring twists or rotates, then this may result in a load on the gate of the connector. Large throat snap hooks are specifically designed for use on fixed structure elements such as rebar or cross members. These are shaped in such a way that they cannot capture the gate of the hook.

### IMPORTANT RESTRICTIONS WHILE MAKING CONNECTIONS

- A snap hook should not be connected into a loop or thimble of a wire rope, or attached to it in any way that may slack the wire rope.
- Do not make connections where the connector locking mechanism can come into contact with a structural member, or other such equipment, as it may potentially unlock the connector and release the connection.
- To connect to a single or a pair of soft loops on a harness, a carabiner that can fully close and lock should only be used. Snap hooks are not allowed for such connections.
- A carabiner may be connected to a loop or ring connector that is already occupied by a choker style connector. Snap hooks are not allowed for such connections.

If the connecting element to which a snap hook (shown) or carabiner attaches is undersized or irregular in shape, a situation could occur where the connecting element applies a force to the gate of the snap hook or carabiner. This force may cause the gate (of either a self-locking or a non-locking snap hook) to open, allowing the snap hook or carabiner to disengage from the connecting point.



## CONNECTING SUBSYSTEMS

Use only those connecting subsystems (self-retracting lifeline, lanyard, rope grab and lifeline, cable sleeves) that are suitable for your application. See subsystems manufacturer's instructions for more information. As per OSHA, the free fall distance should be limited to less than 6 ft., when the personal fall arrest system is used along with the equipment mentioned in this manual. Additionally, the fall arrest force also should be less than 1800 lbs. (8 kN). Ensure the carabiner cannot cross-gate load (load against the gate rather than along the backbone of the carabiner). KStrong recommends use of KStrong energy absorbing lanyards along with anchors mentioned in this manual, to ensure that the maximum fall arrest force does not exceed 1800 lbs. (8 kN), and for the proper functioning of the system.

## RESCUE PLAN

A rescue plan should be well documented and in place before performing work at height. The rescue operation must be performed by trained and competent personnel only. The rescue expert team should supervise the rescue operation performed. It is also advised to work in pairs while working on the site.

### ⚠ WARNING

If the equipment has been subjected to forces of fall arrest, in the event of a fall, then the equipment should be immediately removed from service. Contact KStrong regarding any queries related to this.

## ENVIRONMENTAL HAZARDS

It is important to take additional precautions while using this equipment in the presence of any environmental hazards so as to prevent injury to the user or damage to the equipment.

Environmental hazards may include the following, but are not limited to:

- Chemicals
- Extreme Temperatures
- Corrosive Environments
- Gases
- High Voltage Power Lines
- Sharp Edges
- Moving Machinery and Vehicles

Please contact KStrong with any questions regarding the use of this equipment in the presence of any environmental hazard.

### ⚠ WARNING

This equipment is not designed to be used in high temperature environments. It is important to protect this equipment when using near activities like welding or metal cutting. Hot sparks may cause damage to this equipment or burn it. Contact KStrong for details on use of this equipment in high temperature environments.

## ANCHORAGE STRENGTH

The application type determines the anchorage strength requirement. As per ANSI Z359.1 the necessary anchorage strength for the following applications is listed below:

- **Fall Arrest:** As per OSHA 1926.500 and 1910.66: anchorages that are used for attachment of Personal Fall

Arrest Systems (PFAS) shall be independent of any anchorage being used to support or suspend platforms. They should be capable of withstanding a minimum load of 5000 lbs. (23 kN) per user attached, or should be designed, installed and used as part of a complete PFAS which maintains a safety factor of at least two. Rating of the anchorage should always be done under the supervision of a qualified person.

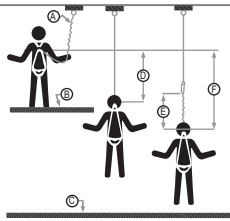
- **Work Positioning:** the structure to which the work positioning system (WPS) is attached must be able to sustain a static load of min. 3000 lbs. (13.3 kN), applied in the directions permitted by the work positioning system. Or, it should be able to sustain two times the potential impact load, whichever is greater; see 1926.502. However, if more than one work positioning system is attached to an anchorage, then the strength mentioned above must be multiplied by the number of WPS attached to the anchorage.
- **Restraint:** The strength requirement of anchorages which are selected for restraint and travel restraint systems is min. of 1000 lbs. (4.5 kN) static load applied in the directions permitted by the system. If more than one restraint and travel restraint system is attached to anchorage, then the 1000 lbs. shall be multiplied by the number of systems attached to the anchorage to determine the min. strength requirement.
- **Rescue:** The minimum strength of the anchorage selected for rescue should be such that it is capable of sustaining a static load of min. 3000 lbs. (13.3 kN) applied in the direction permitted by the system. To determine the strength requirement of the anchorage if more than one rescue system is attached, then multiply 3000 lbs. (13.3 kN) by the number of the systems attached to the anchorage.

## GENERAL LIMITATIONS OF FALL ARREST SYSTEM AND REQUIREMENTS

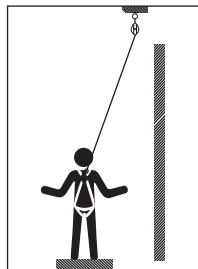
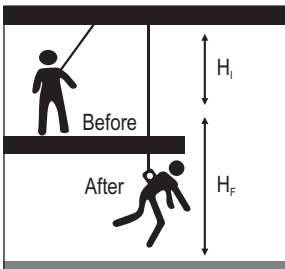
It is important to consider the below mentioned limitations before using or installing this equipment.

- The KStrong cross arm straps are meant for use by ONE person only. The **capacity** of the KStrong cross arm straps is up to 310 lbs. (140 kg) hence, the combined weight (clothes, tools, shoes etc.) of a person using this equipment should not be more than 310 lbs. It is important to ensure that all the components in the system are rated to a capacity which is appropriate to the application. Only one personal protective system should be connected to an anchor at any point in time.
- **Free Fall:** As per ANSI Z359.1 the personal fall arrest systems used with this equipment must be rigged in such a way that the free fall does not exceed 6 ft. (1.8 m), and as per ANSI Z359.13, the free fall should not exceed 12 ft. Restraint systems must be rigged in such a way that no vertical free fall is possible. Work positioning systems are required to be rigged in a way that the free fall does not exceed 2 ft. (0.6 m). Personal riding systems must be rigged so that there is no vertical free fall possible. Climbing systems must be rigged so that free fall is less than 18 inches (46 cm). Rescue systems must be rigged in such a way that there is no vertical free fall. Contact KStrong for any further information needed.

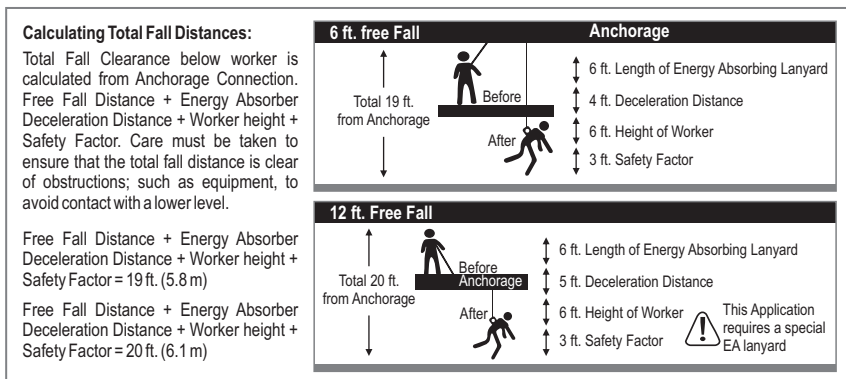
A	Connecting Subsystem (Energy Absorbing Lanyard Shown)
B	Working Level
C	Lower Level or Obstruction
D	Free Fall - 6 ft. (1.8m) Max. (per ANSI Z359.11)
E	Deceleration Distance
F	Total Fall Distance Free Fall (D) + Deceleration (E)



- **Fall Clearance:** There should be sufficient clearance below the user to allow the system to arrest a fall so as to prevent the user from striking the ground or any other obstruction. The clearance required is dependent upon the following factors:
  - Anchorage location
  - Type of connecting subsystem used (energy absorbing lanyard, self-retracting lifeline (SRL), etc.)



If the only available anchorage is situated below the attachment on the harness; and if there is a risk of fall, then it is essential to use a lanyard with a properly rated energy absorber. It is important to ensure that there is sufficient fall clearance below the user, before using a shock absorbing lanyard. If the weight of a wearer is 220 lbs. and the fall factor is two, we can calculate the fall clearance (which will be equal to the stopping distance  $H (2L + 5.74 \text{ ft.}) +$  an additional distance of 3.28 ft.



- Swing Falls:** Swing falls occurs when the position of the anchorage point is not directly above the point where a fall occurs. In such a case if a fall were to occur, it will result in pendulum swing of the fall victim and may also cause them to strike nearby objects with a force. This may cause serious injury or even death. Such swing falls may be minimized by ensuring that the anchorage is directly overhead, and by working as close to the anchorage point as possible. Swing falls will substantially increase the fall clearance required when a SRL or other variable length connecting subsystems are used.

## PERIODIC EXAMINATION

The user must always keep the instructions provided with the product. Take the information from the markings on the product and enter this information in the identification sheet. To ensure the safety of the user, it is essential to check the condition of the equipment through periodic examinations of the product. This equipment must be examined by a qualified person at least once every six months, strictly complying with the manufacturer's instructions. Also, record the previous check on the attached sheet. If the equipment is in heavy usage or is used in a harsh environment, then the frequency of inspection should be increased in accordance with the regulations. Check also that the markings on the product are legible.

## IF USED NEAR CORROSIVE ENVIRONMENT

In corrosive environments or in areas near the seawater, metallic connectors, hooks and anchorages have a greater chance of corrosion and rusting. Hence, the frequency of their inspection must be altered so as to check their functioning and performance more frequently.

## IMPORTANT POINTS FOR SUBSYSTEM ASSEMBLIES

When connecting an energy absorbing lanyard to the dorsal attachment D-ring of the harness, connect only the shock-pack end of the lanyard to the D-ring. The other end of the lanyard is connected to the anchorage point.

While making connections, ensure that all connectors are fully closed and locked.

A lifeline should never be connected to a connector using a knot. Also, never tie-back a connector on to a lifeline or the lanyard. Use a spliced end termination and a thimble to attach a connector to a synthetic rope lifeline. Connectors which are required to attach to wire rope lifelines must be attached to a thimble on a formed eye termination of the wire rope. It is important to ensure that the termination is secured properly by swaging the ends of the wire rope by following proper procedures, before the thimble is connected to a connector.

**▲ WARNING**

If the ends of the lifelines are not spliced or swaged properly by following the proper methods, then this may result in the termination to give away when the connector connected to them is subjected to a force. KStrong shall not be held responsible for the consequences arising out of this.

**▲ WARNING**

Knots should never be used for load bearing end terminations, since the presence of knots significantly reduces the strength of a lifeline. See ANSI Z359.1 for more details.

**▲ WARNING**

It is important to ensure that the connecting elements of the connectors are compatible in size and shape, while making a connection with the hooks and carabiners. Never connect a hook to a hook, or a carabiner to a carabiner, or a carabiner to a hook. Also make sure not to connect a connector to any element that may cause the hook or carabiner material to distort/abrade or wear out.

**▲ WARNING**

**KStrong does not guarantee against subassemblies made using products that are not manufactured by KStrong, and is not responsible for the consequences arising out of the same.**

**KSTRONG ANCHOR INSTRUCTIONS**

KStrong personal fall arrest system consists of a full body harness, a connecting lanyard and an anchorage system, in its simplest form. The anchors mentioned in this manual provide a complete attachment system to the other components of personal fall arrest system. The anchor must not only withstand the impact of fall arrest forces in the event of a fall, but it must also hold the victim of a fall in place until the time of the rescue operation is conducted. Hence, it is extremely important to conduct a proper check of all the components of a personal fall arrest system before use. The fall arrest system must be used only by a trained/competent person.

**LIMITATION OF USE OF KSTRONG ANCHORS**

KStrong Anchors are to be used as part of personal fall arrest, restraint, rescue or work positioning system. Full body harnesses, connectors, hooks, lanyards, etc. are designed in such a way that they work in sync with other elements of a personal fall arrest system. While they are designed to arrest a fall from height they also minimize the impact load on the wearer. KStrong recommends that only those components or sub systems of the personal fall arrest system which are manufactured by KStrong, are used in combination. If other manufacturer's equipment are used, then they should be ensured for compatibility by a qualified person only. If substitutions or replacements are made with non-approved components of sub systems, then this may severely affect the compatibility of the equipment making the complete system unsafe for use.

**INSPECTION OF COMPONENTS OF PERSONAL FALL ARREST SYSTEM**

It is mandatory to have a detailed visual inspection of all the harnesses, lanyards, connectors etc. prior to each use. This ensures that the equipment is in good condition and is operating correctly. If there are any doubts regarding the safe state of the product or if the product has been used to arrest a fall, then immediately remove the equipment from service. Contact KStrong for a qualified authorized repair center. Check on the back-shoulder straps of the harness for the fall indicators which should be intact. If a fall indicator is found to be deployed, then the harness should be removed from use immediately. Never attempt to repair or modify a Personal Protective Equipment (PPE).

**FORMAL INSPECTION**

It is mandatory that a competent person other than the user perform a formal inspection of the personal fall arrest system and its components once at least every six months. This frequency should be altered on the basis of conditions for use or exposure. The inspection results should be recorded in the inspection and maintenance log at the end of this manual.



## PRE USE- INSPECTION CHECK OF THE CROSS ARM STRAPS

Inspect the anchor webbing strap for any cuts, frays, abrasion, puncture or contaminants. The D-ring to which the attachment is made, should be thoroughly checked for cracks, bends, deformities, corrosion, cracks, cuts, elongation etc. The D-ring should be perfectly round and should lay flat. Also inspect the stitching for any cuts, breaks or damages. Thoroughly examine the inside of the webbing loops as well for any signs of damage. Thoroughly examine the wire rope anchor slings for the presence of broken strands, frays, cuts, corrosion, rust, cracks, tears, abrasion, excessive elongation, chemical attack, excessive wear, etc. Inspect ferrules for cracks or damage. The equipment should be immediately removed from service if any of the above conditions are recognized.

### **⚠ WARNING**

Inspect all other components of the fall arrest, work positioning, rescue system that are to be used, as per the manufacturer's instructions. Remove from use immediately if the equipment shows evidence of having arrested a fall, or if it is unfit for further use. Do not attempt to repair the equipment on your own.

## INSTRUCTIONS FOR USAGE OF KSTRONG CROSS ARM STRAPS

Before installing any anchor, it is important that a competent person verify that the underlying structure on which the anchor will be installed is strong enough to withstand the impact of forces which will be experienced in the event of a fall.

### INSTALLATION OF KSTRONG CROSS ARM STRAPS

KStrong cross arm straps and wire slings are designed to be used as a wrap around structural member like beams, trusses, headers, etc. These structures should be strong enough to withstand a minimum load of 5000 lbs. Ensure that the webbing of the cross arm straps does not come in contact with any sharp edges, rough structures, protruding nails and fasteners, chemical and corrosive environment, petroleum products, heat sources, etc. All of these could cause damage to the webbing, causing the cross arm strap to lose its strength. While the wire rope anchor slings can withstand exposure to rough surfaces, their contact with sharp edges and rough surfaces should be kept to a minimum.

### **⚠ WARNING**

The anchorage end of the cross arm strap / wire rope sling must be kept as short as possible. Excess anchorage length of cross arm strap / wire rope sling increases the length of a free fall.

### **⚠ WARNING**

Do not attach more than one personal fall arrest system to the anchor point.

### INSTALLATION OF CROSS ARM STRAP

(Models: UFA20504 and UFA 20506)

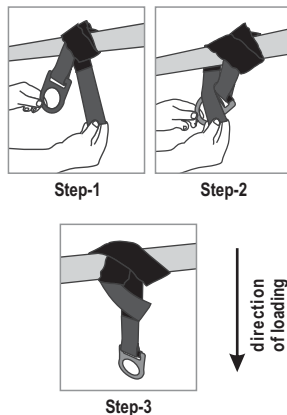
**Step 1:** Loop the cross arm strap around a suitable and strong structure.

**Note:** The label on the strap should face outwards, and the structure on to which cross arm strap is to be looped must be free from sharp and abrasive edges. If however, there is presence of sharp, abrasive surface on the structure, then this should be covered with a suitable covering recommended for such use.

**Step 2:** Pass the D-ring end through loop end of the cross arm strap and cinch tightly.

**Step 3:** Loop the entire strap around the underlying structure, so that there remains no excess webbing. Each time while looping, pass the D-ring through the webbing loop. Continue till all the excess webbing is used up.

**Step 4:** Use the D-ring to anchor the connecting element of the personal fall arrest system.



### INSTALLATION OF CROSS ARM STRAPS

(Models: UFA20003, UFA20004, UFA20006, UFA20010, UFA20016, UFA20024 and UFA20030)

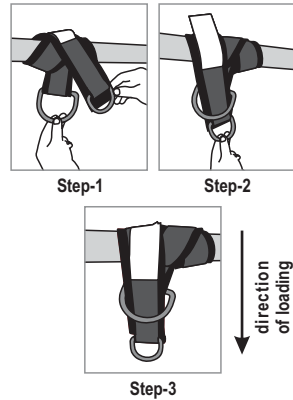
**Step 1:** Loop the cross arm strap around a suitable and strong structure.

**Note:** The label on the strap should face outwards, and the structure on to which cross arm strap is to be looped must be free from sharp and abrasive edges. If however, there is presence of sharp, abrasive surface on the structure, then this should be covered with a suitable covering recommended for such use.

**Step 2:** Pass the small D-ring through the large D-ring of the cross arm strap, and cinch tightly.

**Step 3:** Loop the entire strap around the underlying structure, so that there remains no excess webbing. Each time while looping, pass the small D-ring through the large D-ring. Continue till all the excess webbing is used up.

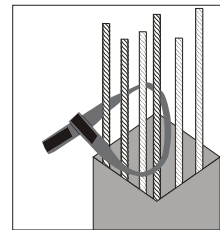
**Step 4:** Use only the small D-ring to anchor the connecting element of the personal fall arrest system.



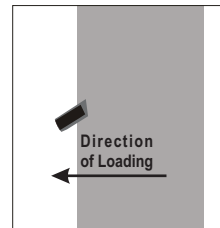
### INSTALLATION OF CONCRETE EMBED STRAPS

(Models: UFA21004, UFA20602, UFA20603, UFA20604, UFA20602(FR), UFA20603(FR), UFA20604(FR) and UFA21006 )

- Identify a pillar, wall or a beam which shall be the best location for embedding the concrete anchor strap, as the ideal Anchorage for Fall Protection.
- After a section of the wall or the concrete column has been partially poured with concrete mix, allow the same to be fully dried and cured up to that level.
- Now take the concrete anchor strap and loop it around the vertical rebar section of the column/pillar. Allow the one loop-end of the strap to pass through the other loop-end of the strap as shown in adjacent fig. Tighten the strap by pulling at the free end.
- Once the strap is in place, pour the rest of the concrete, allowing it to cover the strap completely while keeping only the loop-end hanging out.
- Now allow the concrete to cure and dry completely.
- Once the forms are removed, the loop shall remain on the face of the column, or in between the seams of the walls, and can now be used as a fall protection anchor point.



**Before Concreting**



**After Concreting**

### HOW TO REMOVE THE CONCRETE EMBED STRAP

- The anchor shall be removed from service once it has been decided that all potential fall hazards have been removed from the area.
- Hold the loop and then cut the webbing strap with the help of a cutter or scissors from the concrete seam.
- Never re-use the embedded strap again once the loop has been cut.

### INSTALLATION OF KSTRONG WIRE ROPE SLING

(Models: UFA710103, UFA710104 and UFA710106)

The Anchor wire rope slings are made of PVC coated galvanized wire rope. The termination of the wire rope is looped over a steel thimble and secured back on to the wire, and swaged. The ends of wire rope slings are provided with two O-rings.

**Step 1:** Place the sling over the anchorage structure in such a way that the two O-rings hang on each side of the structure. The anchorage structure on to which anchor sling is to be looped must strong enough to withstand the load of application, and must be free from sharp and abrasive edges.

**Step 2:** Now pass the small attachment O-ring through the large O-ring. Slide the large ring up to the anchorage structure. Pull the small O-ring down to take up slack that was made by moving the large ring up. The sling should be tightly wrapped around the anchorage with the small O-ring hanging free. You may shorten the distance that the small O-ring hangs from the anchorage by wrapping the sling around the anchorage several times. On each loop, pass the small O-ring through the large ring.

**Step 3:** Use the small O-ring as the attachment point for personal fall arrest system, once the installation is complete.



### INSTALLATION OF KSTRONG WIRE ROPE ANCHORAGE EXTENDER

(Models: UFA710003, UFA710004 and UFA710006)

**Step 1:** Select an overhead anchorage point. This point should be compatible to make connection with the snap hook of the wire rope extender. Connect the snap hook of the extender to this anchorage point.

**Step 2:** Allow the extender to hang vertically. Now use the O-ring at the termination of the Extender to connect to the personal fall arrest system.

#### **▲ WARNING**

The free fall distance may get extended because of the use of the anchorage extender. Hence, the anchorage extender should always be connected making sure that the O-ring of the extender lies overhead the user. This helps the free fall distance to be kept to a minimum.



### MAKING CONNECTIONS WITH THE ANCHORAGE CONNECTOR

To make connections with the anchorage connector of the straps/ slings, make sure to use only self-locking snap hooks or carabiners. Do not use a knot to connect the anchorage to a life line. Do not loop the anchorage line or a lanyard through the anchorage O-ring/D-ring, and tie back on itself, to connect with the lifeline or lanyard. Ensure that all connections are compatible in shape, size, and strength. Never connect more than one personal protective system to a single anchorage connector.

### TRAINING

It is essential that the users of this type of equipment receive proper training and instruction, including detailed procedures for the safe use of such equipment in their work application. ANSI/ASSE Z359.2, minimum requirements for a comprehensive managed fall protection program, establishes guidelines and requirements for an employer's managed fall protection program, including policies, duties and training; fall protection procedures; eliminating and controlling fall hazards; rescue procedures; incident investigations; and evaluating program effectiveness.

## MAINTENANCE, SERVICE AND STORAGE

- A Cross Arm Strap can be cleaned with water and a mild soap solution. However, if a Cross Arm Strap is excessively dirty, or there is a build-up of material like paint, etc., then this may hamper the Cross Arm Strap from functioning properly. In severe cases, the webbing may be degraded to a point where it weakens. In such a case, remove the Cross Arm Strap from service. Never use bleach or bleach solutions to clean the Cross Arm Strap as this may damage the webbing. Always dry the Cross Arm Strap by hanging to air dry. Do not force dry with heat. Hardware should be wiped off with a clean dry cloth. Contact KStrong for any further query.
- Additional maintenance and servicing procedure must be completed by an authorized service center only.
- Store Cross Arm Strap in a cool dry clean environment; away from direct sunlight. Avoid areas where there may be the presence of chemical vapors. It is extremely important to thoroughly inspect the Cross Arm Strap after extended storage.

## NOTE


Do not attempt to disassemble the unit or make repairs to the equipment. Send the equipment back to the manufacturer, or persons or entities authorized in writing by the manufacturer to make repairs to the equipment.

**LIFESPAN:** The estimated product Lifespan is 10 years from the date of first use. The following factors can reduce the Lifespan of the product: intense use, contact with chemical substances, especially aggressive environments, extreme temperature exposure, UV exposure, abrasions, cuts, violent impacts, bad use or maintenance.

**DISCLAIMER:** Prior to use, the end user, must read and understand the manufacturer's instructions supplied with this product at the time of shipment and seek training from their employer's trained personnel on the proper usage of the product. Manufacturer is not liable or responsible for any loss, damage or injury caused or incurred by any person on grounds of improper use or installation of this product.

## LABELS

**Models:** UFA20003, UFA20004, UFA20006, UFA20010, UFA20016, UFA20024 and UFA20030



**CROSS ARM STRAP**  
Model: UFA20506

Before using the product, read and understand all manufacturer's instructions provided with equipment at the time of shipment.

Complies with: ANSI Z359.18-2017 Type T A10.32-2012 and OSHA requirements.

Material: Polyester and Steel  
Service Temperature: -30°F (-34°C) and +130°F (+54°C)  
Minimum Breaking Strength: 5000 lbs.  
Serial No.: XXXX  
Batch No.: XXXX  
DOM: MM/YYYY  
Length: 6 ft.  
Capacity Range: 130-420 lbs.

All PFAS equipment must be selected and deemed compatible with Cross Arm Strap by a Competent Person.

Only make compatible connections. Refer to instructions for proper connection methods.

**WARNING**


MAXIMUM 1 connection per anchor.

Avoid any kind of contact with hazards, including, but not limited to, heat, chemicals, electricity, and sharp or abrasive edges and surfaces.

ANY ALTERATION, ABUSE OR MISUSE OF THE PRODUCT VOIDS THE WARRANTY.

BARCODE

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**CROSS ARM STRAP**

**INSPECTION GRID**  
Ensure product is inspected thoroughly before every use. Inspection must be done and recorded by a competent person every 6 months.

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

Product lifetime is indefinite, as long as product passes all inspection requirements.

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If the equipment fails inspection,  
IMMEDIATELY REMOVE FROM SERVICE.


DO NOT REMOVE LABELS



**CROSS ARM STRAP**

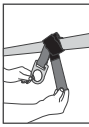
**WARNING**

DO NOT CONNECT A FALL PROTECTION SYSTEM OR SUSPENDED COMPONENT TO THE CLOSED LOOP WHEN USED IN A CINCHING APPLICATION.




**CROSS ARM STRAP**

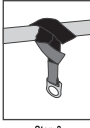
**INSTRUCTIONS TO USE**  
Do not use this equipment outside its limitation, or for any purpose other than that for which it is intended. If used outside its limitation, equipment will not provide an optimum level of protection.



Step-1




Step-2



Step-3

direction of loading

## Models: UFA20003, UFA20004, UFA20006, UFA20010, UFA20016, UFA20024 and UFA20030



**CROSS ARM STRAP**  
Model: UFA20003

Before using the product, read and understand all manufacturer's instructions provided with equipment at the time of shipment.

**Complies with:** ANSI Z359.18-2017 Type T A10.32-2012 and OSHA requirements.

**Material:** Polyester and Steel  
**Service Temperature:** -30°F (-34° C) and +130°F (+54° C)  
**Minimum Breaking Strength:** 5000 lbs.  
**Serial No.:** XXXX  
**Batch No.:** XXXX  
**DOM:** MY/YYYY  
**Length:** 3 ft.  
**Capacity Range:** 130-420 lbs.

All PFAS equipment must be selected and deemed compatible with Cross Arm Strap by a Competent Person.

Only make compatible connections. Refer to instructions for proper connection methods.

**WARNING**

MAXIMUM 1 connection per anchor.  
Avoid any kind of contact with hazards, including, but not limited to, heat, chemicals, electricity, and sharp or abrasive edges and surfaces.

**ANY ALTERATION, ABUSE OR MISUSE OF THE PRODUCT VOIDS THE WARRANTY.**

BARCODE

Made in India      kstrong.com



**CROSS ARM STRAP**

**INSPECTION GRID**

Ensure product is inspected thoroughly before every use. Inspection must be done and recorded by a competent person every 6 months.

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

Product lifetime is indefinite, as long as product passes all inspection requirements.

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If the equipment fails inspection, IMMEDIATELY REMOVE FROM SERVICE.


**DO NOT REMOVE LABELS**



**CROSS ARM STRAP**

**WARNING**


**DO NOT CONNECT A FALL PROTECTION SYSTEM OR SUSPENDED COMPONENT TO THE CLOSED LOOP WHEN USED IN A CINCHING APPLICATION.**



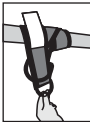
**CROSS ARM STRAP**

**INSTRUCTIONS TO USE**

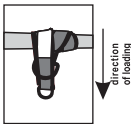
Do not use this equipment outside its limitation, or for any purpose other than that for which it is intended. If used outside its limitation, equipment will not provide an optimum level of protection.



Step-1




Step-2



Step-3

direction of loading

## Models: UFA21004 and UFA21006



**CONCRETE EMBED STRAPS**  
Model: UFA21004

Before using the product, read and understand all manufacturer's instructions provided with equipment at the time of shipment.

**Complies with:** ANSI Z359.18-2017 Type T A10.32-2012 and OSHA requirements.

**Material:** Polyester and Steel  
**Service Temperature:** -30°F (-34° C) and +130°F (+54° C)  
**Minimum Breaking Strength:** 5000 lbs.  
**Serial No.:** XXXX  
**Batch No.:** XXXX  
**DOM:** MY/YYYY  
**Length:** 4 ft.  
**Capacity Range:** 130-420 lbs.

All PFAS equipment must be selected and deemed compatible with Concrete Embed Strap by a Competent Person.

Only make compatible connections. Refer to instructions for proper connection methods.


**WARNING**

MAXIMUM 1 connection per anchor.  
Avoid any kind of contact with hazards, including, but not limited to, heat, chemicals, electricity, and sharp or abrasive edges and surfaces.

**ANY ALTERATION, ABUSE OR MISUSE OF THE PRODUCT VOIDS THE WARRANTY.**

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**CONCRETE EMBED STRAPS**

**INSPECTION GRID**

Ensure product is inspected thoroughly before every use. Inspection must be done and recorded by a competent person every 6 months.

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

Product lifetime is indefinite, as long as product passes all inspection requirements.

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If the equipment fails inspection, IMMEDIATELY REMOVE FROM SERVICE.


**DO NOT REMOVE LABELS**



**CONCRETE EMBED STRAPS**

**WARNING**

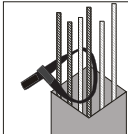
**DO NOT CONNECT A FALL PROTECTION SYSTEM OR SUSPENDED COMPONENT TO THE CLOSED LOOP WHEN USED IN A CINCHING APPLICATION.**



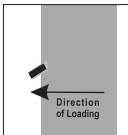
**CONCRETE EMBED STRAPS**

**INSTRUCTIONS TO USE**

Do not use this equipment outside its limitation, or for any purpose other than that for which it is intended. If used outside its limitation, equipment will not provide an optimum level of protection.



Before Concreting



After Concreting

Direction of Loading

**MODELS:** UFA21004, UFA20602, UFA20603, UFA20604, UFA20602(FR), UFA20603(FR), UFA20604(FR) AND UFA21006 )

**K-STRONG®**  
UNRIVALED SAFETY.

**CONCRETE EMBED STRAPS**  
Model: UFA20602(FR)

Before using the product, read and understand all manufacturer's instructions provided with equipment at the time of shipment.

Complies with: ANSI Z359-18-2017 Type T A10.32-2012 and OSHA requirements.

Material: Aramid and Steel

Service Temperature: -30°F (-34°C) and +130°F (+54°C)

Minimum Breaking Strength: 5000 lbs.

UID : XXXXXXXXXX  
DOM: M/YYYY  
Length: 2 ft.  
Capacity Range: 130-420 lbs.

QR CODE

All PFAS equipment must be selected and deemed compatible with Concrete Embed Strap by a Competent Person.

Only make compatible connections. Refer to instructions for proper connection methods.

**WARNING**  
MAXIMUM 1 connection per anchor.  
Avoid any kind of contact with hazards, including, but not limited to: heat, chemicals, electricity, and sharp or abrasive edges and surfaces.

ANY ALTERATION, ABUSE OR MISUSE OF THE PRODUCT VOIDS THE WARRANTY.

BARCODE

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**K-STRONG®**  
UNRIVALED SAFETY.

**CONCRETE EMBED STRAPS**

**INSPECTION GRID**  
Ensure product is inspected thoroughly before every use. Inspection must be done and recorded by a competent person every 6 months.

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

Product lifetime is indefinite, as long as product passes all inspection requirements.

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If the equipment fails inspection, IMMEDIATELY REMOVE FROM SERVICE.

DO NOT REMOVE LABELS

**K-STRONG®**  
UNRIVALED SAFETY.

**CONCRETE EMBED STRAPS**

**WARNING**  
DO NOT CONNECT A FALL PROTECTION SYSTEM OR SUSPENDED COMPONENT TO THE CLOSED LOOP WHEN USED IN A CINCHING APPLICATION.

**K-STRONG®**  
UNRIVALED SAFETY.

**CONCRETE EMBED STRAPS**

**INSTRUCTIONS TO USE**  
Do not use this equipment outside its limitation, or for any purpose other than that for which it is intended. If used outside its limitation, equipment will not provide an optimum level of protection.

Before Concreting

After Concreting

Direction of Loading

**Models:** UFA710103, UFA710104 and UFA710106

**K-STRONG®**  
ANCHORAGE WIRE ROPE SLING

**Model: UFA710103**  
Batch No.: XXXXX  
Serial No.: XXXXX  
Length: 3 ft.  
Minimum Breaking Strength: 5000 lbs.  
Service Temperature: -30°F to 130°F (-34°C to 54°C)  
Complies with ANSI Z359-18-2017 Type A

**WARNING:**  
Ensure manufacturer's instructions received at time of shipment are followed at all times for proper use, maintenance, and inspection. Any alteration, abuse or misuse of this product may result in serious injury or death. Avoid contact with sharp edges and abrasive surfaces. Avoid contact with all hazards including, but not limited to, electricity, chemicals and heat.

ANY ALTERATION, ABUSE OR MISUSE OF THIS PRODUCT VOIDS THE WARRANTY.

DO NOT REMOVE THIS LABEL

DOM:  Barcode

Maximum 1 connection per Anchorage Wire Rope Sling.  
Material: Galvanized Steel.  
Capacity range: 130-310 lbs.

**Always use with compatible equipment.  
Only make compatible connections.**

**Inspection Grid** Made in India kstrong.com

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Inspection: Before every use, user must inspect the product. Every 6 months a competent person must complete final inspection of the product and record initials.

Note: .....

