



## BRUTE™

### USER INSTRUCTION MANUAL SELF-RETRACTING DEVICES

THESE INSTRUCTIONS APPLY TO THE FOLLOWING MODELS:

AFS510003.5, AFS510006, AFS510007, AFS510010, AFS510015,  
AFS510020, AFS510025, AFS510030, AFS510003.5SS, AFS510006SS,  
AFS510010SS, AFS510015SS, AFS510020SS, AFS510025SS,  
AFS510030SS, AFS550003.5, AFS550003.5SH, AFS550006, AFS550012,  
AFS551002(SW), AFS570010, AFS570020, AFS570028 AND AFS570030

CE 0598  
EN 360:2023

Ex II 2G  
Ex h IIC T6 Gb

EN 80079-36:2016  
EN 80079-37:2016

CERTIFIED PRODUCT



AUSTRALIA & NZ STANDARDS  
Certified to AS/NZS 1891.3:2020  
Issued by BSI  
Vide Lic. No.: BMP 777809

Please read and understand the manufacturer's instructions for each component or part of the complete system. Manufacturer's instructions must be followed for proper use, care, and maintenance of this product. These instructions must be retained and be kept available for the user's reference at all times. Alterations or misuse of this product, or failure to follow instructions, may result in serious injury or death.

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

This is the manufacturer's instruction manual drafted with an intention to meet the requirements of EN 360:2023 and Australia and New Zealand standards AS/NZS 1891.3 2020. This manual should be used as a part of an employee training program.

## **▲ WARNING !!**

The products in this Instruction Manual are a part of a personal protective, work support, or rescue system. The user must read and follow the manufacturer's instructions for each component of the system. This manual contains information important to your safety and should be kept in a safe place for future reference. 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 questions regarding the use of this equipment.

## **1. PRODUCT DESCRIPTION**

The Brute Range of Self Retractable Lifelines (SRLs) is classed as Personal Protective Equipment (PPE) under the European PPE Regulation (EU) 2016/425 and complies with this Regulation through the Harmonized European Standard EN 360:2023 and Australia and New Zealand standards AS/NZS 1891.3 2020. The SRLs are designed to minimize the risk of falling from heights and provide protection against such dangers.

### **Important Note**

While this equipment is designed to enhance safety, no item of PPE can provide absolute protection. Caution must always be exercised when performing activities involving risks. This manual is prepared to ensure safe and effective use of the Brute Range of SRLs. For any inquiries or further assistance, please contact KStrong email [customer@kstrong.com](mailto:customer@kstrong.com) or [customer@kstrong.com](mailto:customer@kstrong.com).

## **2. TRAINING**

To ensure that the user is familiar with the instructions provided in this manual, it is the responsibility of the user to undergo proper training for this, and for correct care and use 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.

## **3. POSSIBLE USAGE**

Brute SRLs can be used as a part of a fall arrest system. The overhead anchor point must be rated to at least 12kN as per EN and a minimum of 15kN for AS/NZS. Connectors: EN must comply with EN362, for AS/NZS must comply to EN362 with min 6kN gate or ANSI.

The following equipment is to be used specifically in a vertical condition.

## **4. TECHNICAL SPECIFICATIONS**

No.	KStrong Model	Material	Length	MBS	Conformity
1	AFS510003.5	Casing: Robust and durable plastic Cable: Galvanized steel wire rope Ø4.5mm Metal: Steel Snap Hook	3.5 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020 ATEX 2014/34/EU
2	AFS510006	Casing: Robust and durable plastic Cable: Galvanized steel wire rope Ø4.5mm Metal: Steel Snap Hook	6 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020 ATEX 2014/34/EU

No.	KStrong Model	Material	Length	MBS	Conformity
3	AFS510007	Casing: Robust and durable plastic Cable: Galvanized steel wire rope Ø4.5mm Metal: Steel Snap Hook	7 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020 ATEX 2014/34/EU
4	AFS510010	Casing: Robust and durable plastic Cable: Galvanized steel wire rope Ø4.5mm Metal: Steel Snap Hook	10 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020 ATEX 2014/34/EU
5	AFS510015	Casing: Robust and durable plastic Cable: Galvanized steel wire rope Ø4.5mm Metal: Steel Snap Hook	15 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020 ATEX 2014/34/EU
6	AFS510020	Casing: Robust and durable plastic Cable: Galvanized steel wire rope Ø4.5mm Metal: Steel Snap Hook	20 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020 ATEX 2014/34/EU
7	AFS510025	Casing: Robust and durable plastic Cable: Galvanized steel wire rope Ø4.5mm Metal: Steel Snap Hook	25 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020 ATEX 2014/34/EU
8	AFS510030	Casing: Robust and durable plastic Cable: Galvanized steel wire rope Ø4.5mm Metal: Steel Snap Hook	30 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020 ATEX 2014/34/EU
9	AFS510003.5SS	Casing: Robust and durable plastic Cable: Stainless steel wire rope Ø4.8mm Metal: Steel Snap Hook	3.5 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020 ATEX 2014/34/EU
10	AFS510006SS	Casing: Robust and durable plastic Cable: Stainless steel wire rope Ø4.8mm Metal: Steel Snap Hook	6 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020 ATEX 2014/34/EU
11	AFS510010SS	Casing: Robust and durable plastic Cable: Stainless steel wire rope Ø4.8mm Metal: Steel Snap Hook	10 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020 ATEX 2014/34/EU
12	AFS510015SS	Casing: Robust and durable plastic Cable: Stainless steel wire rope Ø4.8mm Metal: Steel Snap Hook	15 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020 ATEX 2014/34/EU
13	AFS510020SS	Casing: Robust and durable plastic Cable: Stainless steel wire rope Ø4.8mm Metal: Steel Snap Hook	20 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020 ATEX 2014/34/EU
14	AFS510025SS	Casing: Robust and durable plastic Cable: Stainless steel wire rope Ø4.8mm Metal: Steel Snap Hook	25 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020 ATEX 2014/34/EU
15	AFS510030SS	Casing: Robust and durable plastic Cable: Stainless steel wire rope Ø4.8mm Metal: Steel Snap Hook	30 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020 ATEX 2014/34/EU
16	AFS550003.5	Casing: Robust and durable plastic Textile: Polyester webbing 25mm Metal: Steel Snap Hook	3.5 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020

No.	KStrong Model	Material	Length	MBS	Conformity
17	AFS550003.5SH	Casing: Robust and durable plastic Textile: Polyester webbing 25mm Metal: Steel Rebar Hook	3.5 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020
18	AFS550006	Casing: Robust and durable plastic Textile: Polyester webbing 25mm Metal: Steel Snap Hook	6 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020
19	AFS550012	Casing: Robust and durable plastic Textile: Polyester webbing 25mm Metal: Steel Snap Hook	12 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020
20	AFS551002(SW)	Casing: Robust and durable plastic Textile: Polyester Webbing 44mm Metal: Steel Karabiner	2.5 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020
21	AFS570010	Casing: Robust and durable plastic Cable: Stainless steel wire rope Ø4.8mm Metal: Steel Snap Hook	10 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020 ATEX 2014/34/EU
22	AFS570020	Casing: Robust and durable plastic Cable: Stainless steel wire rope Ø4.8mm Metal: Steel Snap Hook	20 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020 ATEX 2014/34/EU
23	AFS570028	Casing: Robust and durable plastic Cable: Stainless steel wire rope Ø4.8mm Metal: Steel Snap Hook	28 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020 ATEX 2014/34/EU
24	AFS570030	Casing: Robust and durable plastic Cable: Stainless steel wire rope Ø4.8mm Metal: Steel Snap Hook	30 Meters	15kN	EN 360:2023 AS/NZS 1891.3:2020 ATEX 2014/34/EU
All Sealed SRL's are tested as per IP69K as per ISO-20653 & EN 60529, ATEX 2014/34/EU, IEC 60068-2-6:2007					

## 5. IMPORTANT INFORMATION

- Inspect the equipment according to the manufacturer's instructions before each use. Refer preinspection checklist on page 18-19.
- Inspection of equipment should be done on a regular basis by a qualified person, and the results must be 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 a KStrong Certified Service Centre or persons 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 of 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 EN or AS/NZS 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.
- Allow adequate fall clearance below the work surface.
- Always have a Rescue Plan ready and at hand when using this equipment.

### **▲ WARNING !!**

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 their ability to safely absorb the fall arrest forces. This equipment is not meant for use by pregnant women and minors.

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.

## 6. 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 user utilizes combinations of components or sub systems that are manufactured by others, then only a “qualified” or “competent” person 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.

## 7. COMPATIBILITY OF CONNECTORS

Connectors are compatible with connecting elements when they have been designed to work together in such a way that their sizes and shapes do not cause their gate mechanisms to inadvertently open regardless of how they become oriented. Connectors (hooks, karabiners, and D-Rings) must be capable of supporting at least 23 kN.

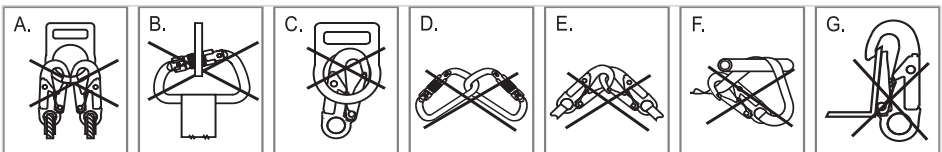
All connectors must be compatible with all system components like anchorages, etc. Never use equipment which is not compatible as this may cause the connectors to disengage unintentionally. All connectors must be compatible in shape and size. As per EN362:2004 or AS/NZS 1891.3 2020, only self-locking snap hooks and Karabiners may be used.

## 8. CONNECTIONS USING CONNECTORS

Ensure that only self-locking snap hooks and Karabiners 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.

## 9. NEVER USE INAPPROPRIATE CONNECTIONS

- 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 when features that protrude from the connectors catch on to 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 karabiner is attached is undersized or irregular in shape, then this may allow 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 A TO G.

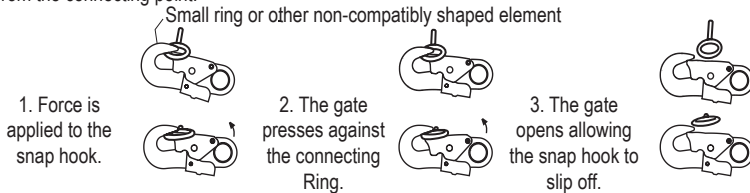
### ▲ WARNING !!

Large throat opening snap hooks should not be connected to standard size D-rings or similar objects. If the hook or D-ring twists or rotates, 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.

## 10. IMPORTANT RESTRICTIONS WHILE MAKING CONNECTIONS

- Do not connect a snap hook to the loop or thimble of a wire rope, nor attach it in any manner that may introduce slack into the wire rope.
- Avoid making connections where the locking mechanism of the connector could come into contact with structural components or other equipment, as this may inadvertently cause the connector to unlock and release.
- When connecting to a single or pair of soft loops on a harness, only use a fully closing, fully locking karabiner. Snap hooks must not be used for these types of connections.
- A karabiner may be connected to a loop or ring that is already occupied by a choker-style connector, provided it can fully close and lock. Snap hooks are not permitted for these connections.

If the connecting element to which a snap hook (shown) or karabiner 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 karabiner. This force may cause the gate (of either a self-locking or a non-locking snap hook) to open, allowing the snap hook or karabiner to disengage from the connecting point.



## 11. CONNECTING SUBSYSTEMS

Use only those subsystems (full body harnesses, lanyard, rope grab and lifeline, cable sleeves) that are suitable for your application. See subsystems manufacturer's instructions for more information. A full body harness must be worn when using the equipment mentioned in this manual. As per EN or AS/NZS, the free fall distance should be limited to less than 2.0m, when the personal fall arrest system is used. Additionally, the fall arrest force also should be less than 6kN. Ensure the karabiner cannot cross-gate load (load against the gate rather than along the backbone of the karabiner).

## 12. ENVIRONMENTAL HAZARDS

It is important to take additional precautions while using this equipment in the presence of any environmental hazard 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 - There is a possibility of an electric current to flow through the lifeline of the SRL's. Moisture absorbed by the lifeline may also cause the electric current to flow through the lifeline. Use extreme caution when working near such 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 !!**

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 questions related to this.

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.

### 13. ANCHORAGE STRENGTH

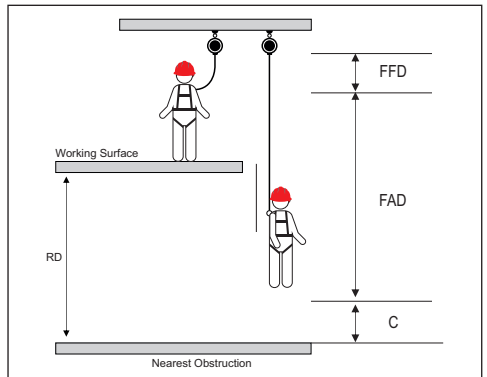
- The application type determines the anchorage strength requirement. As per the European EN 795 and Australia and New Zealand standards AS/NZS 5532:2013, the necessary anchorage strength for the following applications is listed below:
  - Fall Arrest:** For this choose an anchorage that has a minimum of 12 kN (EN) and 15kN (AS/NZS), applied in directions permitted by the system. However, if more than one fall arrest system is attached to the anchorage, then the strength required has to be 23 kN multiplied by the systems attached to the anchorage.
  - Anchorage 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 12 kN (EN) and 15kN (AS/NZS) per user attached. They should be designed, installed and used as part of a complete Personal Fall Arrest System which maintains a safety factor of at least two. Rating of the anchorage should always be done under the supervision of a qualified person.

### 14. GENERAL LIMITATIONS OF FALL ARREST SYSTEM AND REQUIREMENTS

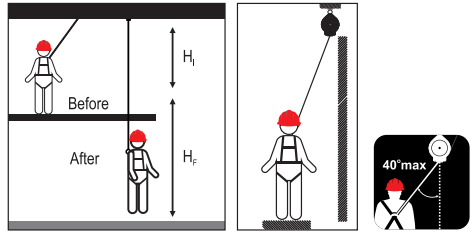
It is important to consider the below mentioned limitations before using or installing this equipment.

- KStrong SRLs are meant for use by ONE person only. The capacity of KStrong SRLs is from a minimum of 60 kgs to a maximum of 140 kg; hence, the combined weight (clothes, tools, shoes etc.) of a person using this equipment should not be less than 60 kgs or more than 140kgs. It is important to ensure that all the components in the system are rated to a capacity which is appropriate to the application.
- Corrosion:** The SRL should not be left in any environment for a long period of time, if it causes corrosion of its metal parts. It is important to be cautious while working around corrosive substances like sea water, ammonium compounds, sewage, fertilizers, and other such environments. Corrosive damage impacts the performance of the SRL, hence the inspection of the SRL should be performed more frequently so as to check its functioning and performance.
- Locking Speed:** The SRL requires an initial speed of retraction of the line to cause it to lock. However, this speed may not be achieved if there is an obstructed fall, or while working in confined spaces. Working in such conditions may limit the speed at which the locking of the SRL is achieved. Special care is required where the SRL is used while working on low-pitched roofs. Here the user may slide on the roof slope, rather than have a direct fall. This could also hamper the SRL locking mechanism. A clear path is required to ensure that the SRL's locking mechanism is activated.
- Free Fall:** As per EN360 2023 and AS/NZS 1891.4 2013 the personal fall arrest systems used with this equipment must be rigged in such a way that the free fall does not exceed 2.0m. Ensure that there is no slack in the lifeline, while using the SRL. Also, never extend the length of the lifeline by connecting a lanyard to it. Do not anchor the SRL at or below foot level unless specifically designed for that function as this will increase your free fall distance beyond the permissible levels as specified by EN360. Additionally, this could also cause excessive load impact on the SRL, thereby exceeding its capabilities to safely arrest a fall. Contact KStrong for any further information required.
- 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:

<b>Over Head Anchor</b>
<b>FFD</b> = Free Fall Distance 0.6m
<b>FAD</b> = Free Fall Distance + Harness Stretch 1.7m
<b>C</b> = Clearance to Obstruction 1.0m
<b>RD</b> = Required Fall Clearance Distance (from surface to nearest obstruction)
<b>RD = FAD + C (3.3m)</b>



- **Swing Falls:** Swing fall 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. Stay within 40° of the overhead anchor when using an SRL.



- **Sharp edges:** The lifeline of the SRL may be damaged by unprotected and sharp edges, hence they should be protected from all edges. The KStrong Leading Edge tested SRLs are designed in such a way that they provide additional protection from falls occurring over edges. However, protection to these SRLs should be provided from sharp edges such as sheared, cold rolled or flame cut steel. Refer the KStrong Leading Edge SRL UIM.
- **Horizontal systems and Tripods:** It is extremely important to ensure that the tripod or the Horizontal line system is compatible with the SRL. Horizontal systems must be designed and installed under the supervision of a qualified engineer only.

## 15. PERIODIC EXAMINATION

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. It is essential to check the condition of the equipment and ensure safety of the user through periodic examination of the product. This equipment must be examined by a qualified person at least once every six months, strictly complying with the instructions of the manufacturer. 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.

## 16. PURPOSE AND APPLICATION

KStrong SRLs are used to safely expand the working area, where a harness with a 1.8m lanyard is inadequate. Hence the lanyard line extends to the required length, as per use. When the length is shortened, the line retracts into its casing, ensuring that there is no slack in the line. More importantly, the SRL is designed to immediately arrest the fall of the user, and also to limit the shock loading on to the body of the user. The SRL is a part of the personal fall arrest system, along with other components like full body harness and anchorage connector.

## 17. LIMITATION OF USE OF KSTRONG SRLS

KStrong Self-Retracting Lifelines (SRLs) are designed for use exclusively as components of a personal fall arrest system. All elements of such a system - full body harnesses, connectors, hooks, lanyards, and related components are engineered to function together to ensure safe fall arrest performance and to minimize impact forces on the user. KStrong strongly recommends that only KStrong manufactured components or subsystems be used in conjunction with KStrong SRLs. If equipment from another manufacturer is to be incorporated, its compatibility must be assessed and confirmed by a qualified person. The use of substitute or non-approved components may compromise system compatibility and severely reduce safety, potentially rendering the entire fall arrest system unsafe for use.

## 18. 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 product or if the product has been used to arrest a fall, then immediately withdraw the equipment and send it back to the manufacturer or to the qualified authorized repair center. Check on the back-shoulder straps of the harness for the fall indicators, which should be intact. If it 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).

## 19. INSPECTION

### Pre-use and periodic inspection

It is mandatory that a competent person other than the user must perform a formal inspection of Personal Fall Arrest Systems (PFAS) and its components once at least every six months. This frequency should be altered based on conditions for use or exposure. The competent person shall determine appropriate inspection intervals in accordance with Appendix A of this UIM. The inspection results should be recorded in the equipment record at the end of this manual.

Equipment shall be inspected by the authorized person prior to each use. In addition, equipment shall undergo periodic inspections by a competent person other than the user, and by an authorized inspection centre.

### Inspection criteria

The authorised person shall establish and maintain inspection criteria for all equipment. These criteria shall meet or exceed the most stringent requirements specified by this standard or by the manufacturer's instructions. Inspection criteria shall be reviewed and updated regularly to account for changing patterns or conditions of use.

### Documentation of inspection

Records of all equipment inspections shall be maintained by the company authorised person . At a minimum, these records shall include:

- Equipment identification.
- Date of inspection.
- Name of the competent person conducting the inspection; and
- Results of the inspection, including any deficiencies detected.

### Action on defects

When an inspection reveals any of the following:

- Defects in equipment.
- Damage to equipment.
- Inadequate maintenance; or
- Activated stress indicators.

The equipment shall be immediately removed from service until it has been repaired, replaced, or otherwise deemed safe in accordance with manufacturer instructions.

### Purpose and frequency of two-level inspection

The purpose of a two-level inspection system is to provide independent oversight to detect and prevent the use of defective, damaged, or improperly maintained equipment. When deficiencies are identified during a competent person's inspection, the organization shall consider:

- Providing additional training or retraining for users in equipment inspection, maintenance, use, and storage; and
- Selecting alternative equipment if the current equipment is unsuitable for the conditions of use.

The frequency of periodic inspections by a competent person shall be determined by the user organization based on relevant factors, including:

- The nature and severity of workplace conditions affecting the equipment.
- Modes of equipment use; and
- Duration and frequency of exposure to operational conditions.

**Appendix A:** Inspection Requirements - based on Pre Use Inspections have been completed and recorded.

Type of Use	Application Examples	Conditions Of Use	Inspection Frequency of Competent Person	Authorized Inspection Centers
Infrequent to light	Rescue and confined space, factory maintenance	Good storage conditions, indoor or infrequent Outdoor use, room Temperature, clean Environments	Annually	At least every 3 years, but not longer than intervals required by the manufacturer
Moderate to Heavy	Transportation, residential construction, utilities, warehouse	Fair storage conditions, indoors and extended Outdoor use, all temperatures, clean or dusty environments	Semi-annually to annually	At least every 2 years, but not longer than intervals required by the manufacturer
Severe to Continuous	Commercial, construction, Oil and Gas, Mining and offshore	Harsh storage conditions, prolonged or continuous outdoor use In all temperatures, dirty or corrosive environments	Quarterly to semi-annually	At least annually, but no longer than intervals required by the manufacturer

**20. CHOOSE THE RIGHT ANCHORAGE POINT FOR THE SRL**

Select the anchorage which should be strong enough to take the load of application. The anchorage should be able to sustain a static load of a minimum 12kN (EN) & 15kN (AS/ NZS) in the direction applied by the personal fall arrest system. The anchor point should always lie directly above the user. Do not work above the anchorage point. The anchor point should also be located in such a place that the swing fall is minimized.

Also, while using the SRL, make sure that there is constant tension in the lifeline, and that there is no slack. If the cable is not taut, then this could increase the fall distance. Also, move normally because sudden jerky movements may cause the locking mechanism of the SRL to activate.

**21. INSTALLATION OF SRL ON OVERHEAD ANCHOR POINT**

As a stationary device, the SRL has to be mounted on an approved fixed anchorage point which is directly overhead the user. Connect the swivel eye of the SRL with a self-locking karabiner to the overhead anchorage. Connect the snap hook at the end of the lifeline to the Dorsal attachment D-ring of the Full body harness. The SRL would extend as the user moves away from the anchor point, and retracts as the user moves back towards the anchor point.

If the anchorage is mobile, over a steel cable or a fixed rail, then the swivel eye of the SRL is connected to the anchor point with the help of a self-locking karabiner. The snap hook at the end of the SRL is connected to the dorsal D-ring of the Full body harness of the user. Here, since the anchor moves along with the user, the SRL travels along with the anchor from one point to the other.

**⚠ WARNING !!**

Never use the tagline as a safety line. The tagline is NOT a part of fall arrest system. It is only an accessory to the SRL, and it should NEVER be used as an extension to the lifeline.

**22. TAGLINE**

**Description, Installation and Usage**

A tagline is a separate line that is used exclusively for allowing the tagline to retract back into the housing during non-use. The tag line is attached to the connecting hook and is long enough to allow the SRL line to retract fully.

It is recommended that a tagline should be used to let the line on a SRL to fully retract back into the housing during extended periods (any time span that is greater than 24 hours) of non-use. When a retracting line is left out for extended periods of time, it may weaken the retraction spring quite prematurely hence affecting the operation of the SRL. These taglines are made of nylon or kernmantle rope connected to a simple snap hook at one end.

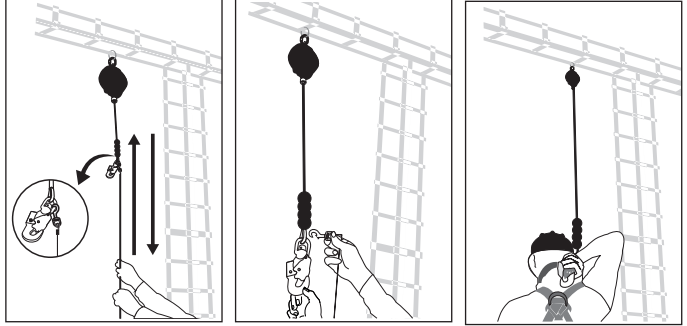
KStrong SRL's are supplied with taglines of appropriate length. When disconnecting the self-locking snap hook of the SRL from the dorsal D-ring of the full body harness, and while the SRL casing is anchored at a height, then use the agline to retract the extended line back to the casing.

- Connect the tagline snap hook to the snap hook of the SRL at its eye.

- Now slowly release the taut extended lifeline while guiding it with the nylon tagline.

- When the entire lifeline of the SRL is retracted into its casing, then hold the tagline in place by tying it securely around a post.

- When you have to pull down the lifeline, just open up the tagline, and pull it down to bring down the lifeline along with it.



- Always use the tagline to retract the lifeline or to extend it slowly.
- Always fold the tagline and keep it in a secure area when not in use.

**23. INSTRUCTIONS FOR USE:**

**Before each use, verify the SRL's locking function by applying a sharp tug to the snap hook at the lifeline termination. The unit must lock immediately. Do not use the SRL if it fails this test.**

- **STEP 1:** Pre-Use Check: Inspect the SRL before each use. Refer to the Pre-Use Inspection Checklist (page 17–18).
- **STEP 2:** Anchor Connection: Attach the anchorage eye of the SRL to a suitable rated overhead anchor point using approved karabiners. Ensure karabiners are locked.
- **STEP 3:** Harness Connection: Connect the swivel hook of the SRL to the attachment point of your full-body harness. Ensure it is locked.
- **STEP 4:** You may now move up and down at normal speed. In the event of a fall, the SRL will lock and reduce impact forces. Do not exceed the maximum user weight on the product label (including tools and PPE).



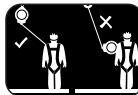
Connect the lanyard to the Dorsal attachment element of your harness.



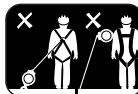
Can not be used at foot level or below the foot level.



The product can not be used on the sharp edges.



The pictogram indicates the correct anchor point position and the proper orientation of the block.



The product should not be used at foot level in any orientation of the block.

**▲ WARNING !!**

Inspect all the other components of the Fall Arrest, Work Positioning, Rescue systems 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.

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.

**24. 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. 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.

**25. RESCUE PLAN**

A rescue plan must be 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.

**26. ADVICE & INFORMATION**

- The SRL should be the personal property of the user.
- Ensure that the SRL is compatible with other items when assembled into a system.
- Usage with other non-compatible items may be dangerous & hazardous as the safe function of one item may be affected or interferes with the safe function of another.
- The user should carry out a pre-use inspection check of the SRL prior to use, to ensure that it is in a serviceable condition and operates correctly before it is used. Refer preinspection checklist on page 18-19.
- The pre-use check shall involve checking of any wear or abrasion on wire ropes/webbing and sign of corrosion if any on metal parts or any breakage of the casing.
- Withdraw from use immediately if there is any doubt about its safe condition or if it has already arrested a fall, the equipment shall not be used again until confirmed in writing by a competent person that it is acceptable to do so.
- Ensure that the strength of the anchor device have a minimum of 12 kN (EN 795) and 15kN (AS/NZS 5532:2013).
- Use karabiners to connect to the overhead anchor point. As per EN, karabiners must conform to EN 362 and for AS/ NZS must use EN362 with a minimum gate strength of 6kN or ANSI Karabiners.
- It is advisable to use the dorsal attachment D-Ring of the harness for connection to the Retractable Fall Arrester.
- However if it is not possible for any reason, the chest attachment element may also be used.
- It is essential to verify that a minimum 4ms height of free space is available below the user's feet & the ground level at the work place, so that in case of a fall, there will be no collision with the ground or other obstacle in the fall path.
- User is advised to keep the User Instructions document for the life of the product.
- Following conditions may be hazardous & may affect the performance of Retractable Fall Arrester:
  - Extreme temperature
  - Trailing or looping of Lanyards over sharp edges.
  - Extreme acidic or basic environments.

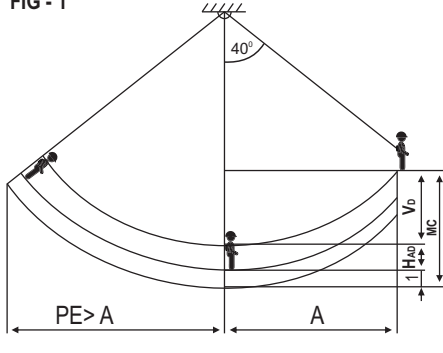
- Abrasive or sharp edge structures which can damage the equipment.
- Pendulum falls.
- Ensure that manufacturer's packaging is used during transportation to prevent damage. In case the original packaging is not available, use polybag which is sealed to prevent moisture.
- It is essential for the safety of the user that if the product is resold outside the original country of destination, the reseller shall provide instruction for use, for maintenance, for periodic examination and for repair in the language of the country in which product is to be used.
- This is advised that annual inspection should be done by a competent person & if any discrepancy is found in product service will be done at authorized service center only.
- During inspection, it is necessary to check the legibility of the equipment marking.
- Only the models with the Ⓢ marking on the product itself are suitable for use in an Explosive Atmosphere.
- A full body harness is the only acceptable body holding device that can be used in a fall arrest system.
- Cleaning procedure is to be strictly adhered to manufacturers instructions. Refer KStrong UIMs for procedure for cleaning.
- Inspect all the other components of the Fall Arrest, Work Positioning, Rescue systems 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.
- 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 karabiners.
- Never connect a hook to a hook, or a karabiner to a karabiner, or a karabiner to a hook.
- Also make sure not to connect a connector to any element that may cause the hook or karabiner material to distort, abrade or wear out.
- Ensure the medical condition of the user does not affect his safety in normal and emergency use.
- The SRL shall only be used by a person trained and competent in its safe use.
- A rescue plan shall be in place to deal with any emergencies that could arise during the work.
- Do not make any alterations or additions to the SRL without the manufacturer's prior written consent and that any repair shall only be carried out by personnel trained by the manufacturer & duly authorized by him.
- The SRL shall not be used outside its limitation, or for any purpose other than that for which it is intended.
- The Retractable Fall Arrester and twin Retractable Fall Arrester may be used in vertical / over head anchorage applications.
- Maximum allowable angle from the true vertical is 40 degrees.
- A connector conforming to EN 362:2004 shall be used to connect with the retractable lanyard. ensure that not more than 600mm of un-retracted length is available out side housing including connector.
- Always make connection to a over head anchorage point rated to 12kN as per EN795:2012 or 15kN as per AS/NZS 5532:2013
- Always make connection to the dorsal attachment of the full body harness conforming to EN 361:2002 by a connector complying to EN 362:2004 or AS/NZS 1891.1 2020.
- Visual fall indicator is available near the swivel eye of the steel snap hook which remains green until the device has arrested a fall. The visual indicator turns red in the event of a fall arrest and the device must be removed from the service.
- The Retractable Fall Arrester shall not be used in any application where self -locking function may not activate like inclined surfaces & free-falling solids.
- User must work vertically below the Retractable Fall Arrester to avoid contact with the ground or any obstacle during a fall, including the risk of pendulum effect (Refer Fig-1).

The necessary minimum clearance (MC) below the feet of the user (See below FIG-1 and FALL CLEARANCE CHART) to avoid collision with the ground or other obstacles:-

$$\text{HAD} + \text{VD} = 1.4\text{m} + \text{VD}$$

$$\text{MC} = 1\text{m}(\text{Safety Factor}) + (1.4\text{m} + \text{VD})$$

**FIG - 1**



**FALL CLEARANCE CHART**

SRL LENGTH	2	3.5	7	7.5	10	15	20	25	30
Max Offset Angle	<b>0 Degree</b>								
VD (Vertical displacement due to lateral offset)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MC (Minimum Fall clearance)	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
A (Max Offset Distance )	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PE (Min. Clearance For Pendulum Effect)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Offset Angle	<b>10 Degree</b>								
VD (Vertical displacement due to lateral offset)	0.0	0	0.1	0.1	0.2	0.2	0.3	0.4	0.5
MC (Minimum Fall clearance)	2.5	2.5	2.5	2.5	2.6	2.6	2.7	2.8	2.9
A (Max Offset Distance )	0.3	0.6	1.2	1.3	1.7	2.6	3.5	4.3	5.2
PE (Min. Clearance For Pendulum Effect)	0.8	1.0	1.6	1.7	2.2	3.0	3.9	4.8	5.6
Max Offset Angle	<b>20 Degree</b>								
VD (Vertical displacement due to lateral offset)	0.1	0.2	0.4	0.5	0.6	0.9	1.2	1.5	1.8
MC (Minimum Fall clearance)	2.5	2.6	2.8	2.9	3.0	3.3	3.6	3.9	4.2
A (Max Offset Distance )	0.7	1.2	2.4	2.6	3.4	5.1	6.8	8.6	10.3
PE (Min. Clearance For Pendulum Effect)	1.5	2.0	3.2	3.4	4.2	5.9	7.7	9.4	11.1

Max Offset Angle	30 Degree								
VD (Vertical displacement due to lateral offset)	0.3	0.5	0.9	1.0	1.3	2.0	2.7	3.3	4.0
MC (Minimum Fall clearance)	2.7	2.9	3.3	3.4	3.7	4.4	5.1	5.7	6.4
A (Max Offset Distance )	1.0	1.8	3.5	3.8	5.0	7.5	10.0	12.5	15.0
PE (Min. Clearance For Pendulum Effect)	2.2	3.0	4.7	5.0	6.2	8.7	11.2	13.7	16.2
Max Offset Angle	40 Degree								
VD (Vertical displacement due to lateral offset)	0.5	0.8	1.6	1.8	2.3	3.5	4.7	5.9	7.0
MC (Minimum Fall clearance)	2.9	3.2	3.5	4.2	4.7	5.9	7.1	8.3	9.5
A (Max Offset Distance )	1.3	2.2	4.5	4.8	6.4	9.6	12.9	16.1	19.3
PE (Min. Clearance For Pendulum Effect)	2.8	3.8	6.0	6.4	7.9	11.2	14.4	17.6	20.8

All the values in meters

## 27. INSTRUCTION FOR MAINTENANCE

- Cleaning the equipment after use is extremely important, as this maintains the life and safety of the equipment. If soiled, the SRL may be wiped off clean with a dry clean cloth. Contact KStrong for any further questions.
- Additional maintenance and servicing procedure must be completed by authorized service center only.
- Store the SRL in a cool dry clean environment away from direct sunlight. Avoid areas where there may be the presence of chemical vapors, heat, excessive moisture, oil or other degrading elements. Soiled, wet or contaminated SRL should first be thoroughly cleaned and dried, before placing them in storage.
- It is extremely important to thoroughly inspect the equipment after extended storage. This inspection should be performed by a competent person only.

## 28. 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.
- **Before each use, verify the SRL's locking function by applying a sharp tug to the snap hook at the lifeline termination. The unit must lock immediately. Do not use the SRL if it fails this test.**

Before each use, verify the SRL's locking function by applying a sharp tug to the snap hook at the lifeline termination. The unit must lock immediately. Do not use the SRL if it fails this test.

**SELF RETRACTING LIFELINE (SRL)**

The top swivel anchor allows the SRL to rotate preventing the twisting or tangling whilst ensuring the user stays aligned.

Label



High Impact Polymer Casing

**Ergonomic carry handle** allowing the user to transport the SRL with ease.

**Impact Indicator** allows easy visual inspection to determine if the unit has experienced a fall by a user.


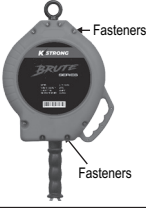

**Snout for minimizing the accidental Locking** consists of Snout which minimizes the accidental locking of the Block when the wire rope is released suddenly.

Galvanized or Stainless Steel Swivel Hook provides corrosion resistance.

**⚠ WARNING !!**

Before every use, each SRL must be checked to ensure the locking function is working properly. This is a mandatory step and in case of failure to follow this step the manufacturer will not be liable for any loss, injury or damage. A pre-use inspection must be carried out as per the checklist below and a record of each check must be maintained for the full lifespan of the SRL. It is the user's responsibility to read and understand the manufacturer's instructions provided with the product at the time of shipment and to receive proper training from the authorized personnel. The manufacturer will not be liable for any loss, injury, or damage resulting from incorrect use, lack of training, or improper installation. The suggested service interval of 3 years shall be changed in consultation with authorized person when SRL is intended to be used in Chemical, corrosive, marine or other aggressive environments including extreme temperature exposure, UV exposure, abrasions, cuts, violent impacts, incorrect use, or lack of maintenance.

**PRE USE INSPECTION CHECK LIST SELF RETRACTABLE LIFELINE (SRL)**

<b>Description:</b>		<b>Model No.:</b>		
<b>Serial No.:</b>		<b>Batch Number:</b>		
<b>Date of Manufacture:</b>		<b>Date of Purchase:</b>		
<b>Inspector:</b>		<b>Last Inspected on:</b>		
Checking Area		Inspect for	Guide Lines for inspection	Remarks
1) Block Casing and Anchorage Eye :	a. Casing with Guide & Snout	 <ul style="list-style-type: none"> <li>i) Damages / Breakages</li> <li>ii) Cracks</li> <li>iii) Deformations</li> </ul>	Check all Moulded parts including Casing, guide & snout, etc for any crack, damage/ breakage, deformation, etc. If any non-conformity found mark the block and send for servicing / repair.	
	b. All Fasteners	 <ul style="list-style-type: none"> <li>i) Availability</li> <li>ii) Tightening of all Fasteners Properly</li> </ul>	Check all fasteners for their presence and tightening as well. If any non-conformity found mark the block and send for servicing / repair.	
	c. Anchorage Eye	 <ul style="list-style-type: none"> <li>i) Availability</li> <li>ii) Damages/ Breakages</li> <li>iii) Cracks</li> <li>iv) Deformations</li> <li>v) Swivel Motion</li> </ul>	Check the anchorage eye for its availability. No crack, damage/ breakage, deformation, etc. should be observed. Check the Swivel motion of the eye for free movement. If any non-conformity found mark the block and send for servicing / repair.	

Checking Area		Inspect for	Guide Lines for inspection	Remarks
2) Snap Hook	a. Load Indicator Status		i) Red or Green	Never use the block if Load Indicator shows Red colour.
	b. Metal Parts		i) Deformation ii) Cracks	Check all metal parts for deformation or crack.
	c. Functioning		i) Opening and Locking	Check the functionality of the hook. Gate should not open without pushing lock. Spring movement of the Gate and Lock must work free.
3) Wire Rope / Webbing Assembly	a. Ferrule and Thimble		i) Crack ii) Deformation iii) Loose grip	Check the termination end including ferrule and thimble for any crack or damage. Ensure the grip of ferrule on wire. it should be intact.
	b. Wire rope		(i) Corrosion (ii) Kinking (iii) Frays (iv) Open strands (v) Cut	Check the Wire rope for corrosion, kinking, frays, open strands, cuts, etc.
	c. Energy Absorber		(i) Openings (ii) Cuts (iii) Stitching (iv) Label	Check the Energy absorber for any openings, cuts, burst stitching. It should be intact and not loose. Check that label is present & has valid information.
	d. Webbing		(i) Loose Yarn (ii) Cuts (iii) Stitching	Check the webbing for any Cut, Frayed, Heavily Soiled, burst stitching. It should be intact.
4) Functionality and Performance	a. Retraction & Mechanical functioning		It must retract the wire on its own	Extract the wire out side and allow it to retract automatically. Block should retract whole wire automatically.
	b. Locking		By pulling out the wire with a sudden jerk.	Hold the hook and extract the wire with a sudden jerk, block must lock .

**Note:-** If any non-conformity found, mark the block and send it for servicing / repair to the authorized service centre.

Inspection Date: .....

Inspector's Signature: .....



**ICON EXPLANATION**

Keep away from sunlight or heavy rains.



Use between temperature range of -30°C to + 50°C.



Ensure that the anchorage point has strength of min 12kN (EN) and 15kN (AS/NZS 5532:2013)



The product is designed for users with a minimum weight of 60 kg and a maximum weight of 140 kg.



Ensure that the max angle between the vertical & the lanyard is 40°.



Do not attempt repair unless trained by the manufacturer.



Ensure that wire rope has no cuts or abrasion marks before use



Can not be used at foot level or below the foot level.



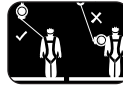
Once the wire rope has been reeled out, do not leave it suddenly to retract inside on its own, let it go inside gradually by guiding it slowly inside.



The product can not be used on the sharp edges.



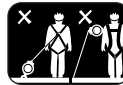
Connect the lanyard to the Dorsal attachment element of your harness.



The pictogram indicates the correct anchor point position and the proper orientation of the block.



Read the instructions carefully before use.



The product should not be used at foot level in any orientation of the block.

**ICON EXPLANATION FOR MINI BLOCK**

Keep away from sunlight or heavy rains.



The product is designed for users with a minimum weight of 60kg and a maximum weight of 140kg.



Ensure that the anchorage point has strength of min 12kN (EN) and 15kN as per AS/NZS 5532:2013.



Do not attempt repair unless trained & allowed by the manufacturer.



Ensure that the max angle between the vertical & the lanyard is 40°.



Can not be used below the foot level.



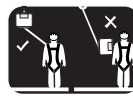
Ensure that webbing has no cuts or abrasion marks before use.



The product can not be used on the sharp edges.



Mini Block can neither be used at foot level or in sharp edge condition.



The pictogram indicates the correct anchor point position and the proper orientation of the mini block.



Connect the lanyard to the Dorsal attachment element of your harness.



The product should not be used at foot level in any orientation of the mini block.



**Certification Body :**

ANCCP Certification Agency S.R.L., Via dello Struggino, 6 (2nd floor), I-57121 Livorno (Italy) (Notified Body 0302)

**Ongoing Assessment Body:**

SGS Fimko Oy, Takomotie 8, FI-00380 Helsinki, Finland (Notified Body 0598)



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**KS GROUP**

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