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USER INSTRUCTION MANUAL  
**ROPE GRAB AND VERTICAL LIFELINE (VLL)**

THESE INSTRUCTIONS APPLY TO THE FOLLOWING MODELS:

UFG611010, UFG611020, UFG601010, UFR100025,  
UFR100050, UFR100100, UFR100200 and UFR100500





**Do not skip this instruction manual. Read the instruction manual carefully before using the equipment. If failed in doing so it may cause serious injury or Death.**

**NOTE:** The user is advised to keep the user instructions document for the life of the product.

**IMPORTANT:**

- Prior to using the equipment, please record the product identification information found on the ID label of your fall arrestor in the equipment record table of this manual.
- If you have any questions on the use, care, or suitability of this equipment for your application, contact KStrong.

This manual must be read and understood in its entirety and used as part of fall protection training program as required by OSHA or any state regularity agency. These instructions are intended to meet the manufacturer's instructions as required by OSHA 1910, ANSI Z359.1-2007

**INTRODUCTION**

It is crucial that the authorized person/user of this fall protection equipment reads and understands these instructions. In addition, it is the employer's responsibility to ensure that all users are trained in the proper use, inspection, and maintenance of fall protection equipment. Fall protection training should be an integral part of a comprehensive safety program.

Proper use of fall arrest systems can save lives and reduce the potential of serious injuries from a fall. The user must be aware that forces experienced during the arrest of a fall or prolonged suspension may cause injury. Consult a physician if there is any question about the user's ability to use this product. Pregnant women and minors must not use this product.

KStrong rope grabs are designed to protect working personnel from falls while allowing them freedom of movement. Rope grabs easily move up and down on vertical lifelines yet lock instantly in the event of a free fall.

**GENERAL REQUIREMENT**

- All warnings and instructions shall be provided to authorized persons/users.
- All authorized persons/users must refer to the regulations governing occupational safety, as well as applicable ANSI standards. Please refer to product labels for information on specific OSHA regulations, and ANSI standards met by the product.
- 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.
- All equipment must be inspected before each use according to the manufacturer's instructions.
- 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.
- Equipment must not be altered in any way. Repairs must be performed only by the manufacturer, or persons or entities authorized in writing by the manufacturer.
- Any product exhibiting deformities, unusual wear, or deterioration must be immediately discarded.
- Any equipment subject to a fall must be removed from service.
- The authorized person/user shall have a rescue plan and the means at hand to implement it when using this equipment.
- Never use fall protection equipment for purposes other than those for which it was designed. Fall protection equipment should never be used for towing or hoisting.
- All synthetic material must be protected from slag, hot sparks, open flames, or other heat sources. The use of heat resistant materials is recommended in these applications.
- Never use natural materials (manila, cotton, etc.) as part of a fall protection system.
- Environmental hazards should be considered when selecting fall protection equipment. Equipment must not be exposed to chemicals which may produce a harmful effect. Polyester should be used in certain chemical or acidic environments. Use in highly corrosive or caustic environments dictates a more frequent inspection and servicing program to ensure the integrity of the device is maintained. Contact KStrong if in doubt.
- 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.
- Always check for obstructions below the work area to make sure potential fall path is clear.
- Allow adequate fall clearance below the work surface.
- Never remove product labels, which include important warnings and information for the authorized person/user.

## WARNING AND LIMITATIONS

### Rope Grabs

- For use by ONE person only. Maximum capacity is 310 lbs. (140.6 kg), including tools. – DO NOT EXCEED THIS WEIGHT.
- Do not use if any part of the device appears to be damaged.
- Do not attempt to service the device or alter it in any way.
- Attach the device to appropriate vertical lifelines only. The KStrong rope grabs work best with KStrong lifeline.
- Use of this product is not suitable when the user is positioned on an unstable surface, fine grain material, or particulate solids such as sand or coal.
- Maximum arrest distance: 54 inch

### Vertical Lifelines

- For use by ONE person only. KStrong vertical lifelines have a minimum tensile strength of 6000 lbs. (27kN). [OSHA requires a minimum tensile strength of 5,000 lbs. (22.2kN).]
- Lifelines must be kept clean.
- Never allow the lifeline to become slack or to pass under or entwine around arms, legs, neck, or any other obstacle.
- Do not tie knots in lifelines.
- Lifelines must be attached independently of the working surface and anchored above the user to prevent a swing fall.
- Elastic elongation of no more than 22% at 8kN load is allowed.

### System

- A competent person must ensure the compatibility of all connections and that of the system.
- Do not use the system if the device does not lock onto the lifeline or if any component in the system does not operate properly.
- The device and lifeline should be installed and used in such a manner as to reduce the potential for a swing fall.
- Allow sufficient clearance in the event of a free fall. For synthetic rope lifelines, add 1ft. (.3m) of fall clearance for each 20 feet (6m) of rope above the connection point. If a shock absorber is used, you must also allow for an additional 3-1/2 ft. (1.06m) maximum elongation.
- System must be rigged to limit the free fall distance to 6 feet (1.8m) or less.

## SYSTEM COMPATIBILITY

KStrong rope grabs and vertical lifelines are designed for use with KStrong 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.

Always use KStrong rope grabs with specified KStrong vertical lifelines with a minimum tensile strength of 6000 lbs. (27kN).

| Model of lifeline | Model of Rope Grab Assembly             | Description   | Material                                       |
|-------------------|---|---|--|
| UFR100025         | UFG611010 /<br>UFG611020 /<br>UFG601010 | 5/8 inch Poly steel twisted rope lifeline UFR100025 (25 ft. long) with stop-knot at one end and one steel snap hook UFC404150 at the other end to be used with Rope Grab  | For Rope: Poly Steel<br>For Metal: Alloy Steel |
| UFR100050         | UFG611010 /<br>UFG611020 /<br>UFG601010 | 5/8 inch Poly steel twisted rope lifeline UFR100050 (50 ft. long) with stop-knot at one end and one steel snap hook UFC404150 at the other end to be used with Rope Grab  | For Rope: Poly Steel<br>For Metal: Alloy Steel |
| UFR100100         | UFG611010 /<br>UFG611020 /<br>UFG601010 | 5/8 inch Poly steel twisted rope lifeline UFR100100 (100 ft. long) with stop-knot at one end and one steel snap hook UFC404150 at the other end to be used with Rope Grab | For Rope: Poly Steel<br>For Metal: Alloy Steel |
| UFR100200         | UFG611010 /<br>UFG611020 /<br>UFG601010 | 5/8 inch Poly steel twisted rope lifeline UFR100200 (200 ft. long) with stop-knot at one end and one steel snap hook UFC404150 at the other end to be used with Rope Grab | For Rope: Poly Steel<br>For Metal: Alloy Steel |
| UFR100500         | UFG611010 /<br>UFG611020 /<br>UFG601010 | 5/8 inch Poly steel twisted rope lifeline UFR100500 (500 ft. long) with stop-knot at one end and one steel snap hook UFC404150 at the other end to be used with Rope Grab | For Rope: Poly Steel<br>For Metal: Alloy Steel |

## MAKING CONNECTION

### Connecting to the Anchorage

KStrong vertical lifelines are designed to be used by one person only (max 130lbs including all its materials and tools).

The vertical lifeline must be attached to an anchor point capable of supporting 5000 lbs. (22.2 kN) per worker or meet OSHA 1926.502 requirements for a safety factor of two. Anchorage requirements based on ANSI are as follows:

- For fall arrest systems, anchorages must withstand a static load of 5000 lbs. (22.2 kN) 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.

Make sure connections are compatible with respect to size, strength, and shape. Never use an anchor point which shall not allow the snap hook or carabiner keeper to close and lock, or which is capable of causing a load to be applied to the keeper. Rope grabs are connected to the vertical lifeline as per steps mentioned below in Installation section.

### Connecting to the Full Body Harness

Rope grabs should be connected to either the back D-ring on the full-body harness using an approved lanyard, or to the front chest D-ring on the full-body harness using a connector, such as a locking carabiner.

(According to ANSI standards, a front D-ring attachment element may be used for fall arrest only in applications where the personal fall arrest system limits the maximum free fall distance to 2 ft. (0.6m) and limits the maximum arrest force to 900 lbs. (4.0kN).

## SPECIFIC MARKING REQUIREMENT

KStrong Connectors are marked to identify the following:

- Year of manufacture
- Manufacturer's identification
- Part number
- Load rating for the major axis of the connector stamped or otherwise permanently marked on the device.
- Load rating for gate stamped or otherwise permanently marked on the gate mechanism.
- Marking for connectors shall be sufficient to provide traceability.
- For connectors that are non-integral, include the standard number ANSI Z359.1:2007 or higher.

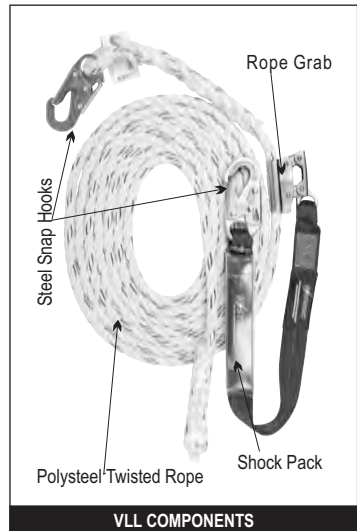
## INSTALLATION

KStrong provides pre-installed lifelines with Rope Grabs. For use, the user needs to anchor the steel snap hook at the end of lifeline to a suitable anchor and attach the steel snap hook end of the rope grab assembly to the front mounted attachment of the harness.

**▲ Warning:** NEVER attach the device on the lifeline with the arrow pointing down-ward; should a fall occur it will not lock onto the lifeline.

### MODEL : UFG611020

**USAGE:** The Lifeline should always be used along with its rope grab assembly and an energy absorbing mechanism shall be assembled with either the life line or the rope grab assembly. The product shall be used by trained personnel or under supervision of competent personal. The steel snap hook end of the life line should be connected to the anchor (anchor selection must be done with relative normative reference). The steel snap hook end of the rope grab assembly shall be attached to the user's front mounted attachment point of the full body harness. KStrong provides pre-installed lifelines with rope grab assembly having energy absorption mechanism. If user needs to assemble both products, it should be done by authorized personal only.



Model: UFG 601010

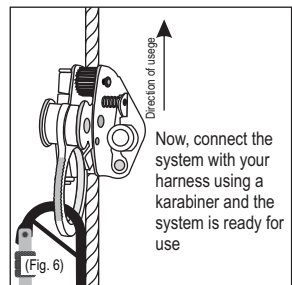
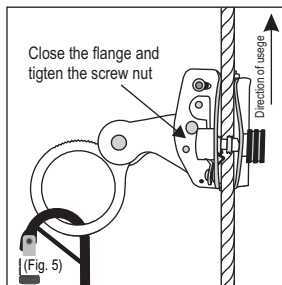
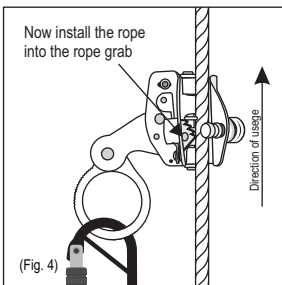
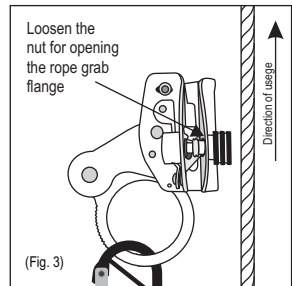
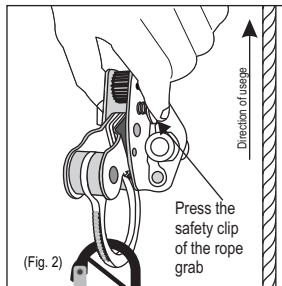
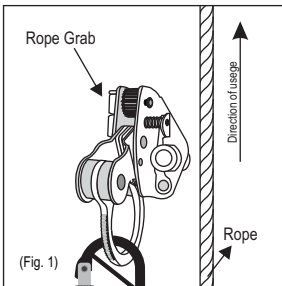
**USAGE:** The fall arrester, model UFG 601010 is a guided type fall arrester on a flexible anchorage line made of kernmantle rope of dia 0.47 inch. It accompanies the user without requiring manual adjustment during upward or downward movement, and locks automatically on the anchorage line when a fall occurs.

• **Follow Step 1 to Step 8 to use the fall arrester:**

- STEP 1:** Press the safety clip of the rope grab and loosen the screw to open the covers. Refer Fig. 2 and 3
- STEP 2:** Insert the rope inside the rope grab. Refer Fig. 4
- STEP 3:** Close the flange covers and tighten the screw. Refer Fig. 5
- STEP 4:** Release the safety pin.
- STEP 5:** Connect the upper end of the anchorage line with the help of the carabiner to the anchorage point. Ensure that the anchorage point has a strength of more than 4496 lbs.
- STEP 6:** Now connect the carabiner of the rope grab to the attachment element of your Full Body Harness. Ensure that the carabiner is locked tightly. Refer Fig. 6
- STEP 7:** The user is now free to move up and down while pressing the rope grab grip.
- STEP 8:** Ensure that when you are working, the rope grab grip is released to its normal position.



Refer The below given Pictogrames for Installing the System.



## INSPECTION AND MAINTENANCE

KStrong rope grabs and vertical lifelines are designed for today's rugged work environments. To maintain their service life and high performance, system components should be inspected frequently. Inspect each product thoroughly before every use. Regular inspection by a competent person for wear, damage or corrosion should be a part of your safety program.

### INSPECTION

#### Frequency:

Inspect the equipment visually before each use .

The lanyard must be inspected by a competent person other than the user at least once a year. Record the results of each inspection in the inspection log.

#### Rope Grabs:

- Inspect for physical damage, cracks, wear and corrosion.
- Check cam and springs for damage or loss of tension.
- Check pawl and locking mechanism.
- Be sure that all parts move freely without hesitation.
- Check rivets for damage, cracks, wear or corrosion.
- Inspect for malfunctioning components, broken or missing springs.



### VERTICAL LIFELINES

- Rope Lifelines: Rotation of the rope lifeline while inspecting from end-to-end will bring to light any fuzzy, worn, broken or cut fibers. Weakened areas from extreme loads will appear as a noticeable change in original diameter. The rope diameter should be uniform throughout, following a short break-in period.
- Snap Hooks/Karabiners: Inspect closely for hook and eye distortions, cracks, corrosion, or pitted surfaces. The keeper (latch) should seat into the nose without binding and should not be distorted or obstructed. The keeper spring should exert sufficient force to firmly close the keeper. Keeper locks must prevent the keeper from opening when the keeper closes.
- Thimbles: The thimble must be firmly seated in the eye of the splice, and the splice should have no loose or cut strands. The edges of the thimble must be free of sharp edges, distortion, or cracks.



**If inspection reveals a defect in condition, remove the device from service. Any equipment that has been subjected to a fall should be remove from service. Products removed from service should be disposed of in a manner that prevents inadvertent further use.**

### TYPES OF MATERIAL DAMAGE

| HEAT  |  | MOLTEN METAL OR FLAME  |  |
|---|--|--|--|
| In excessive heat, rope/webbing becomes brittle and shows a shriveled brownish appearance. Fibers will break when flexed. Should not be used above 180°F. | Change in color usually appearing as a brownish smear or smudge. Transverse cracks when rope/ webbing is bent over a mandrel. Loss of elasticity in rope/ webbing. | Rope/webbing strands fuse together. Hard shiny spots. Hard and brittle feel. | Paint which penetrates and dries restricts movement of fibers. Drying agents and solvents in some paints will appear as chemical damage. |

Contact KStrong if you have any questions about the above chart.

**MAINTENANCE****Cleaning and Storage:**

Basic care of all KStrong Fall Protection equipment will prolong the durable life and will contribute towards the performance of its vital safety function. Clean the equipment to remove any dirt, corrosives, or contaminants. Store in a clean, dry area, free of exposure to fumes or corrosive elements. Avoid excessive heat, steam, or long periods of sunlight.

**Servicing:**

A record log of all inspection dates for this device must be maintained. KStrong rope grabs and wire rope grabs are not repairable and should be replaced if damaged. This system and all components must be taken out of service if subjected to fall arrest forces. Contact KStrong if you have any questions.

**TRAINING**

- A vertical lifeline shall be securely attached to and suspended freely from its anchorage connection and should not come in contact with any structure or object, which could adversely affect its integrity or its function. Vertical lifelines shall be protected from abrasion or other damage (i.e., heat, welding slag, electrical, chemicals etc.) that may occur from suspension over or along a structural member. In order to stabilize the lower end of the lifeline, it shall be rigged with a weight or other provision specified by the manufacturer of the associated fall arrester. The VLL shall be extended to or below the lowest level to which the authorized person is expected to travel. A stop specified by the manufacturer of the fall arrester shall be installed to prevent the fall arrester from accidentally coming off the lifeline.
- The competent person shall check the vertical lifeline to assure that it is of the correct size and construction for use with the intended fall arrester.
- Fall arresters shall be installed in the proper direction on the VLL in accordance with the manufacturer's instructions.
- Authorized persons and users shall be trained by a competent trainer to inspect, use, store and maintain the equipment according to the requirements of this standard and the manufacturers' instructions.
- Training shall address inspections performed prior to use of the equipment and include the manufacturer's recommendations for inspection.
- Training shall be provided in proper use of the equipment and include:
  - How to use the equipment.
  - How to estimate and limit the maximum arresting force to acceptable limits for the personal fall arrest system.
  - Proper methods of donning, adjusting, and interconnecting of the equipment.
  - Proper attachment locations on the equipment.
  - Intended function and performance characteristics for each item of equipment.
  - Proper attachment methods including compatibility of the sizes of snap hooks, D-rings, and other connections to reduce the probability of accidental disengagement.
  - How to determine free fall distance and total fall distance.
  - What to do after a fall to protect the user from an injury.
  - Emergency rescue planning and execution to include:
    - Methods of rescue.
    - Rescue personnel availability.
    - Type of equipment available for rescue and effective means to summon rescue personnel.
    - To organize drills for rescue personnel in rescue and evacuation procedures.
- Training in maintenance procedures shall include those issues set forth in the manufacturer's instruction.
- Training in proper storage techniques shall be provided in accordance with the manufacturer's recommendations.
- Training through practical demonstration shall be provided to each user when:
  - Initially donning or using equipment
  - A component is changed





- First approaching a condition of use
- Encountering special conditions
- Periodic assessment of the effectiveness of user training shall be conducted at least annually by a competent person and determine the need for more training.
- Training shall address inspections performed prior to each use of the equipment and include the manufacturer's recommendations for inspection.
- Training shall be provided in the selection and hands-on use of fall protection equipment and training including climbing and workplace task situations.
- The competent person trainer shall include many different methods of training the authorized persons. The training shall include lectures, videos, demonstration, and hands-on types of training on the equipment and their intended type of usage. The competent person trainer shall keep the training records of the trained authorized persons for at least ten years.
- Training shall be communicated to the authorized person in a multimedia format and in a language that they have a working knowledge, usually their first or second natural language.
- Competent person trainers and qualified person trainers shall have current knowledge of fall protection methods, issues, and practices, and shall maintain this current knowledge through practice, experience, or education.

**PRODUCT IDENTIFICATION**

All KStrong rope grabs and vertical lifelines are included this instruction manual. Special order and custom product model numbers may not be listed. New model numbers will be added in the next printing of this manual. If there is any doubt as to whether this instruction manual applies to your particular product.





|   |  <p><b>LIFELINE FOR USE WITH ROPE GRAB</b></p> <p>Model: UFR100025<br/>         UID: XXXXXXXXXXXX<br/>         Length: 25 ft.<br/>         Minimum Breaking Strength: 5000 lbs.<br/>         DOM: <input style="width: 50px;" type="text"/></p> <p>Always read and understand all manufacturer's instructions included with equipment at time of shipment.</p>  |          |   |   |   |   |   |   |   |   |   |   |   |   |    |  |  |  |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |  |  |  |
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|   | <p>Compliant with ANSI Z359.1-2007, A10.32-2012 and OSHA requirements.<br/>         Worker weight capacity range: 130 - 310 lbs.<br/>         Materials: 5/8" diameter polysteel, polyester or nylon.<br/>         Make only compatible connections. Refer to instructions for proper connection methods.<br/>         Avoid contact with sharp or abrasive edges and surfaces.</p> <p><b>⚠ WARNING</b></p> <p>Improper use of the product could result in serious injury or death.<br/>         Any alteration, abuse or misuse of the product voids the warranty.</p> <p><b>ANY ALTERATION, ABUSE OR MISUSE OF THIS PRODUCT<br/>         VOIDS THE WARRANTY.</b></p>   |          |   |   |   |   |   |   |   |   |   |   |   |   |    |  |  |  |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |  |  |  |
|  | <p>Before every use, user must inspect the products. Every 6 months a competent person must complete final inspection of the product and record initials.<br/>         Date of First Use: _____<br/>         Product lifetime is indefinite, as long as product passes all inspection requirements.</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>MO<br/>YR</th> <th>J</th> <th>F</th> <th>M</th> <th>A</th> <th>M</th> <th>J</th> <th>J</th> <th>A</th> <th>S</th> <th>O</th> <th>N</th> <th>D</th> </tr> </thead> <tbody> <tr><td>20</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>20</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>20</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>20</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>20</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>20</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>20</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>20</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>20</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>20</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table> <p>DO NOT remove labels. <span style="float: right;">Made in India <span style="margin-left: 100px;">kstrong.com</span></span></p> | MO<br>YR | J | F | M | A | M | J | J | A | S | O | N | D | 20 |  |  |  |  |  |  |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |  |  |  |  |
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**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 usage or installation of this product.

| <b>EQUIPMENT RECORD</b>                           |   |  |   |  |
|---|---|--|---|--|
| Product:  |   |  |   |  |
| Model and type/identification                     | Trade name  | Identification number  |   |  |
| Manufacturer                                      | Address   | Tel, fax, email  |   |  |
| Year of manufacture                               | Purchase date   | Date first put into use  |   |  |
| Other relevant information (e.g. Document number) |   |  |   |  |
| <b>PERIODIC EXAMINATION AND REPAIR HISTORY</b>    |   |  |   |  |
| Date  | Reason for entry<br>(periodic examination<br>or repair) | Defects noted, repair<br>carried out and other<br>relevant information | Name and signature<br>of competent user | Periodic<br>examination<br>next due date |
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KStrong Inc.  
150 N. Radnor Chester Road Suite F200  
Radnor, Pennsylvania 19087 United States  
Contact number: 1-833-KSTRONG

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