

“ The First Catalogue for **KARAM Africa** for the year 2020-21 celebrates a Promise of Quality and Service With the perseverance to save millions of lives working in hazardous industrial environment all across the globe, KARAM stands committed to provide the best quality-in product and service, with the view to achieve its mission ”

**Let us define Safety  
the KARAM way**

*Safe Regards,*  
Team **KARAM**

**DISCLAIMER**

The information provided in this catalogue is based upon the technical data that KARAM obtained under laboratory conditions and believes to be reliable. KARAM does not guarantee results and takes no liability or obligation in connection with this information. As conditions of end use are beyond our control it is the user's responsibility to determine the hazard levels and the use of proper personal protective equipment. Persons having technical expertise should undertake evaluation under their own specific end-use conditions, at their own discretion and risk. Please ensure that this information is only to check that the product selected is suitable for the intended use. Any product that is damaged, torn, worn or punctured should be immediately discontinued from usage .

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**K**ARAM has achieved for itself a name to reckon with in the field of Fall Protection and PPE across boundaries globally. With a Mission that speaks of commitment towards the safety of millions of workers working at a height across the world, KARAM stands tall in achieving its goals. Over the last 20 years, we at KARAM have worked tirelessly and relentlessly, to understand the needs of our valuable customers, and manufacture products, which not only comply with the world Safety Standards, but are also designed to provide the best in Safety and ergonomics.

An infrastructure that spans more than 50 acres houses a team of over 3000 dedicated individuals, working collectively as a team, towards a common purpose. Aptly supported by the finest machinery, Manufacturing at KARAM is a combination of highly technology-based processes carried out under strict quality supervision. KARAM has been awarded the ISO 9001:2015 Systems Certification by SGS-Finland, in addition to processing now more than 2000 product certifications.

KARAM products have a worldwide reach of over 80 countries, expanding every year. They are certified to various International Standards like CE (European), ISI, ANSI (American), AS NZ (Australia, Newzeland), Singapore etc.

KARAM has the largest fully backward integrated manufacturing set up in the world, manufacturing all the components of its entire range of products, from basic raw material, all in-house. Operations at KARAM are performed using the best practices in manufacturing like Six Sigma, Gemba (the real place), KAIZEN (Continuous Improvement), Poka-Yoke (Error Proofing) etc. With the commitment to sustain these practices in manufacturing, KARAM has been winning the IMEA Award in the field of Manufacturing Excellence organized by Frost and Sullivan and FICCI since the year 2017. Along with sustainability of these practices, Operations at KARAM are under constant vigilance and are continually improvised each day, involving better processes and technology at all steps.

KARAM has the finest and best in-class state of the art machinery along with extremely skilled manpower involved in critical operations to produce the best quality safety gear from head to toe.

Our Quality lab has also been accredited by the Australian body to provide AS NZ certification.

Constant enhancement in technology and focused attention towards providing the highest quality products has enabled KARAM to establish itself as a leading player in the field of PPE.



LAZER CUT MACHINE



WEBBING CUTTING MACHINE



ED ANODIZING PLANT



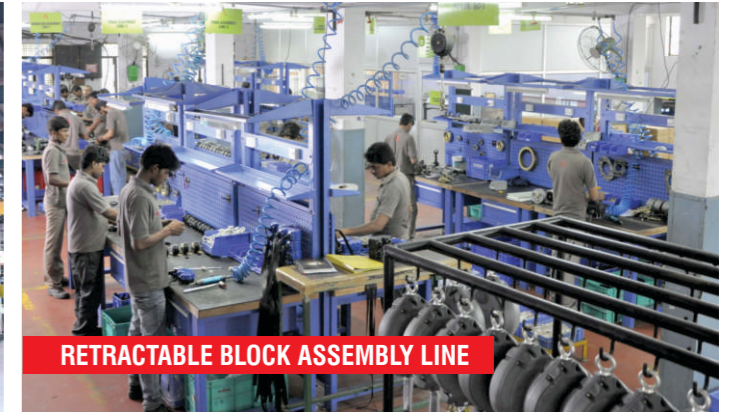
KERNMANTLE ROPE MAKING



EFFLUENT TREATMENT PLANT



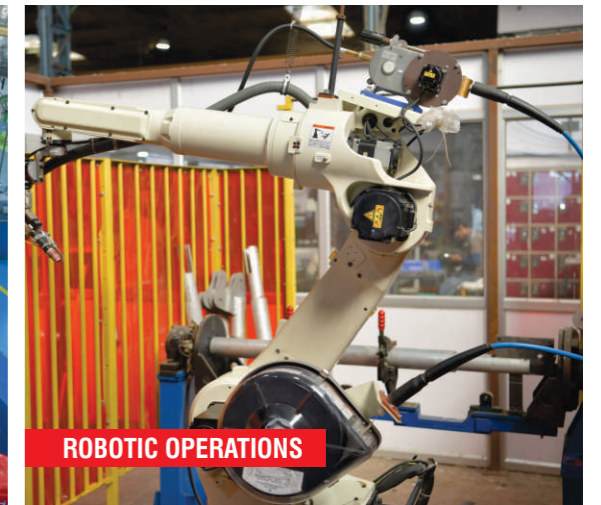
COLD STAMPING



RETRACTABLE BLOCK ASSEMBLY LINE



WIRE ROPE ASSEMBLY



ROBOTIC OPERATIONS



PRODUCT DESIGN AND DEVELOPMENT



AUTOMATIC ELECTRO GALVANIZING



PACKAGING

## CERTIFICATION

### Quality Management Systems Certification (ISO 9001:2015)

KARAM Quality Management System is certified as per ISO 9001:2015, by SGS-Finland

Under this certification all processes and systems are stringently monitored to deliver quality product at each stage of manufacturing and service.

## PRODUCT CERTIFICATION (CE)

Around 2000 products manufactured by KARAM ARE CE certified.

Our Certificates have been issued by Certifying Body SATRA, Apave and Dolomitcert, in accordance module B with Regulation (EU) 2016/425.

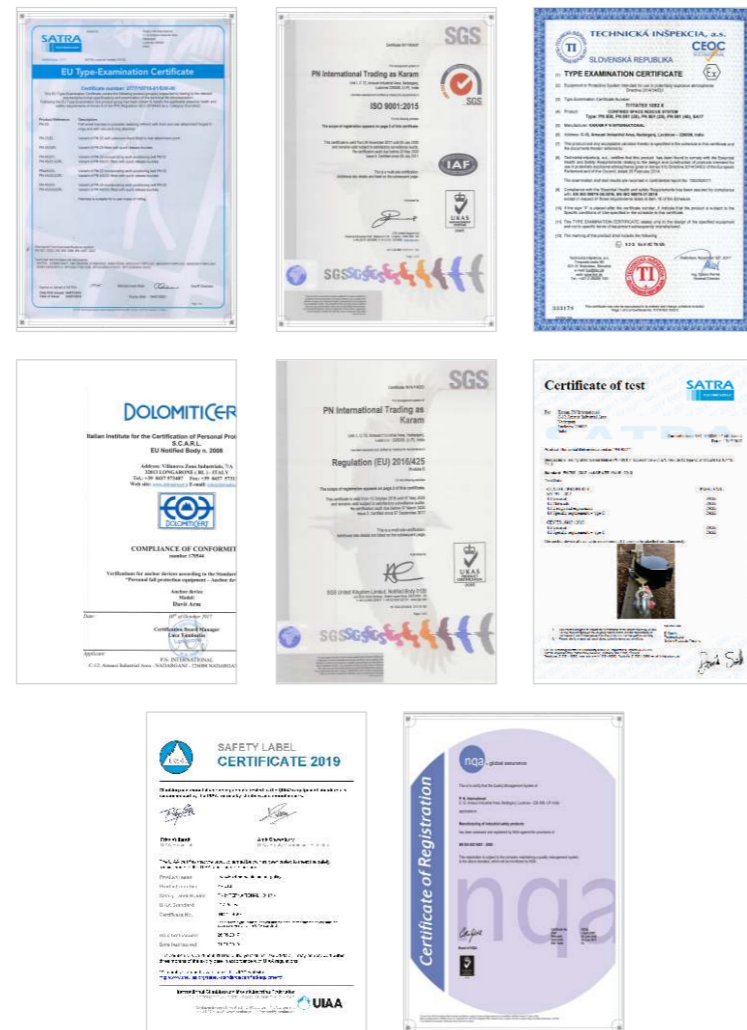
Our on-going assessment body is SGS-UK which issues us our module D certificate as per directive Regulation (EU) 2016/425. The notified body number of SGS is 0598.

All our products are marked '0598'.

As per module D certificate all products marked CE 0598 must have a valid E.U. type examination certification issued under module B.



EN 361	Full Body Harnesses
EN 813	Sit Harnesses
EN 12277	Mountaineering Harnesses
EN 1498	Rescue Loops
EN 358	Lanyards
EN 354	Belt for Work Positioning & Restraint and Work Positioning Lanyards
EN 362	Hooks and Connectors
EN 12275	Mountaineering Connectors
EN 355	Energy Absorbers
EN 795	Anchorage Devices
EN 353-1	Guided type Fall Arrester including a Flexible Anchorage Line
EN 353-2	Guided type Fall Arrester including a Rigid Anchorage Line
EN 360	Retractable type Fall Arresters
EN 1496	Rescue Lifting Devices
EN 341 & EN 12841	Descender Devices for Rescue
EN 566	Mountaineering Slings
EN 1497	Rescue Harnesses

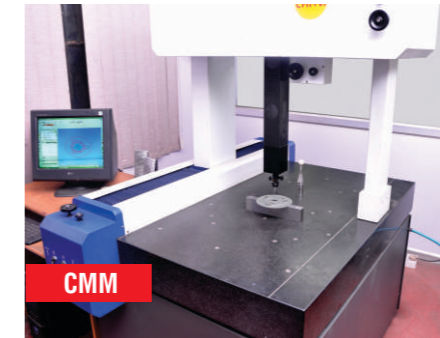


Each and every step of manufacturing at KARAM follows adherence to strict quality parameters and focus lies on quality throughout the various stages involved. All raw as well as semi finished goods at KARAM also pass through stringent quality checks as laid down in the Quality Manual of the Company.

The final product at KARAM is then tested to fulfill the requirements which are set much above the EN Norms and ANSI standards.



GATE STRENGTH TESTING



CMM



2D MEASURING



DYNAMIC PERFORMANCE TESTING



DYNAMIC PERFORMANCE TESTING



HARNES STATIC LOAD TESTING



PROOF LOAD TESTING



HARDNESS TESTING



SALT SPRAY TESTING



SPECTRO PHOTO METER TEST



100% VISUAL INSPECTION



CHEMICAL ANALYSIS



STATIC LOAD TESTING

## WHAT IS A FALL?

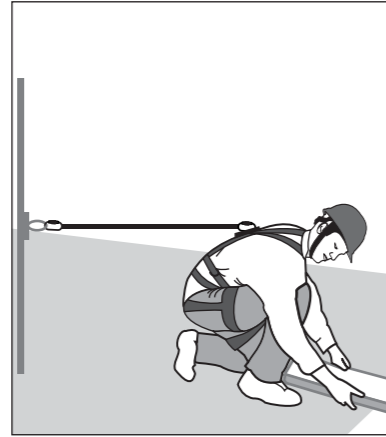
- Slip
- Trip
- Fall on same level
- Fall from a height

## HIERARCHY OF FALL



### Fall Prevention - Guard the edges

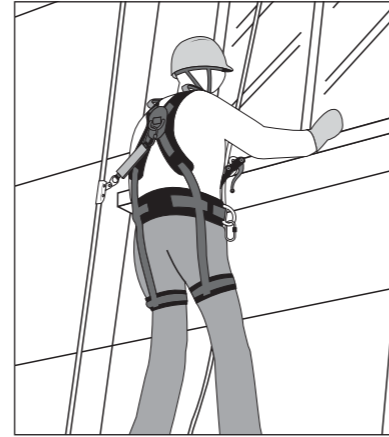
- Guard Rails
- Barricades
- Covering the pits



### Fall Restraint - Prevents you from reaching the edge.

Following equipment can be used to prevent you from reaching the edge.

- Body Wear having attachment facility on the waist level
- An Anchor point
- A Restraint Lanyard



### Fall Protection - Where Fall Prevention / Fall Restraint is not Possible

## WHAT IS FALL PROTECTION?

Fall protection is defined as a means of preventing workers from experiencing disastrous accident falls from elevations. Fall Protection systems are usually passive or active.

Passive fall protection consists of components and systems such as nets, that do not require any action on the workers part. Once properly installed, Passive fall protection can be designed to protect the individual 100% of the time.

Active fall protection is made of components and systems that require some manipulation by the workers to make the protection effective. These systems include body belts, harnesses , lanyards and their attachments, and component parts such as rope grabbing devices, lifelines, etc.

The safety and health professional should analyze the job site and specific task to be done. If the job requires working vertically, a different or modified system will be needed than if the worker must move laterally.

Other factors should be addressed using rescue methods, backup systems, length of time at workstations, dry or wet conditions, number of workers needed on the job site, and environment factors.

This complete analysis, along with a review of regulations, helps to determine the fall protection system needed. Modern Fall Protection encompasses a variety of technical, ergonomic, and legal issues and has become a multi-disciplinary science of its own. In most cases, the introduction of fall protection system involves much more than simply selecting and purchasing one. Quite often a system has to be specifically designed for a particular application . In such cases the design engineer, or other component person, has to take into an account not only the individual performance of every component of the system and a proper anchor for the equipment , but also the geometry of the work place , environment conditions present.

## OBLIGATION OF A WORKER

- Keep a distance from fall danger
- Use Collective protection (Passive Safety)
- Use Personal protection (Active Safety)
- Follow the instructions
- Proper use of PPEs

## OBLIGATION OF EMPLOYER

- Do not allow the worker to work alone at height.
- Provide Safe working environment through collective protection.
- To provide Instructions/ training on use of Safety Products.
- To ascertain a regular procurement of certified PPEs.

## OBLIGATION OF SUPERVISOR

- Must be competent to recognize the fall hazards.
- Must be on the same working surface and within visual vicinity distance of the employee being monitored.
- The safety monitor must be close enough to communicate orally with the employee.

**First, the employer must set a policy, which is clearly communicated to employees and enforced during applicable operations, that addresses these points:**

<b>Worker Qualification</b>	: Is the employee qualified to perform work at elevated conditions?
<b>Training</b>	: Are the workers who are placed in the elevated work positions trained in the protection system to be used?
<b>Selection of Equipment</b>	: Is equipment being used as required to perform the job safely? Equipment purchased for the job meet appropriate standards and certified too.
<b>Installation of Equipment</b>	: Has equipment been installed according to acceptable standards, regulations and manufacturer's recommendations?
<b>Equipment Maintenance and Inspection</b>	: Can equipment be maintained as recommended, and will employees inspect their personal systems components daily before use.
<b>Rescue Procedures</b>	: Has the plan been developed to rescue any employee who has experienced, a fall and either awaits rescue while suspended in the Harness or is seriously injured because of not using safety equipment?
<b>Job Survey analysis</b>	: Has a job procedure been developed and implemented for every job in an elevated situation?

The analysis of elevated work tasks is intended to determine the most suitable match between required worker mobility and the capabilities of the fall protection system. The company policy establishes what is to be done.

Next, the appropriate system and its component must be selected. A variety of equipment is available to help employers set up an effective fall protection program. Generally, it includes Body Support mechanisms, Climbing protection systems, Vertical Lifeline Systems, Horizontal Lifeline Systems, Confined Entry And Retrieval Systems, and Controlled Descent Emergency Escape Systems.

However, the proper selection and purchase of safety equipment alone does not constitute a fall protection program . The employer also has an important responsibility for choosing and using fall protection equipment only for application recommended in the literature, instructions and on the label. Commercial equipment should never be used for application not stated by the manufacturer.

## ACTIVE FALL PROTECTION SYSTEMS

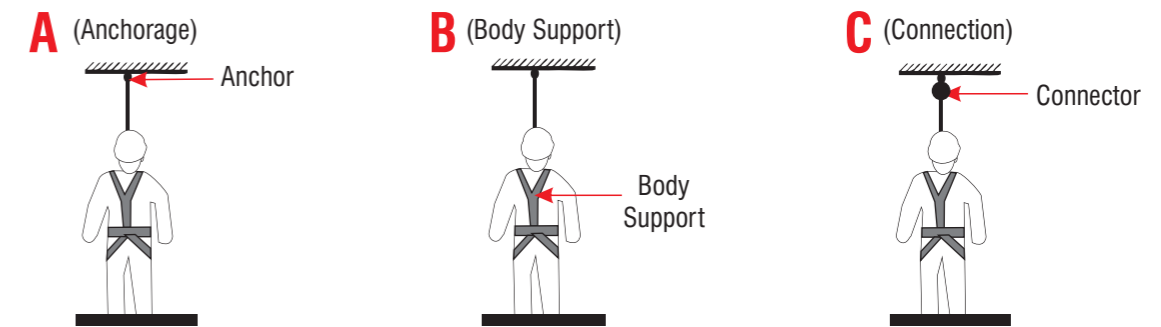
- Anchor/ Anchorage Points** : The critical problem in all active fall protection - the anchorage point- is the position on an independent structure to which the fall protection device or lanyard is securely attached. Supervisor and workers must also analyze all hazards below and to the side of the anchoring point to ensure that the worker does not strike or swing into any obstacles should he or she fall.
- Full Body Harness** : The Full Body Harness is a Fall Protection Equipment meant to be worn by the worker while working at heights. It consists of shoulder and thigh straps in case of a fall the impact is distributed and hence the worker is in a comfortable, upright position after the fall is arrested.
- Lanyards** : A lanyard is a small flexible rope, strap, or webbing connecting the worker to the anchor. A lanyard permits limited lateral movement on the job. Its length (and placement of the anchor) determines the amount of free fall a worker experiences before the protective device stops the fall.
- Retracting Lifeline Devices** : These portable, self-contained devices are fixed to an anchorage point above the work area. They act as an automatic taut lanyard. The lifeline rope or cable is attached directly to the worker's body belt or harness. The rope extends out of the device as the distance increases and retracts as the worker moves closer. At the moment fall occurs, a centrifugal locking mechanism is activated to arrest the movement, thereby reducing the potential shock load. This device is ideal for use on sloping roofs and angular structures, because the rope is never slack and does not interfere with the surface work.
- Lifeline** : A horizontal lifeline is an anchoring cable rigged between two fixed anchorage points on the same level. The line may serve as a mobile fixture to attach lanyards, lifelines, or retracting life lines. The purpose is to limit swing injuries by providing continuously overhead support fixture point as the worker moves horizontally. Temporary Vertical Anchorage Line Systems have uniquely designed Rope Grabs that grab onto the Anchorage Line on which they move, thus arresting the fall immediately.
- Hardware Connectors** : Hardware Connectors consists of Hooks, Karabiners, Anchorage extensions and metal links that connect parts of the lifeline.
- Fall Arresting Systems (FAS)** : The purpose of fall arresting system (FAS) is not only to stop the fall but also to ensure that the energy gained by the body during the fall is distributed so as to prevent the wearer from being injured. A fall arresting system is composed of an independent anchorage point, a vertical lifeline (dropline), a fall arrester, a harness (or a belt) and optionally a lanyard and a shock absorber, equipped with all the necessary hardware (snap-hooks, D-rings, etc).
- Rescue Systems** : The moments following an accidental fall can be critical in preventing worker injuries. Companies should develop, implement, and regularly practice rescue procedures and use specialized rescue equipment which should be available 100% of the working time.
- Systems Used In Below-ground Level Tanks or Confined Spaces** : Confined spaces are those, which by design have limited openings for entry and exit. Examples of confined spaces includes storage tanks, process vessels, ship compartments, pits, silos, vats, sewers, boilers, tunnels, vaults and pipelines. For entering and safely exiting these, equipment such as tripod and winches are available.

## PASSIVE FALL PROTECTION SYSTEMS

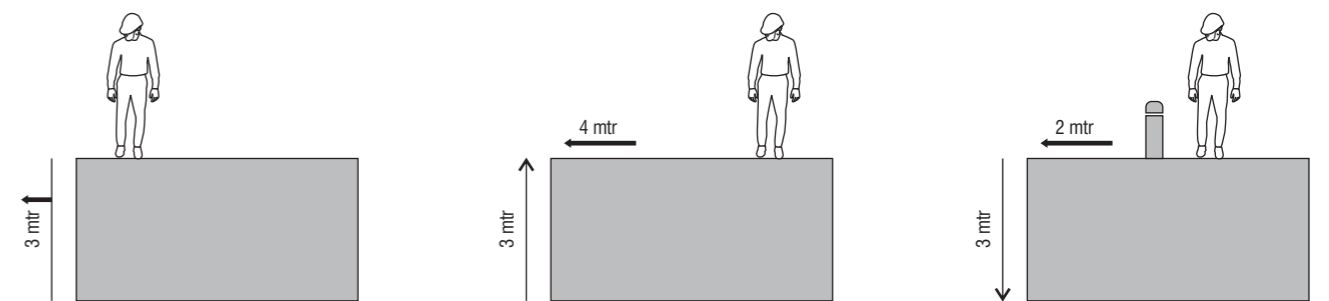
Passive fall protection systems consists of components and system such as nets, that do not require any action on the workers part. Once properly installed, passive fall protection systems can be designed to protect the individual yet these have their own limitations.

## UNDERSTANDING THE A,B,C OF FALL PROTECTION

- A: Anchorage - Provides a secure point of attachment for the fall arrest system.**  
Always remember:
  - To make sure that the Anchorage point should be above the head.
  - To be sure to Anchor yourself correctly.
  - To confirm the strength of the Anchor. It should not be less than 12kN.
- B: Body Support - A Full Body Harness which distributes the forces of a fall**  
Always remember:
  - That no webbing part is torn or damaged.
  - That all the D-rings are intact.
  - That metal components are free from any burrs or sharp edges.
  - The Harness should be snugly fit and the Dorsal D-ring should be between the shoulder straps.
- C: Connecting Device - The device that connects the Full Body Harness to the Anchorage system.**  
Always remember:
  - That the Connector should be properly locked.
  - To not use the connector to extend the length of the connector.
  - To not attach the connector directly to webbing or rope lanyard.



## ALWAYS REMEMBER



Fall Protection Equipment should be used when the worker is working above 3 mtr from ground level.

If working at a distance of 4mtr from the edge, Fall Protection equipment is not required, only Restraint system can be used.

Stay away- Use a Physical Barrier (Collective Protection). Clear and physical barrier (min height 1m) from the edge at 2 mtr.

## CLEANING AND STORAGE OF PPE

Clean with warm water and mild soap.

Try to store your PPE in its original packing.

## FALL PROTECTION INSPECTION

### Webbing should be free from

- Wear and Tear
- Broken or cut fibers
- Signs of chemical or heat damage
- Breaks in stitching
- Any cuts or breaks
- Abrasion, frays

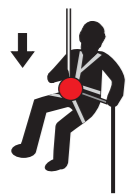
### Hardware should be free from

- Sharp edges
- Distortion or cracks
- Cut and corrosion

### Ropes should be free from

- Pulled or cut yarns
- Abrasion, knots
- Excessive soiling and discoloration

## STANDARDS



EN 341

PPE against Falls from a Height

Descender devices



EN 353- 1,2

PPE against Falls from a Height

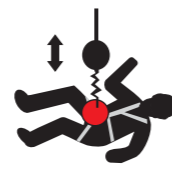
Guided Fall Arrestors



EN 354

PPE against Falls from a Height Equipment

Lanyards Length max 2m



EN 355

PPE against Falls from a Height

Energy Absorbers



EN 360

PPE against Falls from a Height

Retractable Fall Arrestor



EN 361

PPE against Falls from a Height

Full body Harness



EN 362

PPE against Falls from a Height

Connectors



EN 813

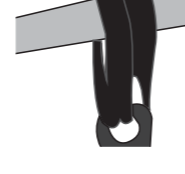
PPE against Falls from a Height

Sit Harness



EN 358

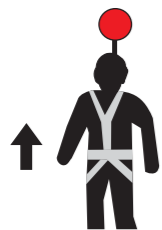
PPE for Work Positioning



EN 795  
EN 795/A1

PPE against Falls from a Height

Anchor Devices



EN 1496

Rescue Equipment  
Rescue Lift System



EN 1497

Rescue Equipment  
Rescue Harness



EN 1891

PPE against Falls from a Height  
Kernamental Ropes



EN 892

PPE against Falls from a Height  
Stretchable ropes

## PPE APPLICABLE IN INDUSTRIES



CONFINED SPACE



CONSTRUCTION AND MAINTENANCE



ELEVATED-WORK PLATFORM



LADDER WORK



MINING



RESCUE



ROOF WORK



SCAFFOLDING



TOWER WORK



WAREHOUSE



WELDING



WORK POSITIONING



PAINTING



WINDOW CLEANING



HOTELS



CONTAINER



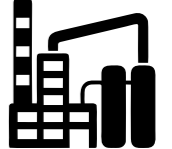
LOGISTICS



WINDMILL



CEMENT INDUSTRY



REFINERY INDUSTRY



STEEL INDUSTRY



POWER INDUSTRY



TERMINAL



PHARMACEUTICAL



CHEMICAL



MUNICIPAL CORPORATIONS



# FULL BODY HARNESSSES

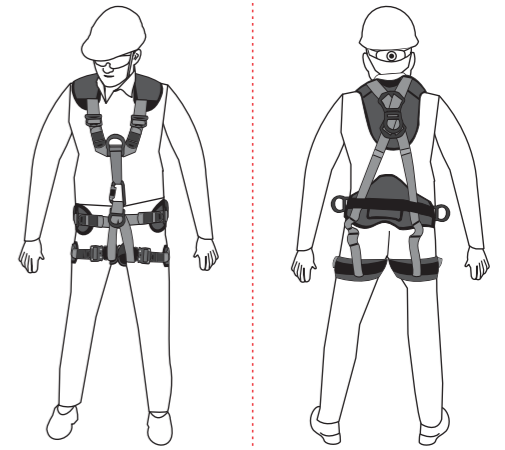
## FULL BODY HARNESSSES



### WHAT IS A FULL BODY HARNESS?

A Full Body Harness is the ideal body wear that should be worn by a worker, since it distributes the force of impact incurred in the event of a fall evenly on the thighs and torso region of the body.

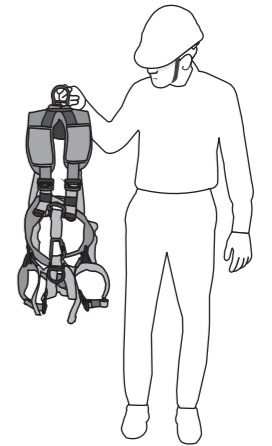
The material of construction of the webbing of KARAM Harnesses is Polyester. Since this has the least elongation properties as compared to other materials, the Harness does not stretch dangerously when subjected to a fall. The user does not risk slipping out of the harness.



### HOW TO INSPECT A HARNESS?

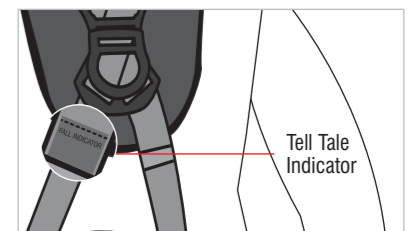
Before wearing a harness it is important to inspect the harness for certain features:

- Hold the Harness by the Back D-Ring, and allow the straps to fall in place. The Harness has clear and separate colours for the shoulder and thigh straps, for them to be easily distinguished.
- Inspect the harness webbing for any cuts, burns or damages.
- Check the stitches for their continuity.
- Carefully look for any evidence of corrosion on the metal parts.
- KARAM Harnesses also give an assurance that the Harness has not been subjected to a fall, if the unique Tell-Tale Indicator is still secure on the shoulder strap.



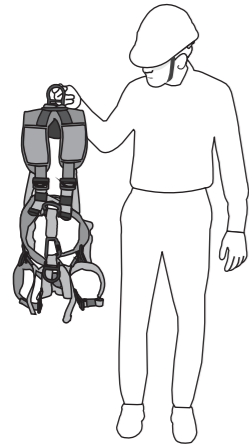
### ABOUT TELL TALE INDICATOR

The Tell-Tale Indicator is a small strip of webbing stitched to the back side of the shoulder strap, and it flies out of the harness in the event of a fall.

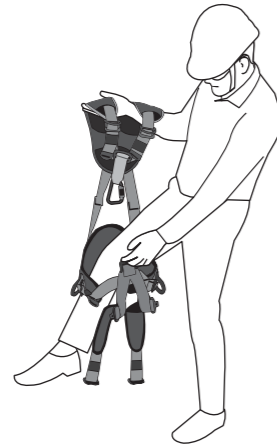


Once the user is convinced that the harness is devoid of any visual physical damage, and has not been involved in a fall, it is now safe for him to wear it.

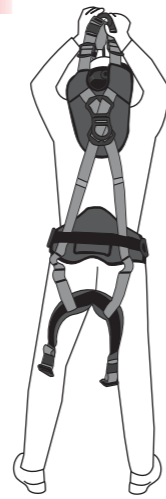
## HOW TO WEAR A HARNESS



**Step 1**  
Untangle the harness by holding it from the Dorsal D-ring.



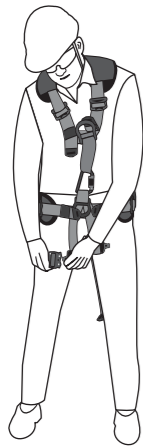
**Step 2**  
Insert your feet into the waist belt such that the right foot enters into the right leg strap and similarly left foot into the left leg strap.



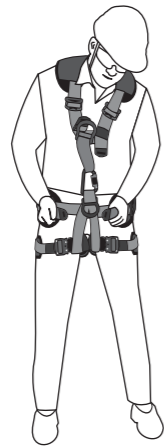
**Step 3**  
Now insert your head between the two shoulder straps such that the harness lies completely on your shoulders.



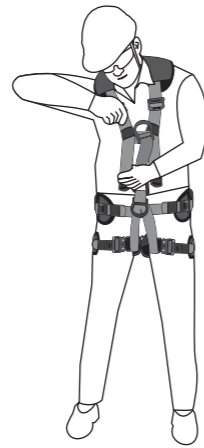
**Step 4**  
Connect and close the Karabiner on the webbing loop provided above the ventral D-ring.



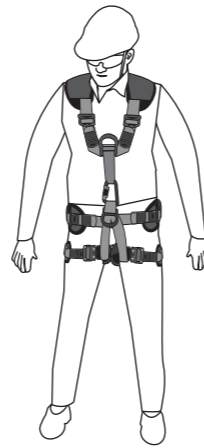
**Step 5**  
Adjust and close the automatic buckles on the leg straps for a proper fit.



**Step 6**  
Now adjust the buckles provided on the waist belt according to your body fit.



**Step 7**  
Tighten shoulder straps to obtain tight fit.



**Step 8**  
You are now ready to work.

## HOW TO CHECK THAT THE WEBBING OF THE HARNESS IS MADE OF DOPE-DYED YARN

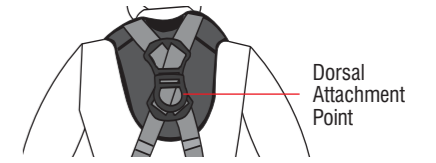
On cutting a portion of the KARAM webbing by a pair of scissors, a uniform colour of all fibers is seen through and through, which shows dope-dyed yarn having been used. The KARAM webbing has excellent UV light stability and better strength. On the other hand, if the webbing of other Harnesses is cut, the internal fibers will stand out distinctly as white in colour. This shows only superficial dyeing of the fabric, which will tend to fade faster, adversely affecting its strength.



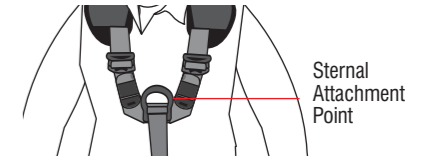
The Colour of the Webbing will resist fading, for much longer time because of the special high tenacity Polyester Dope dyed yarn used.

## ATTACHMENT POINTS OF HARNESS AND ITS USES

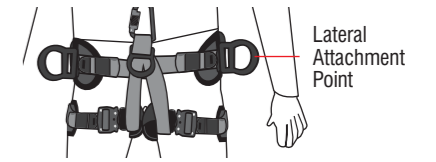
- DORSAL ATTACHMENT POINT**  
 This point is meant for fall arrest. It is located on the ID plate on the back of the Harness between the shoulder blades. Dorsal attachment point is ideal for fall arrest purposes because it evenly distributes the forces of fall arrest across a person's body. It is suitable for standard site work or platform working, where the worker only needs to be attached with no other requirement for climbing, work positioning.
- STERNAL ATTACHMENT POINT**  
 Ergonomically placed Sternal D ring on the chest area of the Harness is used as a front attachment point for fall protection when using a guided type fall arrester while climbing or entering a confined space.
- LATERAL ATTACHMENT POINT**  
 2 Lateral D-rings located on the sides in the lower waist area of the harness is used for work positioning. It allows a worker to have both their hands free to work while they remain connected to the work area. It should be noted that these attachment points are not to be used for fall arrest, but instead this system is a form of fall restraint.
- VENTRAL ATTACHMENT POINT**  
 This attachment point is located in the centre of the waist level of the Harness. It is used for rope access, rescue and many other applications.
- 'A' ATTACHMENT POINT**  
 The Labels marked as 'A' denote the Attachment points on the Harness. In certain areas the labels are marked 'A/2', meaning that two similar points held together shall constitute a single Attachment point.



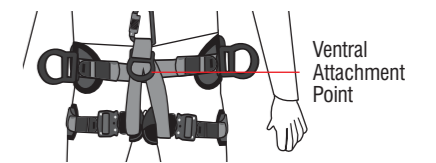
Dorsal Attachment Point



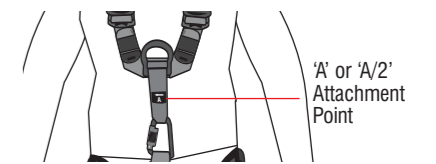
Sternal Attachment Point



Lateral Attachment Point



Ventral Attachment Point



'A' or 'A/2' Attachment Point

## WHAT IS WORK POSITIONING?

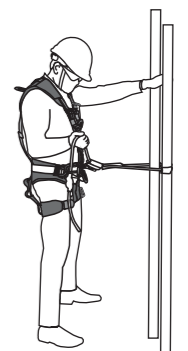
There are frequent instances which require a worker to work at heights using both his hands for the purpose. If in such a case the worker is conscious of the height, then he will tend to hang on to a support with one hand, and use only his other free hand for working. Hence, not only his work is compromised, he also risks an eventual fall. In such cases, we recommend the use of a suitable Work Positioning System. A Work Positioning System consists of a Work Positioning Belt and a Work Positioning Lanyard. The Work Positioning System enables the worker to work at heights uninhibited, well supported, in a safe suspended position, with both his hands free. The Work Positioning Belts and Work Positioning Lanyards, however, should not be used for Fall Protection. For such a purpose, a secondary Fall Arrest system is incorporated into the Belt (popularly known as Combination Work Positioning and Fall Protection Harnesses), thereby ensuring a safe use by the worker.



Step 1



Step 2



Step 3

**GAMMA SERIES**

KARAM offers Gamma Series of Harnesses specially designed to combat the dangers of fall from height.



**LANYARD KEEPERS**  
Specially designed keepers on both sides for safely attaching the free connector end of lanyard



**ELASTIC LOOPS**  
Specially designed to retain the excess strap while adjustment



**FORKED WEBBING LANYARD**  
Permanently spliced on the Dorsal D-ring of the Harness



**ID PLATE**  
Dorsal webbing holding cross plate maintains the D-ring in place even after a fall



**ENERGY ABSORBER**  
Has Energy Absorber permanently affixed on the Dorsal D-ring of the Harness and it reduces the forces that are felt on the body of the user in the event of fall to less than 6kN, preventing any internal damage to the body



**SIT STRAP**  
Ideally positioned sit strap for extended comfort



**HOOKS / LIFELINE END**  
Steel Scaffold Hooks at the Lifeline end



**PN 10(S)+PN 324**



**FEATURES**

- Application**  
Consists of Dorsal D-ring for Fall Arrest.
- Ergonomics**  
Ideally positioned sit strap for extended comfort.
- Convenience**  
Equipped with Textile Lanyard Keepers for placement of free lanyards.
- Attachments**  
Has Fall Arrest 44mm Webbing Lanyard PN 324 made from high tenacity polyester permanently spliced on the Dorsal D-ring of the Harness having the following features-
  - The loops at the ends are protected by an abrasion resistant covering. This prevents the webbing from being damaged by the metallic contact of the connector.
  - Consists of Energy Absorber with loop at one end and Steel Snap Hook PN 121 at other end.
  - Lanyard is certified as per EN 355:2002.



**TECHNICAL SNAPSHOT**



**Material** Polyester  
**Application** FA  
**Attachment Points** Dorsal

**Adjustability** Adjustable sliding chest strap, thigh straps  
**Conforms to** EN 361:2002

**PN 10(S)+PN 361(with Steel Snap Hooks)**



**FEATURES**

- Application**  
Consists of Dorsal D-ring for Fall Arrest.
- Ergonomics**  
Ideally positioned sit strap for extended comfort.
- Convenience**  
Equipped with Textile Lanyard Keepers for placement of free lanyards.
- Attachments**  
Has Fall Arrest 44mm Forked Webbing Lanyard PN 361N made from high tenacity polyester permanently spliced on the Dorsal D-ring of the Harness having the following features-
  - This Lanyard offer the facility to move in all directions while remaining safely anchored at all times.
  - The loops at the ends are protected by an abrasion resistant covering. This prevents the webbing from being damaged by the metallic contact of the connector.
  - Consists of Energy Absorber with loop at one end and Steel Snap Hooks PN 121 at other ends.
  - Lanyard is certified as per EN 355:2002, VG11/RfU CNB/P/11.063 (additional Static Strength Test) AS/NZS 1891.1:2007.



**TECHNICAL SNAPSHOT**



**Material** Polyester  
**Application** FA  
**Attachment Point** Dorsal

**Adjustability** Adjustable sliding chest strap, thigh straps  
**Conforms to** EN 361:2002

PN 10(S)+PN 326



✓ FEATURES

- Application**  
Consists of Dorsal D-ring for Fall Arrest.
- Ergonomics**  
Ideally positioned sit strap for extended comfort.
- Convenience**  
Equipped with Textile Lanyard Keepers for placement of free lanyards.
- Attachments**  
Has Fall Arrest 44mm Webbing Lanyard PN 326 made from high tenacity polyester permanently spliced on the Dorsal D-ring of the Harness having the following features-
- The loops at the ends are protected by an abrasion resistant covering. This prevents the webbing from being damaged by the metallic contact of the connector.
  - Consists of Energy Absorber with loop at one end and Steel Scaffold Hook PN 131N at other end.
  - Lanyard is certified as per EN 355:2002 and AS/NZS 1891.1:2007.



TECHNICAL SNAPSHOT



**Material** Polyester  
**Application** FA  
**Attachment Points** Dorsal

**Adjustability** Adjustable sliding chest strap, thigh straps  
**Conforms to** EN 361:2002

PN 21(WB)+PN 324



✓ FEATURES

- Application**  
Consists of Dorsal D-ring for Fall Arrest.
- Ergonomics**  
Ideally positioned sit strap and waist belt for extended comfort.
- Convenience**  
Equipped with Lanyard Keepers for placement of free lanyards.
- Attachments**  
Has Fall Arrest 44mm Webbing Lanyard PN 324 made from high tenacity polyester permanently spliced on the Dorsal D-ring of the Harness having the following features-
- The loops at the ends are protected by an abrasion resistant covering. This prevents the webbing from being damaged by the metallic contact of the connector.
  - Consists of Energy Absorber with loop at one end and Steel Snap Hook PN 121 at other end.
  - Lanyard is certified as per EN 355:2002.



TECHNICAL SNAPSHOT



**Material** Polyester  
**Application** FA  
**Attachment Points** Dorsal

**Adjustability** Adjustable sliding chest strap, thigh straps and waist belt  
**Conforms to** EN 361:2002

PN 10(S)+PN 361 (with Steel Scaffold Hooks)



✓ FEATURES

- Application**  
Consists of Dorsal D-ring for Fall Arrest.
- Ergonomics**  
Ideally positioned sit strap for extended comfort.
- Convenience**  
Equipped with Textile Lanyard Keepers for placement of free lanyards.
- Attachments**  
Has Fall Arrest 44mm Forked Webbing Lanyard PN 361N made from high tenacity polyester permanently spliced on the Dorsal D-ring of the Harness having the following features-
- This Lanyard offer the facility to move in all directions while remaining safely anchored at all times.
  - The loops at the ends are protected by an abrasion resistant covering. This prevents the webbing from being damaged by the metallic contact of the connector.
  - Consists of Energy Absorber with loop at one end and Steel Scaffold Hooks PN 131N at other ends.
  - Lanyard is certified as per EN 355:2002, VG11/RfU CNB/P/11.063 (additional Static Strength Test) and AS/NZS 1891.1:2007.



TECHNICAL SNAPSHOT



**Material** Polyester  
**Application** FA  
**Attachment Point** Dorsal

**Adjustability** Adjustable sliding chest strap, thigh straps  
**Conforms to** EN 361:2002

PN 21(WB)+PN 361 (with Steel Scaffold Hooks)



✓ FEATURES

- Application**  
Consists of Dorsal D-ring for Fall Arrest.
- Ergonomics**  
Ideally positioned sit strap and waist belt for extended comfort.
- Convenience**  
Equipped with Lanyard Keepers for placement of free lanyards.
- Attachments**  
Has Fall Arrest 44mm Forked Webbing Lanyard PN 361N made from high tenacity polyester permanently spliced on the Dorsal D-ring of the Harness having the following features-
- This Lanyard offer the facility to move in all directions while remaining safely anchored at all times.
  - The loops at the ends are protected by an abrasion resistant covering. This prevents the webbing from being damaged by the metallic contact of the connector.
  - Consists of Energy Absorber with loop at one end and Steel Scaffold Hooks PN 131N at other ends.
  - Lanyard is certified as per EN 355:2002, VG11/RfU CNB/P/11.063 (additional Static Strength Test) and AS/NZS 1891.1:2007.



TECHNICAL SNAPSHOT



**Material** Polyester  
**Application** FA  
**Attachment Point** Dorsal

**Adjustability** Adjustable sliding chest strap, thigh straps and waist belt  
**Conforms to** EN 361:2002

**BETA SERIES**

KARAM introduces Beta Series of Harnesses equipped with enhanced features that provide full comfort and ergonomics to the user at all times.

**WEB KEEPERS**  
All end straps are equipped with unique plastic web keepers to give better grip while adjustment

**LANYARD KEEPERS**  
For placement of free lanyards

**LABEL(A OR A/2)**  
Denotes attachment point for fall arrest

**PADDED BELT**  
Increases support and worker productivity

**TOOL HOLDER LOOPS**  
Two tool holder loops and a extra bigger handle at the back for keeping extra Karabiners and accessories



**DORSAL ATTACHMENT POINT**  
Dorsal D-Ring - For fall arrest. It is located on the ID plate located on the back of the harness between the shoulder blades

**ELASTIC LOOPS**  
Specially designed to retain excess straps while adjustment

**STERNAL ATTACHMENT POINT**  
Sternal D-Ring- Located on the chest area of the Harness is used as a front attachment point for fall protection when using a guided type fall arrester while climbing or entering a confined space

**VENTRAL ATTACHMENT POINT**  
Ventral D-ring- Located in the centre of the waist level of the Harness. It is used for rope access, rescue and many other applications

**LATERAL ATTACHMENT POINT**  
Lateral D-Ring- For attachment with work Positioning Lanyards, to enable the worker to work comfortably, with both his hands free



**PN 24**



**FEATURES**

**Application**  
Consists of Dorsal and Sternal D-ring for Fall Arrest.

**Ergonomics**

- Ideally positioned sit strap for extended comfort.
- Fully padded shoulder and thigh straps with cushioned mesh net for better shock absorption and comfort to the user.

**Convenience**  
Equipped with Lanyard Keepers for placement of free lanyards.

M-L 1.5 kg ± 0.01 kg

**TECHNICAL SNAPSHOT**



**Material** Polyester  
**Application** FA  
**Attachment Points** Dorsal, Sternal

**Adjustability** Adjustable shoulder, Chest strap, thigh straps  
**Conforms to** EN 361:2002

KARAM Full Body Harnesses are also available in combination with a comfortable work positioning comfort belt. The D-rings located onto the two sides of the waist allows for attachment with a work positioning Lanyard and enable a worker to work with both his hands free.

**PN 41**



**FEATURES**

**Application**  
Consists of Dorsal D-ring for Fall Arrest and two lateral D-rings at waist level on the sides for work positioning.

**Ergonomics**

- Ideally positioned sit strap for extended comfort.
- Fully padded work positioning belt with cushioned mesh net for better shock absorption and comfort to the user.

**Convenience**  
Equipped with Lanyard Keepers for placement of free lanyards.

M-L 1.8 kg ± 0.01 kg

**TECHNICAL SNAPSHOT**



**Material** Polyester  
**Application** FA + WP  
**Attachment Point** Dorsal, Lateral

**Adjustability** Adjustable shoulder, chest strap, thigh straps and waist belt.  
**Conforms to** EN 361:2002, EN 358:1999

PN 42



Back View

✓ FEATURES

**Application**  
Consists of Dorsal D-ring for Fall Arrest and two lateral D-rings at waist level on the sides for work positioning.

**Ergonomics**

- Ideally positioned sit strap for extended comfort.
- Fully padded shoulder, thigh straps and work positioning belt with cushioned mesh net for better shock absorption and comfort to the user.

**Convenience**  
Equipped with Lanyard Keepers for placement of free lanyards.

M-L 1.65 kg ± 0.01 kg

TECHNICAL SNAPSHOT



**Material** Polyester  
**Application** FA  
**Attachment Points** Dorsal, Sternal, Lateral

**Adjustability** Adjustable shoulder, chest strap, thigh straps and waist belt.  
**Conforms to** EN 361:2002, EN 358:1999, AS/NZS 1891.1:2007

PN 56 is a special Tower Harness in the KARAM range. Equipped with comfortable padding on shoulder, waist and the thigh pads, PN 56 is a comfortable harness and very versatile in use. It is the most popular Harness used for the purpose of carrying out rescue of a fall victim, by descent.

PN 56



Back View

✓ FEATURES

**Application**  
Consists of Dorsal and Sternal D-ring for Fall Arrest, two lateral D-rings at waist level on the sides for work positioning and one Ventral D-ring at waist level in front for rope access.

**Ergonomics**

- Two tool holder loops and a extra bigger handle at the back for keeping extra Karabiners and accessories.
- Fully padded shoulder, thigh straps and work positioning belt with cushioned mesh net for better shock absorption and comfort to the user.
- X-shaped construction wraps to reduce pressure points during prolonged suspension.

**Convenience**

- Equipped with Lanyard Keepers for placement of free lanyards.
- The Karabiner at the front of the Harness enables the wearer to easily wear or remove the Harness by detaching.

M-L 2.24 kg ± 0.01 kg

TECHNICAL SNAPSHOT



**Material** Polyester  
**Application** FA + WP+RA  
**Attachment Point** Dorsal, Sternal, Lateral, Ventral

**Adjustability** Adjustable shoulder, thigh straps, waist belt  
**Conforms to** EN 361:2002, EN 358:1999, EN 813:2008

ALPHA SERIES

KARAM Alpha series is a premium range of Harnesses which comes with the highest feature of Ergonomics, Comfort, Safety and Quick Connect Buckles for easy adjustment.

METAL COMPONENTS

All hardware used are made from Aluminium and are Black Powder Coated to provide the highest degree of corrosion resistance packed with high aesthetic appeal

LANYARD KEEPERS

For placement of free lanyards

WIDER ELASTIC LOOPS

Specially designed to retain excess straps while adjustment

TRIPLE ACTION LOCKING KARABINER

Enables the wearer to easily wear or remove the harness by simple detaching it

BEND LATERAL D-RING

Lateral D-rings with "BEND" for easy accessibility to the user during positioning at all times

AUTOMATIC BUCKLES

Extremely easy to use for single-hand adjustment



SHOULDER STRAPS

Fully padded Shoulder straps for better shock absorption and comfort to the user

COMBINATION BUCKLES

With a unique pull-up grip, these buckles are very easy to use & can be tightened/ loosened with one hand. They provide for very comfortable adjustment, keeping the Harness snug fit to the body

WORK POSITIONING BELT

With knitted mesh pads for extra comfort. The belt is provided with holding loops for attaching tool bags etc

THIGH STRAPS

The distinctively placed fully padded straps with automatic buckles allow easy adjustment

STITCHING PATTERN

Unique aesthetic stitch pattern for enhanced stitching, strength and smart styling. Padded shoulder, thigh straps and work positioning belt for better shock absorption and comfort to the user



**MAGNA 2**



3D View



**FEATURES**

- Application**  
Consists of Dorsal D-ring for Fall Arrest and two lateral D-rings at waist level on the sides for work positioning. The sternal attachment textile loops can be attached to a Rope Grab to allow safe anchorage while climbing.
- Ergonomics**
- Ideally positioned sit strap for extended comfort.
  - Fully padded shoulder, thigh straps and work positioning belt with cushioned mesh net for better shock absorption and comfort to the user.
- Convenience**
- Equipped with Lanyard Keepers for placement of free lanyards.
  - Shoulder strap have combination buckle and thigh straps and waist belt are provided automatic buckles for easy adjustment.
  - Two tool holder loops at the back for easy carrying of the tools.

M-L **2.45 kg ± 0.01 kg**

**TECHNICAL SNAPSHOT**



**Material** Polyester  
**Application** FA + WP  
**Attachment Points** Dorsal, Sternal, Lateral

**Adjustability** Adjustable shoulder, chest strap, thigh straps, waist belt  
**Conforms to** EN 361:2002, EN 358:1999, AS/NZS 1891.1:2007

**MAGNA 3**



3D View



**FEATURES**

- Application**  
Consists of Dorsal and Sternal D-ring for Fall Arrest, two lateral D-rings at waist level on the sides for work positioning and one Ventral D-ring at waist level in front for rope access.
- Ergonomics**
- Two tool holder loops and a extra bigger handle at the back for keeping extra Karabiners and accessories.
  - Fully padded shoulder, thigh straps and work positioning belt for better shock absorption and comfort to the user.
  - X-shaped construction wraps to reduce pressure points during prolonged suspension along with ideally positioned elasticated straps for extended comfort.
- Convenience**
- Equipped with Lanyard Keepers for placement of free lanyards.
  - Shoulder strap have combination buckle and thigh straps has automatic buckles for easy adjustment.
  - The Karabiner at the front of the Harness enables the wearer to easily wear or remove the Harness by detaching.
  - Shoulder strap have combination buckle and thigh straps and waist belt are provided automatic buckles for easy adjustment.
  - The Karabiner at the front of the Harness enables the wearer to easily wear or remove the Harness by detaching.

M-L **2.30 kg ± 0.01 kg**

**TECHNICAL SNAPSHOT**



**Material** Polyester  
**Application** FA + WP+RA  
**Attachment Point** Dorsal, Sternal, Lateral, Ventral

**Adjustability** Adjustable shoulder, thigh straps, waist belt  
**Conforms to** EN 361:2002, EN 358:1999, EN 813:2008, AS/NZS 1891.1:2007

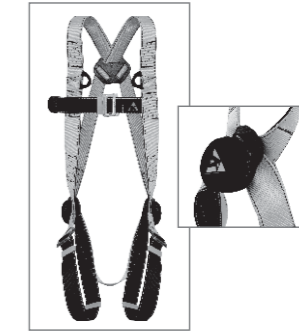
**SUSPENSION INTOLERANCE STRAP STS 01(N)**



Scan here for a virtual tour of the product

**FEATURES**

- Specially designed to help relieve the negative effects of Suspension Trauma.
- Compact and light-weight. Does not hamper with the activity of the worker while at work.
- Easy to attach to the harness with the help of the textile loop and velcro provided.



KARAM provides Harnesses fitted with Suspension Intolerance Straps on request.

**STEPS TO USE**

- Unzip the pouches fitted on both sides of the harness.
- Hold the 2 straps together.
- connect the straps with each other making a loop with the help of the easy-to-use buckle.
- Put your feet into the loop.
- Stand onto the loop, so that the thigh straps are free to move.
- Adjust the sit strap towards the front to release pressure and give a sitting posture.

**TOOLS LANYARD**

Accidents are also known to occur when tools fall from the hand of a worker who is using them while working at a height. KARAM offers Tools Lanyards with improvised elasticated webbing which can be connected to the belt of the Harness at one end and has a loop at the other end to hold a tool of weight of upto 10kg.

**FEATURES**

- Made of 20mm wide tubular webbing.
- Provided with a light-weight Karabiner for attachment to the user's belt.
- Relaxed length : 85 cm
- Expanded length : 135 cm



**TOOLS LANYARD TL 01(N)**

- Convenient stretch-lanyard for tool holding.



**TWIN TOOLS LANYARD TL 02(N)**

- Convenient "Y" leg stretch-lanyard for tool holding, allow the user to attach and carry 2 tools.



Scan here for a virtual tour of the product



# LANYARDS

## WHAT IS A LANYARD?

A Lanyard is the connecting element in a fall protection system between a Harness and an Anchorage Point. The Fall Arrest Lanyards incorporate a Shock Absorbing element which is capable of limiting the force felt on the body of the worker to less than 6kN.

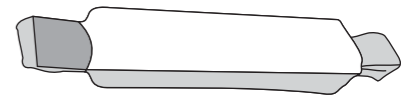
A comprehensive range of KARAM Lanyards are available for use, each tested to withstand a static load test of more than 15 kN for 3 minutes. Before using a lanyard, it is mandatory to inspect it for any damages, cuts, and burns.

**There are certain important factors which should be considered while using the lanyard for the purpose of Fall Arrest**

- The lanyard should never, in any case, be wrapped around any anchor point, and then attached back on itself. In doing so, the lanyard could suffer a “choke-effect”, making it vulnerable to break.
- Never use the lanyard as a means of suspension. It is only a connecting element between the worker and his anchorage.
- Never use two single lanyards to create a forked lanyard, or to increase the length of the lanyard.

## UNDERSTANDING THE ENERGY ABSORBER

The Energy Absorber at one end of the lanyard is an essential component of the connecting system, since it absorbs the major part of the impact incurred in the event of a fall. An Energy Absorber should form a necessary component of any Fall Protection System. A Test Dummy falls smoothly without incurring any damage, when an Energy Absorber is incorporated in the Fall Arrest system. Technically, the impact on the test dummy has been reduced to less than 6 kN, when subjected to a 4.0mtrs fall. This means that with the use of this Energy Absorber, the forces that are felt on the body of the worker in the event of a fall have been reduced to a minimum, thereby not incurring any internal damage to the body.

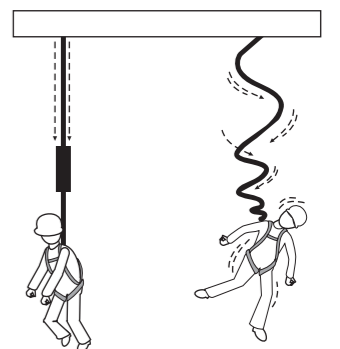


## HOW DOES THE ENERGY ABSORBER IN A LANYARD WORK?

In the event of a fall, the special webbing inside the Energy Absorber opens up. This opening of the webbing takes up most of the jerk which is felt as an impact when a fall occurs.

Finally very little jerk is felt on the body of the user. We can therefore imagine that if this Energy Absorber is absent from a fall protection system, the forces which are felt on the body of the user can be very high and can result in injury.

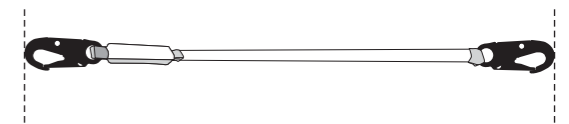
**Always use Energy Absorbing Lanyards for fall arrest applications.**



Smooth free fall with Energy Absorber      A jerky fall without Energy Absorber

## WHAT SHOULD BE THE LENGTH OF A KARAM FALL ARREST LANYARD?

The standard maximum length of the Fall Arrest Lanyard is **2.0mtrs**. Important thing to note is to have a Lanyard long enough to be user friendly, however, kept as short as possible, to minimize the free fall distance. All KARAM Fall Arrest Lanyards are tested and certified as per **EN 355:2002** for their maximum length of **2.0mtrs**.

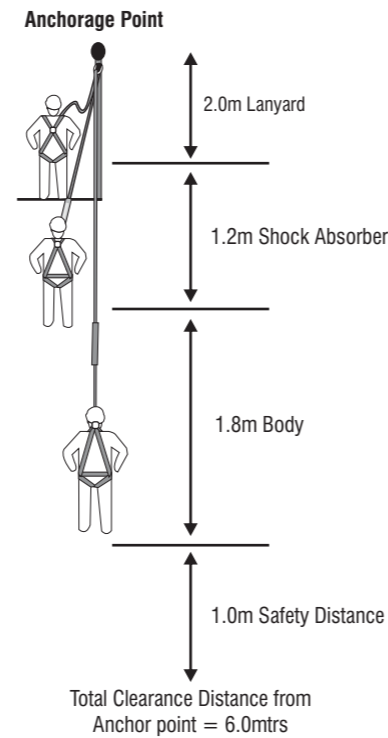


Total length of Lanyard should not exceed 2.0mtrs

## MINIMUM FALL CLEARANCE DISTANCE REQUIRED WHEN USING AN ENERGY ABSORBING LANYARD

It is extremely important to know the fall clearance distance when working at a height using the appropriate Fall Protection System. While anchored vertically above the head level, the length of the Lanyard used and the elongation of the Energy Absorber which occurs in the event of a fall become two of the important factors to determine the fall clearance. Always check for the minimum Fall clearance distance so that the risk of hitting an obstacle below is not there. In the worst case where the user has climbed above the point of anchorage, and has a free fall of 4.0mtrs before the Lanyard has been activated, the minimum clearance required is **6.0 mtrs below the anchorage**.

The Fall clearance is the safe clearance distance calculated from the anchorage point downwards



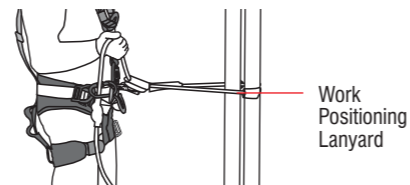
## WHAT IS A WORK POSITIONING LANYARD?

Work Positioning Lanyard is used by a worker to position himself at a height in a safe and supported manner, and work with both hands free.

It is used by connecting the two ends of the Lanyard to the two Lateral D-rings on the work positioning belt of the Full Body Harness of the user. The Length can be easily adjusted to suit the application.

**It is important to note that a Work Positioning System is not Fall Protection Equipment.**

**It is mandatory to use specific Fall Arrest Lanyards and other such equipment along with Work Positioning Systems to ensure Safety of the worker at a height.**

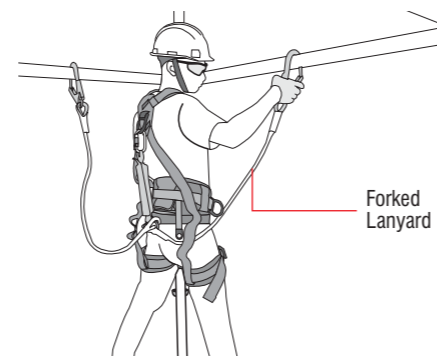


## ABOUT FORKED LANYARDS

KARAM also provides a range of forked lanyards that can be used to move up or down, or along the sides while remaining connected at all times.

A Forked Lanyard is essentially used for a safe and progressive movement between two anchorage points, upwards, or sideways. Use one Scaffolding hook of the Forked Lanyard to anchor on the anchorage bar. After climbing use the second hook to anchor at a higher level. Only when you are completely sure that the higher level hook is locked properly then release the lower hook. Similarly once reaching at the level of the second hook, the first hook can now be used for subsequent anchorage. This ensures that you are anchored safely at all times of ascent or descent or while moving sideways.

**If an Energy Absorbing Forked Lanyard is used, then make sure that only the Energy Absorber end of the lanyard is connected to the Harness at its attachment point. If this is not done so, the shock absorption element gets removed from the system, making it extremely dangerous in the event of a fall.**



## FALL ARREST 30MM WEBBING LANYARDS

KARAM introduces Fall Arrest 30mm Webbing Lanyards made up of 30mm wide polyester webbing from high tenacity polyester yarn

- The Loops at the end are provided with an abrasion resistant covering. This prevents the webbing from getting damaged by the metallic contact of the connector.
- As these lanyards are made from a webbing, it prevents undue twisting, grime and dust. It is easy to clean and prevents water absorption.

### PN 329(30)



#### ✓ FEATURES

- Material**  
Made up of 30mm wide polyester webbing from high tenacity polyester yarn.
- Length**  
Available in length 2m.
- Attachments**  
Has Steel Snap Hook PN 124 at one end and Steel Scaffold Hook PN 131N at other end.



#### TECHNICAL SNAPSHOT



**Material** Polyester Webbing  
**Attachments** Harness End: PN 124  
Anchorage End: PN 131N

**Length** 2 mtrs  
**Certified to** EN 355:2002

### PN 325(30)



#### ✓ FEATURES

- Material**  
Made up of 30mm wide polyester webbing from high tenacity polyester yarn.
- Length**  
Available in length 2m.
- Attachments**  
Has Steel Snap Hook PN 124 at both the ends.



#### TECHNICAL SNAPSHOT



**Material** Polyester Webbing  
**Attachments** Harness End: PN 124  
Anchorage End: PN 124

**Length** 2 mtrs  
**Certified to** EN 355:2002

## FORKED LANYARDS

KARAM also provides a range of Forked Lanyards that can be used to move up or down, or along the sides while remaining connected at all times.

- The Loops at the end are provided with an abrasion resistant covering. This prevents the webbing from getting damaged by the metallic contact of the connector.
- As these lanyards are made from a webbing, it prevents undue twisting, grime and dust. It is easy to clean and prevents water absorption.

### PN 361(30)



#### ✓ FEATURES

**Material**  
Made up of 30mm wide polyester webbing.

**Length**  
Available in length 2m.

**Attachments**  
Has Steel Snap Hook PN 124 at both the ends.



#### TECHNICAL SNAPSHOT



**Material** Polyester Webbing  
**Attachments** Harness End: PN 124  
Anchorage End: PN 124

**Length** 2 mtrs  
**Certified to** EN 355:2002, VG 11/RfUCNB/P/11.063

### PN 361(30)



#### ✓ FEATURES

**Material**  
Made up of 30mm wide polyester webbing from high tenacity polyester yarn.

**Length**  
Available in length 2m.

**Attachments**  
Has Steel Snap Hook PN 124 at one end and two Steel Scaffold Hook PN 131N at other end.



#### TECHNICAL SNAPSHOT



**Material** Polyester Webbing  
**Attachments** Harness End: PN 124  
Anchorage End: PN 131N

**Length** 2 mtrs  
**Certified to** EN 355:2002, VG 11/RfUCNB/P/11.063

## WORK POSITIONING LANYARDS

KARAM introduces a range of Work Positioning Lanyards that can be used by the worker to position himself at a height in a safe and supported manner, and work with both hands free. These Lanyards can be connected to the Lateral D-Rings on the Work Positioning Belts or combination Harnesses and can be easily adjusted for their lengths to suit the application.

- Rope is cross stitched and protected with a strong transparent covering sleeve, which not only protects the ends, but also makes the stitches visible for easy inspection prior to use.
- The loop at one end are protected by an abrasion resistant thimble, which prevents the rope from being damaged by the metallic contact of the connector.
- The rope also has a coloured tracer strand which loses its colour in due course of time, indicating that the Lanyard is now unfit for further use.
- Also available with protective covering sleeve (30cm) to protect the rope from abrasion when the Lanyard is used around a structure in the event of work-positioning.

### PN 244



#### ✓ FEATURES

**Material**  
Made up of Kernmantle Rope of dia 11mm.

**Length**  
Available in length 2m.

**Convenience**  
Equipped with convenient Rope Grab adjuster for easy length adjustment.

**Attachments**  
Easy to connect Steel Karabiner PN 112 at both the ends.



### PN 244(PR)



→ Protective Sleeve

#### TECHNICAL SNAPSHOT



**Material** Kernmantle Rope  
**Attachments** PN 112  
**Minimum Breaking Strength** 15kN

**Dia of Rope** 11mm  
**Length** 2 mtrs  
**Certified to** EN 358:1999

### PN 245



#### ✓ FEATURES

**Material**  
Made up of Kernmantle Rope of dia 11mm.

**Length**  
Available in length 2m.

**Convenience**  
Equipped with convenient manual ring type adjuster made of Forged Alloy Steel for easy length adjustment.

**Attachments**  
Easy to connect Steel Karabiner PN 112 at both the ends.



### PN 245(PR)



→ Protective Sleeve

#### TECHNICAL SNAPSHOT



**Material** Kernmantle Rope  
**Attachments** PN 112  
**Minimum Breaking Strength** 15kN

**Dia of Rope** 11mm  
**Length** 2 mtrs  
**Certified to** EN 358:1999

## WHAT IS A CONNECTOR ?

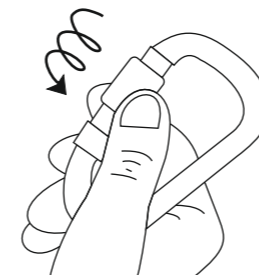
Connector is an important element of a Fall Protection System.

The Connectors may be of two types- Anchorage Connector, which is at the termination end of the Connecting Element; and the Harness-Attachment Connector, which is at the Harness end of the Connecting Element.

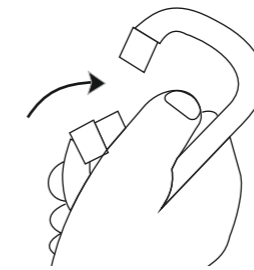
### KARAM Hooks and connectors come with various unique features

- KARAM Hooks and Connectors have a minimum Breaking Strength of **23 kN**, and hence conform to the necessary norms.
- These Connectors and Hooks are uniquely zinc electroplated that gives an extended corrosion resistant property to them.
- All the metal components are subjected to stringent methods of Inspection and Testing procedures.
- A 100% Online Inspection, visual check of each and every component is done for proper functioning, and finishing.

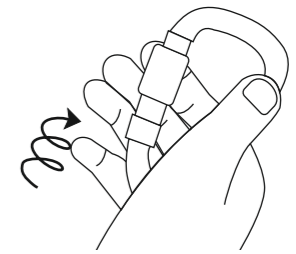
## USING THE CONNECTOR CORRECTLY



Press open or unscrew the lock



Open the gate by pressing it inside the body of the hook

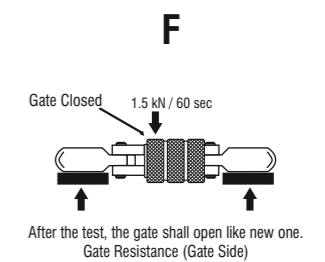
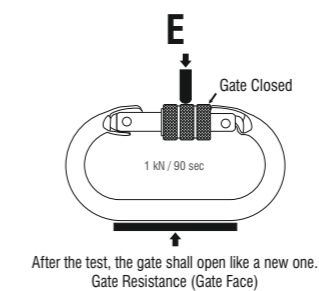
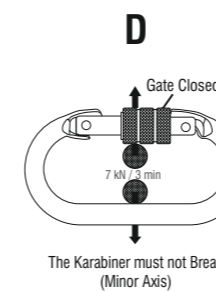
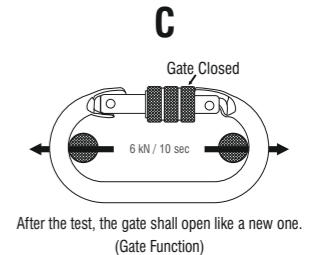
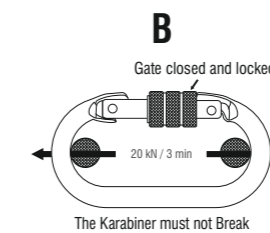
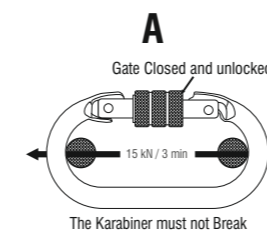


Always lock the gate when connected

## ADVANTAGES OF STEEL SCREW LOCKING KARABINER

- Reliability in harsh or dirty environments.
- Immediate alert in case of wrong locking.
- Features a threaded nut over gate which locks manually when desired by user.
- Easy to use with one hand.

## FUNCTIONALITY TEST CARRIED ON CONNECTORS



# CONNECTORS

## TESTS CARRIED OUT ON HOOKS AND CONNECTORS



### Proof Load Testing

To ensure complete compliance of the Load Bearing metal components, our products are 100% Proof-Load tested at a load of 16 kN.

This means that each Load Bearing metal part passes through a strength test where it is assured of taking a minimum load of 16 kN, without showing any signs of breakage or cracking, before being incorporated into a Harness or Fall Arrest System.

This further reinforces the strict quality measures followed at KARAM before a product reaches the end user.



### Hardness Testing

Since a definite relationship exists between the Hardness of a Metal Component and its Tensile Strength, all the raw material for the Metal Components at KARAM are tested accordingly. Two methods are widely used at KARAM-Brinell Hardness Test Method; and Rockwell Hardness Test Method.

Only when the basic raw material of the metal components conforms to the requirements of hardness, is the process of manufacturing undertaken.



### Salt-Spray Test

This test is carried out to assure maximum resistance of all Metal components to rusting and corrosion. The components are placed in a Salt Spray Chamber and are subjected to neutral salt-spray at a temperature of around 35° celsius, for a period of 72 hours.

All Metal components of KARAM pass the Salt-spray test for 72 hours, without showing any red rusting and corrosion.

This test ensures the Corrosion resistant properties of the metal components used. All KARAM connectors and hooks are therefore conditioned to withstand extremely corrosive conditions, without showing signs of rusting and damage.



### Static Strength test

This test is carried on randomly drawn samples, lot wise for major axis, minor axis, gate side, strength and gate-face strength as per requirement.



### Spectro Photo Meter Test

Spectrophotometer Test is carried to know the accurate chemical composition of metal.

## INSPECT THE CONNECTOR BEFORE EVERY USE

### Caution

A safe personal fall arrest system is one which does not have any weak link. Always perform full inspection of your FAS before every use.



1- Look closely at the Connector from all sides to check for cuts, kinks etc.



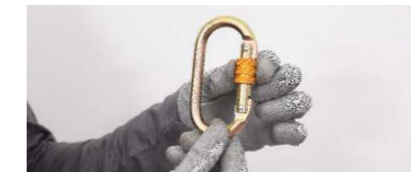
2- Now through 3 step action check the opening, closing and locking of the gate of the connector.



3- Check the gate of the Connector - it should be in line with the body of the connector.



4- Run your index finger along the surface of the connector to see for deformities.



5- Always check the lock function of the Connector-it should work smoothly and the Connector should lock properly.



6- Always check the marking on the connector. Check for possibilities of rusting on the gate and lock of the connector.

## STEEL SCREW LOCKING KARABINER PN 112




### ✓ FEATURES

- Can be opened by minimum two deliberate consecutive manual action.
- Tested for both gate function and gate resistance.

 18mm  160.5 gm

### TECHNICAL SNAPSHOT

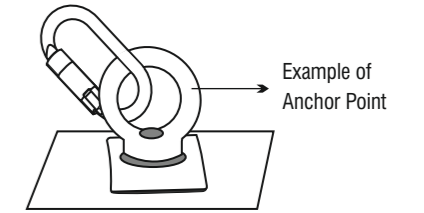


**Material** Alloy Steel  
**Minimum Breaking Strength** 25 kN  
**Gate Opening** 18mm

**Finish** Silver / Golden yellow galvanized  
**Certified to** EN 362:2004 Class B and Class M

## DEFINING AN ANCHOR POINT

An Anchorage point is commonly referred to as a secure tie off point. It is the place where a worker anchors himself so that he can easily move about that point, and also hold onto safely in case he experiences a fall.



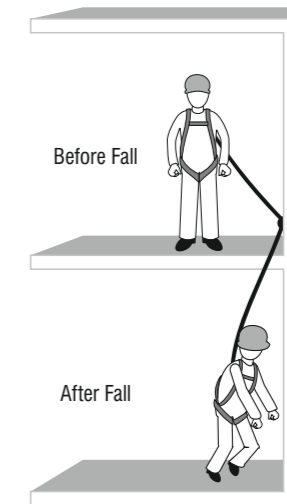
## POINTS TO CONSIDER WHEN ANCHORING YOURSELF TO ANY ANCHORAGE POINT

Always make sure that the Anchorage used (whether a scaffolding bar, or the bar of a ladder, or an Anchorage Connector) is strong enough to hold you in case you are subjected to a fall. Technically, it should be capable of withstanding a static load of more than **15 kN for 3 minutes**.

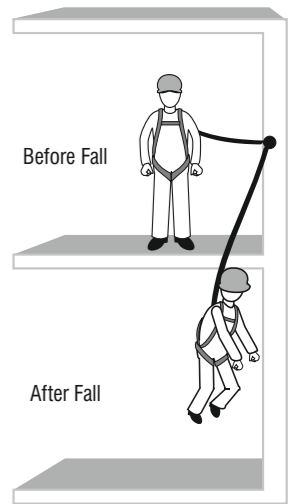
You should Anchor yourself to the point which lies either to your shoulder level, or higher than this. If the Anchorage point is below this, then the distance of the fall gets increased, thereby exposing you to a risk.

What is Fall Factor? =  $\frac{\text{It is the max length of a fall which the person can suffer}}{\text{Length of the Lanyard}}$

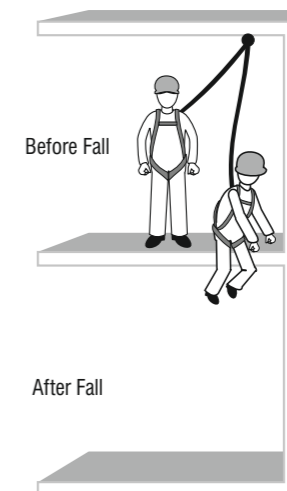
**X** Fall when anchored at lower level (Fall Factor 2)



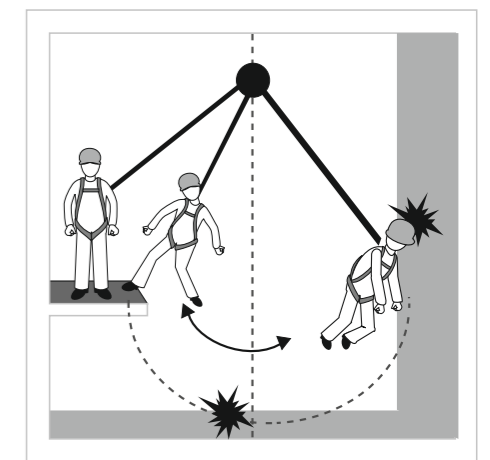
**X** Fall when anchored on the side (Fall Factor 1)



**✓** Fall when anchored at a level above the head (Fall Factor 0)



**X** If the Anchorage is on the side, you may experience a risky swing fall in the event of a fall, and may injure yourself by hitting an obstacle.



You could be injured if anchored on the side due to the pendulum effect.

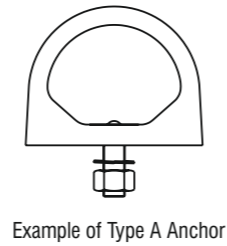
Try to Anchor yourself to a point which is more vertically above you, than to your side.

# ANCHORAGES

According to EN 795:2012, Anchor devices have been classified into various types, Type A, B, C, D and E. KARAM offers a range of Anchor devices which fall under various such types.

### TYPE A ANCHOR (AS PER EN 795:2012)

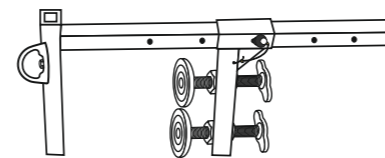
Type A is an Anchor device with one or more stationary anchor points having the need for a structural anchor or fixing element to fix to the structure. This type of anchor is usually small, and may or may not be removed from the supporting structure due to being fixed, such as with rivets, studs, screws, welds or resin bonding.



Example of Type A Anchor

### TYPE B ANCHOR (AS PER EN 795:2012)

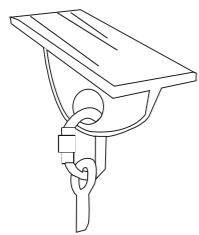
This type is an Anchor device with one or more stationary Anchor points, not having the need for a fixing element to fix to the structure. They are designed to be easily transported, as they normally require minimal installation or can be dismantled and moved quickly.



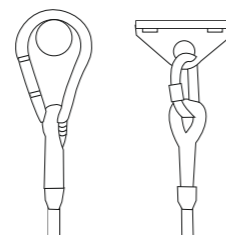
Example of Type B Anchor

### CHOOSE THE RIGHT ANCHORAGE FOR SAFE STEPPING

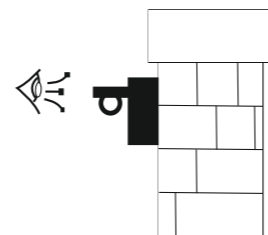
1- Anchorages must be strong. The best anchorages are i-beams, specially rigging lifelines and other solid fixtures. Never anchor to cable hangers, light fixtures or anything else that is not designed to take a sudden, heavy load. Be sure the anchor point meets certain strength requirements.



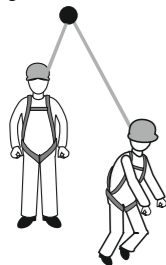
2- Make sure your anchor point has been approved by your employer.



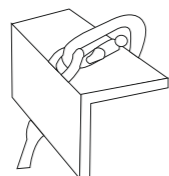
3- Before you hook up to any anchorages, check it for damage.



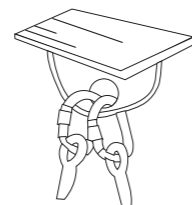
4- Always anchor at a level above the head to minimize the distance of fall preventing swing effect.



5- Be sure that you anchor yourself correctly.



6- No two people should use the same anchor point for fall arrest.



7- Anchor should be at least 6m above ground level/clearance area.



KARAM offers a wide range of Anchorage Solutions in Webbing, Steel and Metal. All these Anchorages comply to the latest European Standards EN 795:2012.

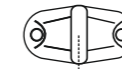
### TYPE A ANCHOR

#### ALUMINIUM POINT ANCHOR SA 09



Scan here for a virtual tour of the product

Tested direction of loading



X- Axis



Y- Axis



Z- Axis

#### FEATURES

- Compact and highly corrosion resistant.
- Can be bolted on any structure with the help of 2 screw-bolts.
- Tested to withstand the impact load in all the 3 axes, providing the highest level of safety.
- It can be bolted on concrete structures having minimum width of 125mm and metal structures using suitable fasteners.

**KG** 308.0 gm

#### TECHNICAL SNAPSHOT



**Material** Aluminium Alloy  
**Minimum Breaking Strength** 23 kN

**Finish** Natural silver/Colored anodized  
**Conforms to** EN 795:2012 Type A, ANSI Z359.1-2007 Type A

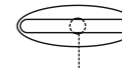
### TYPE A ANCHOR

#### STEEL POINT ANCHOR SA 10



Scan here for a virtual tour of the product

Tested direction of loading



X- Axis



Y- Axis



Z- Axis

#### FEATURES

- Designed as the intermediary for securing a connecting device to an anchorage point.
- A forged single Point Steel Anchor designed to be fixed on walls, ceiling, roof-tops, and steel structures.
- Can sustain a load impact in all the three axis 'X', 'Y', 'Z'.
- Extremely durable and reusable.

**KG** 380.0 gm

#### TECHNICAL SNAPSHOT



**Material** Alloy Steel  
**Minimum Breaking Strength** 23 kN  
**Process** Forged

**Finish** Silver / Golden yellow galvanized  
**Certified to** AS/NZS 5532:2013  
**Conforms to** EN 795:2012 Type A, TS 16415:2013 Type A, ANSI Z359.18-2017 Type A

**TYPE A ANCHOR**

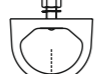
**STEEL POINT ANCHOR  
SA 10A**



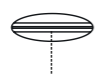
Tested direction of loading



X- Axis



Y- Axis



Z- Axis

**FEATURES**

- Designed as the intermediary for securing a connecting device to an anchorage point.
- This forged Steel Anchorage Point is another device that can be bolted on any structure without the help of any additional fastener.
- Special lengths of studs can also be provided on request.
- Can sustain a load impact in all the three axis 'X', 'Y', 'Z'.
- Extremely durable and reusable.

**KG** 435.0 gm

**TECHNICAL SNAPSHOT**



**Material** Alloy Steel  
**Minimum Breaking Strength** 23 kN  
**Process** Forged

**Finish** Silver / Golden yellow galvanized  
**Certified to** AS/NZS 5532:2013  
**Conforms to** EN 795:2012 Type A, ANSI Z359.1-2007  
TS 16415:2013 Type A (for upto 4 users)

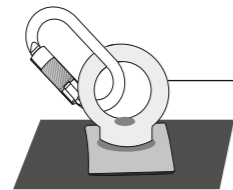
**TYPE A ANCHOR**

**STAINLESS STEEL  
CHEMICAL POINT ANCHOR  
SA 12**



Scan here for a virtual tour of the product

Tested direction of loading



Anchor Point

**FEATURES**

- Designed in a way that it can be removed from the structure, without damaging the structure or anchor, thus allowing reuse.
- For fastening into concrete.
- Used with adhesive capsule 10 HVU M12 x 110 code: 256693
- Drilling dia recommended for installation-14mm and depth-110mm
- Durable and easy to install.
- An anchorage point fastening system comprises a 110 mm long stainless steel eye bolt for fastening into concrete.

**KG** 300.0 gm

**TECHNICAL SNAPSHOT**



**Material** Stainless Steel  
**Minimum Breaking Strength** 12 kN

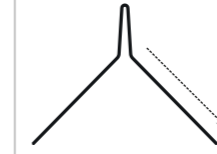
**Finish** Polished  
**Certified to** AS/NZS 5532:2013  
**Conforms to** EN 795:2012 Type A

**TYPE A ANCHOR**

**HINGE ANCHOR  
SA 49**



Tested direction of loading

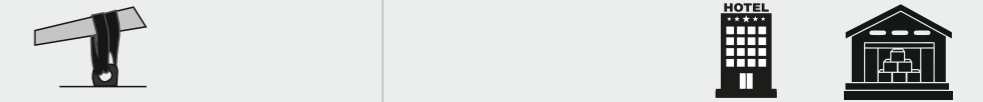


**FEATURES**

- The Hinged Steel Roof Anchor has two steel hinged flaps which can be nailed to the roof made of a wooden structure to provide a safe anchorage.
- The steel flaps each having 8 holes which can be nailed on the two sides of the wooden structure to provide a safe anchorage.
- Comes with a hole dia of 25.4 mm to make it compatible with large opening Snap Hooks.

**KG** 590.0 gm

**TECHNICAL SNAPSHOT**



**Material** Galvanized Steel  
**Minimum Breaking Strength** 23 kN

**Finish** Powder coated or Zinc plated  
**Conforms to** EN 795:2012 Type A  
ANSI Z359.18-2017 Type A

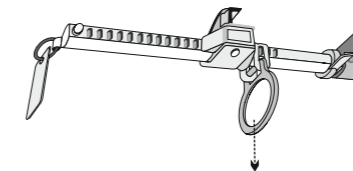
**TYPE B ANCHOR**

**BEAM ANCHOR  
SA 08**



Scan here for a virtual tour of the product

Flange width adjustable from 90mm to 340mm



Tested direction of loading

**FEATURES**

- It is a temporary transportable Anchor device, and provides an Anchorage Point while being attached safely onto a beam, without penetrating it.
- The Beam Anchor arm has flanges made of brass, and is adjustable to suit different beam sizes.
- Once installed, the D-ring on the aluminum bar of the Beam Anchor can be used for connection with a variety of connectors for suitable Anchorage.

**KG** 1.87 kg ± 0.01 kg

**TECHNICAL SNAPSHOT**

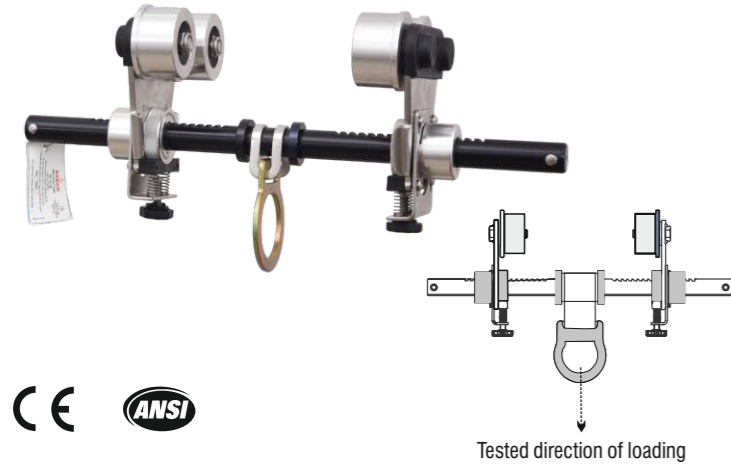


**Material** Aluminum Alloy and Brass  
**Minimum Breaking Strength** 23 kN/ 5000lbs  
**Flange Width** 90mm to 340mm

**Certified to** EN 795:2012 Type B, AS/NZS 5532:2013  
**Conforms to** ANSI Z359.18-2017 Type A

**TYPE B ANCHOR**

**BEAM ANCHOR TROLLEY SA 15A**



**FEATURES**

- Provides a movable Anchorage Point using the length of the beam to which it is mounted, to move along with the user.
- Highly corrosion resistant and easy to install.
- Comes with adjustable flanges for use on different beam sizes.
- This trolley allows continuous safe Anchorage by allowing the Anchor Point to travel across the length of the beam, along with the user.
- The wheels of the trolley provide extremely smooth movement over the beam, over which it is mounted.

**KG** 3.9 kg ± 0.01 kg

**TECHNICAL SNAPSHOT**

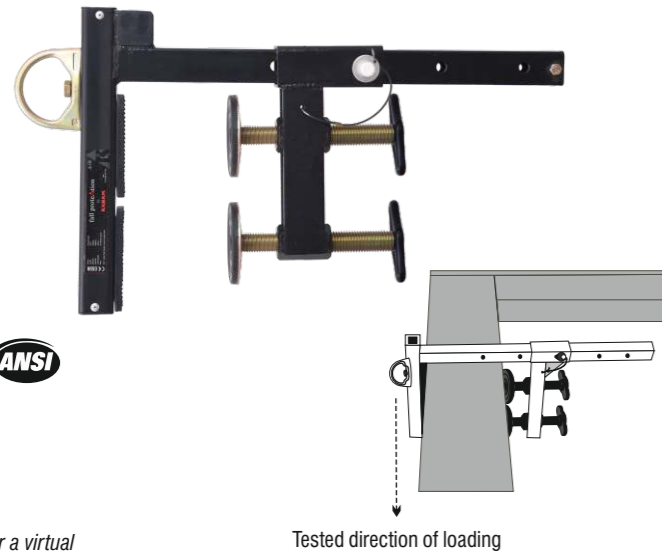


**Material** Aluminum Alloy and Stainless steel  
**Minimum Breaking Strength** 23 kN/ 5000lbs

**Certified to** EN 795:2012 Type B  
**Conforms to** ANSI Z359.18-2017 Type A

**TYPE B ANCHOR**

**PARAPET ANCHOR SA 11**

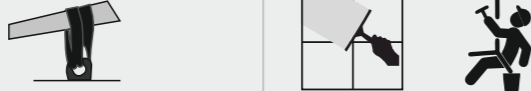


**FEATURES**

- KARAM Parapet Anchor provides a safe anchorage point on Parapets and facades for use on various structures.
- A regular Screw-bolt anchor cannot be used in such places because it may damage the base structure, KARAM Parapet Anchor preserves the look of the parapet and facade, while providing a safe anchorage point.
- The soft part on the inner side of the flanges also ensures that the Parapet is not damaged.
- Has adjustable Flanges which makes the device versatile for use on various structures having a width ranging from 60mm to 360mm.

**KG** 9.0 kg ± 0.01 kg

**TECHNICAL SNAPSHOT**



**Material** Alloy Steel with ED coated black  
**Minimum Breaking Strength** 23 kN/ 5000lbs

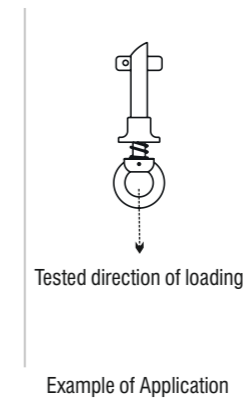
**Flange Width** 60mm to 360mm  
**Certified to** EN 795:2012 Type B  
**Conforms to** ANSI Z359.18-2017 Type A

**TYPE B ANCHOR**

**GIRDER STEEL ANCHOR SA 13**



Scan here for a virtual tour of the product



**FEATURES**

- Can be installed on a steel structure having thickness upto 40mm through a hole of dia ranging from 21mm to 30mm.
- Can be installed easily with one hand without the use of any tools and fasteners.
- Is provided with green indicator band which becomes visible when the installation is complete to indicate fool-proof safety.

**KG** 500.0 gm ± 10 gm

**TECHNICAL SNAPSHOT**



**Material** Stainless Steel and Alloy Steel  
**Minimum Breaking Strength** 23 kN  
**Thickness of Structure** upto 40mm

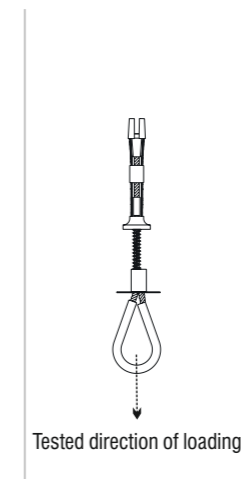
**Preformed Hole of Dia** 21mm to 30mm  
**Certified to** EN 795:2012 Type B, AS/NZS 5532:2013  
**Conforms to** ANSI Z359.18-2017 Type A

**TYPE B ANCHOR**

**CONCRETE ANCHOR SA 16**



Scan here for a virtual tour of the product



**FEATURES**

- KARAM introduces an anchorage point which is extremely easy to install using a single hand.
- Can be installed through a pre-defined hole of diameter 18-19mm through a drilling depth of 110mm.
- The flanges are pulled in when the eye of the anchor is pulled allowing the anchor to pass through the hole. When the eye is released, these flanges fan out along the outer part of the concrete wall, and hold the anchor in its place.

**KG** 150 gm ± 10 gm

**TECHNICAL SNAPSHOT**

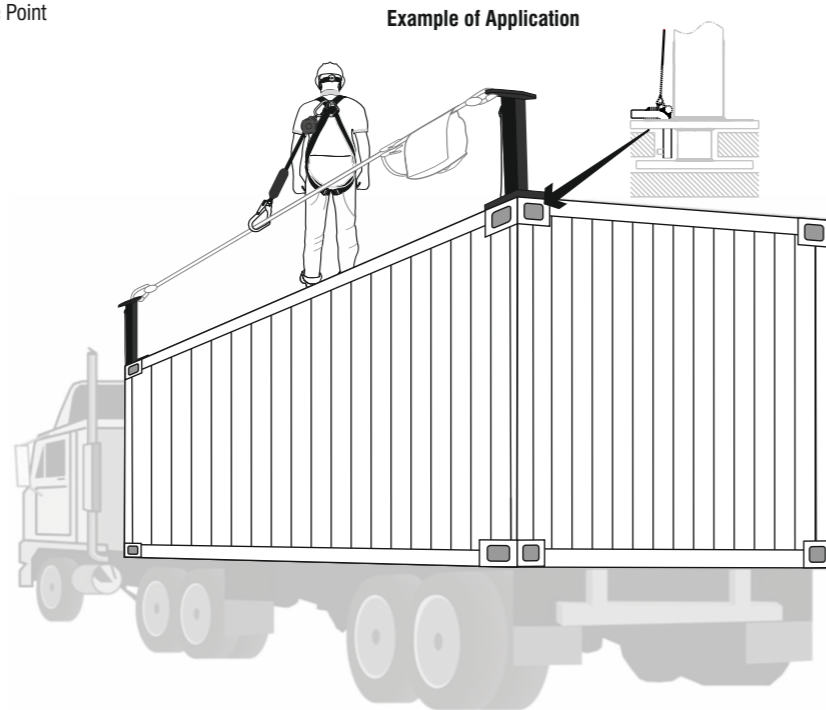


**Material** Galvanized Wire Rope of dia 6.0mm  
**Minimum Breaking Strength** 12 kN

**Certified to** EN 795:2012 Type B, AS/NZS 5532:2013

**TYPE B ANCHOR**

**CONTAINER ANCHOR POST WITH SWIVEL ANCHORAGE EYE SA 48(SW)**



Scan here for a virtual tour of the product

**FEATURES**

- KARAM Container Anchor post is meant to provide a temporary anchor for working on top of 20ft and 40ft shipping containers.
- In addition to be used as a stand alone anchor post, Container Anchor Post can also be used to form a Horizontal Lifeline over the top of container depending upon the requirement of work to be done.
- Comes with a side lock and tag line arrangement for easy and secure installation by one person only.
- Consists of side handle with special grip for easy carrying and safe transportation.
- Can be easily removed without damaging the container.
- Consists of one swivel eye for anchorage / making connections.

**KG 14.53 kg**

**TECHNICAL SNAPSHOT**

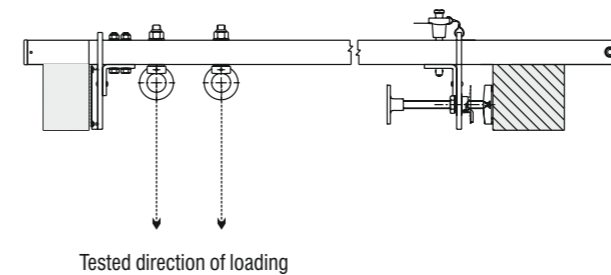


**Material** Alloy steel  
**Minimum Breaking Strength** 15 kN

**Finish** ED coated black  
**Certified to** EN 795:2012 Type B  
TS 16415:2013 Type B

**TYPE B ANCHOR**

**DOOR ANCHOR PN 802**



Scan here for a virtual tour of the product

**FEATURES**

- The New KARAM Door Anchor provides a non-intrusive anchor point and can be easily installed inside the interior of a building or window opening enabling the most difficult jobs to get done safely and with confidence.
- KARAM Door Anchor can be installed by just compressing it against the door or window frame, jamming itself between the two vertical sides.
- It is made of a highly corrosion resistant Aluminium Alloy.
- The Arms of the KARAM Door Anchor are adjustable, enabling installation on door / window frames of width from 60 cm to 125 cm.
- Fast and easy Installation with built in adjustment knob hence no tools or drilling is required.
- Extremely portable design for easy transport, storage and usage.
- Provided with two separate eye bolts enabling anchorage by two personnel at the same time.
- **Certified for 2 users.**

**KG 4.85 kg**

**TECHNICAL SNAPSHOT**



**Material** Aluminium Alloy  
**Minimum Breaking Strength** 15 kN

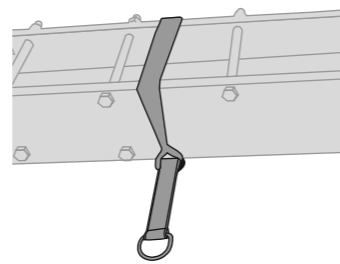
**Certified to** EN 795:2012 Type B  
TS 16415:2013 Type B (for upto 2 users)

## CROSS ARM AND CONCRETE ANCHOR STRAPS

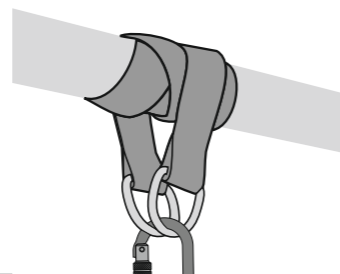
KARAM provides a wide range of Cross Arm and Concrete Anchor Straps of various configurations and lengths that can be altered as per the requirement. The Cross Arm can be slipped around any concrete structure, or around pillars or poles, and then used successfully as an Anchorage Point. Has Minimum Breaking Strength of 18kN for 3 minutes.



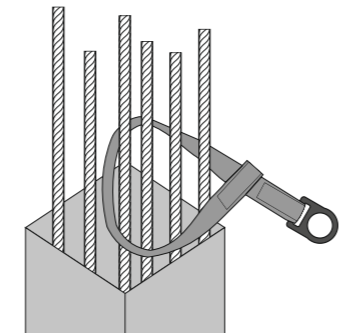
**CROSS ARM STRAP  
PN 803**



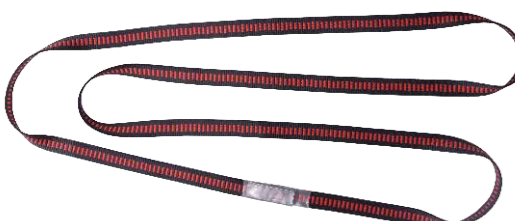
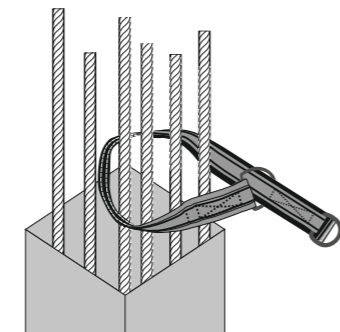
**CROSS ARM STRAP  
PN 804**



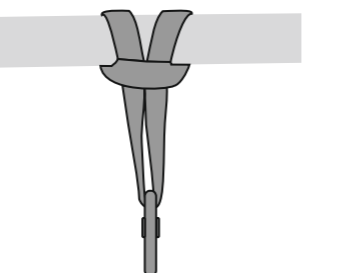
**CROSS ARM STRAP  
PN 805**



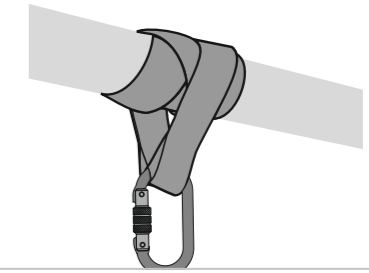
**CROSS ARM STRAP  
PN 806**



**CROSS ARM STRAP  
PN 807**



**CROSS ARM STRAP  
PN 809**



### TECHNICAL SNAPSHOT

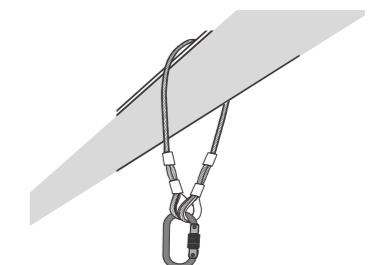
PN 803	<b>Material Length</b>	44 mm wide Polyester webbing 1.2mtrs or as requested	<b>Attachments Certified To</b>	D-Ring at one end and textile loop at the other end EN 795:2012 Type B, AS/NZS 5532:2013
PN 804	<b>Material Length</b>	44 mm wide Polyester webbing 1.0mtrs, 1.5mtrs and 2.0mtrs or as requested	<b>Attachments Certified To</b>	D-Ring on both the ends EN 795:2012 Type B, EN 566:2017, AS/NZS 5532:2013
PN 805	<b>Material Length</b>	44 mm wide Polyester webbing 1.0mtrs or as requested	<b>Attachments Certified To</b>	D-Ring at one end and textile loop at the other end. Provided with a polyester covering on the load-bearing face of the webbing, for abrasion resistance. EN 795:2012 Type B, AS/NZS 5532:2013
PN 806	<b>Material Length</b>	44 mm wide Polyester webbing 1.0mtrs, 1.5mtrs and 2.0mtrs or as requested	<b>Attachments Certified To</b>	Small D-Ring at one end and a bigger D-Ring at other end. EN 795:2012 Type B, AS/NZS 5532:2013
PN 807	<b>Material Length</b>	25 mm wide Polyester webbing 0.6mtrs, 1.0mtrs, 1.5mtrs or as requested	<b>Attachments Certified To</b>	NA EN 795:2012 Type B, EN 566:2017, AS/NZS 5532:2013
PN 809	<b>Material Length</b>	50 mm wide Polyester webbing 1.0mtrs, 1.5mtrs and 2.0mtrs or as requested	<b>Attachments Certified To</b>	Loops at both the ends EN 795:2012 Type B, EN 566:2017

## ANCHORAGE WIRE ROPE SLINGS

Anchorage Wire Rope Slings are highly resistant to wear and can be used around edges structures.



**ANCHORAGE STEEL WIRE ROPE SLING  
PN 813**

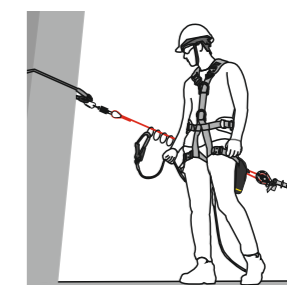


### TECHNICAL SNAPSHOT

PN 813	<b>Material Length</b>	PVC Coated Galvanized Iron Rope of dia 8.0mm 1.0mtr, 1.5mtr, 1.8mtr and 2.0mtr or as requested	<b>Attachments Certified To</b>	Steel thimbles at both the ends. EN 795:2012 Type B
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## WHAT IS A TEMPORARY ANCHORAGE LINE?

Temporary Anchorage Lines are engineered to be easily installed and removed for use on short-term jobs and are perfect for areas where activities are infrequent. KARAM perfectly designed its Temporary Lifelines to address all the needs keeping OSHA fall protection regulations in mind. KARAM provides a range of Temporary Horizontal and Vertical Lifelines to provide a suitable and safe anchorage to the user as per the requirement.



Example of Application

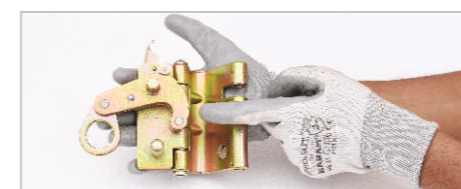
## APPLICABLE IN INDUSTRIES

- Construction
- Heavy metal industries
- Cement
- Refinery
- Telecommunication
- Power transmission
- Wind mill

## ADVANTAGES

- Easy to carry and use
- Can be easily installed and removed
- Highly durable and reliable

## PRE-USE CHECKS FOR ROPE GRAB FALL ARRESTER AND ANCHORAGE LINE



Check the inner part of the rope grab visually. It should not show any signs of deformity, bents, cracks or traces of corrosion on the body.



Check the anchorage line for any cuts, abrasion marks or any sharp objects.



Check for smooth opening, closing and locking. Once closed onto the anchorage line, the rope grab should not open on its own.



Check for any signs of rusting / corrosion or sharpness on the teeth of the rope grab.



Inspect the spring. Ensure that it should not be broken, and there should not be cracks, deformations, traces of corrosion or foreign objects.



Check the movement of fall arrester on anchorage line. It should move freely, and immediately grab the rope when released.

# TEMPORARY ANCHORAGE LINE SYSTEMS



## CHOOSING THE CORRECT TEMPORARY ANCHORAGE SOLUTION

Work Area	Hazard	Mobile Anchorage Solution
Ladder	<ul style="list-style-type: none"> <li>Fall due to vertical climbing up and down</li> </ul>	<b>Temporary Vertical Line</b> Rope Grabs on flexible (textile) Anchorage Lines PN 2000A, PN 2006(11)
Roof Top	<ul style="list-style-type: none"> <li>Fall through skylight</li> <li>Fall from roof edge</li> <li>Fall from roof slope</li> </ul>	<b>Temporary Horizontal Line</b> PN 3000(BC), PN 3001, Handy Line PN 4001
Scaffold	<ul style="list-style-type: none"> <li>Fall while erecting and dismantling the scaffold</li> <li>Fall while working on scaffold</li> </ul>	<b>Temporary Vertical Line</b> Rope Grabs on flexible (textile) Anchorage Lines PN 2000A, PN 2006(11)

### HORIZON TEXTILE HORIZONTAL LINE

KARAM introduces the Horizon range of Temporary Horizontal Lifelines, made of textile webbing and rope which are extremely easy to carry and install wherever required. These Anchorage Lifeline systems by KARAM provide a suitable and safe anchorage horizontally along the entire length.

### HORIZON TEMPORARY HORIZONTAL WEBBING ANCHORAGE LINE FOR 2 USERS PN 3000(BC)

KARAM introduces the Horizon range of Temporary Horizontal Lifelines, made of textile webbing and rope which are extremely easy to carry and install wherever required. These Anchorage Lifeline systems by KARAM provide a suitable and safe anchorage horizontally along the entire length.



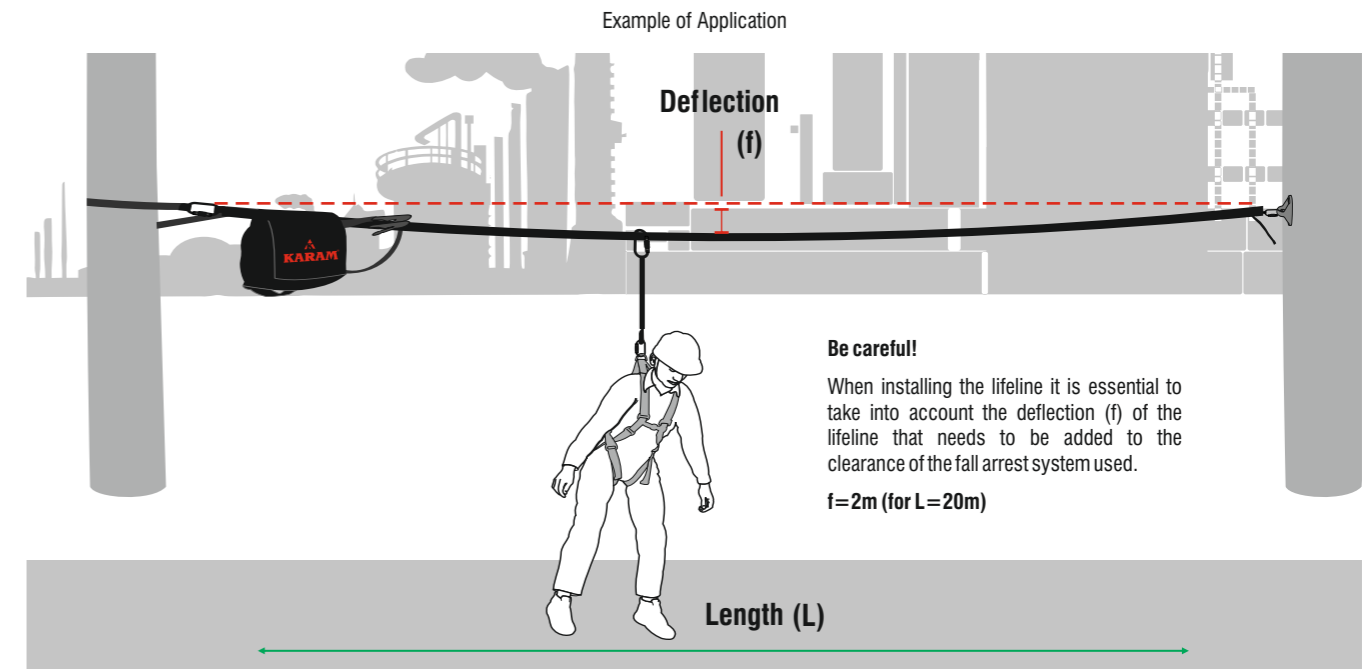
#### FEATURES

- Consists of KARAM Ratchet Tensioner that allows easy tensioning of the lifeline between two structures.
- PN 3000(BC) has 2 Cross Arm Straps PN 804 each to tie off to the structure where the anchorage is required.
- The Horizontal Anchorage Lifeline is also available without cross arm straps PN 3000.
- The complete system is supplied in a bag, which is permanently attached to the assembly and also enables the user to easily carry the system with the help of comfortable shoulder hanging straps provided in the bag.
- Once the lifeline is fitted, the user can easily connect the lanyard attached to his harness with the lifeline using a Karabiner. This allows movement along the length while keeping the user secured and safe at all times.



Scan here for a virtual tour of the product

**KG** 4.25 kg ± 0.01 kg



#### TECHNICAL SNAPSHOT

**Webbing Material** Polyester webbing of 30mm  
**Attachment Ends** Both ends - Stitched loops with PN 113  
**Max. No. of Users** upto 2 users

**Max. Span Length** upto 20.0 mtrs  
**Certified to** EN 795:2012  
 TS 16415:2013 Type B and C



### HORIZON 4 MAN TEMPORARY HORIZONTAL ROPE ANCHORAGE LINE PN 3001

KARAM introduces a Horizon 4 Man Temporary Horizontal Lifeline extremely easy to carry and install. It provides a suitable and safe anchorage horizontally along the entire length. **Suitable for upto 4 personnel.**



**FEATURES**

- Quick and easy to install, and is reusable.
- PN 3001 has 4 Steel O-Rings to enable the user to easily attach the Lanyard of his Harness to the Lifeline using a Connector.
- Has unique tension indicator for creating an adequate tension in the line. Once the required tension is achieved, the disc on the tension indicator rotates freely, indicating the line is ready to use.
- Swivel Connector- specially designed to prevent any twisting of the rope.
- Minimum breaking strength: 25kN
- The whole system is supplied in a bag (Ref. BGFB 161), which is permanently attached to the assembly and also enables the user to easily carry the system with the help of comfortable handles provided in the bag. This bag is designed in such a way that it keeps the unused rope safely, thereby preventing the rope being subjected to abrasion or any damage caused from dust, dirt grime, oil etc. Once fitted, you can easily put back the extra rope not deployed along the length, into the bag.



Scan here for a virtual tour of the product

**KG** 9.28 kg ± 0.01 kg

Example of Application



**TECHNICAL SNAPSHOT**



<b>Material</b>	Aluminium and Stainless Steel	<b>Anchorage Type</b>	Forged Galvanized Steel O-Rings Qty- 4 nos.
<b>Rope Type</b>	Kernmantle Rope of dia 16mm	<b>Max. No. of Users</b>	4 users
<b>Attachment Ends</b>	One end- Swivel brass connector with PN 113 Other end- Tension indicator with PN 113	<b>Min-Max. Span Length</b>	5.0 mtrs to 25.0 mtrs
		<b>Conforms to</b>	EN 795:2012 Type C and TS 16415:2013 Type C

### HANDY LINE TEMPORARY HORIZONTAL LIFELINE PN 4001

KARAM introduces the Horizontal Lifeline used to protect the workers working in the horizontal plane who may not have continuous access to suitable anchorage points. The innovative design allows the user to quickly install and dismantle the lifeline.



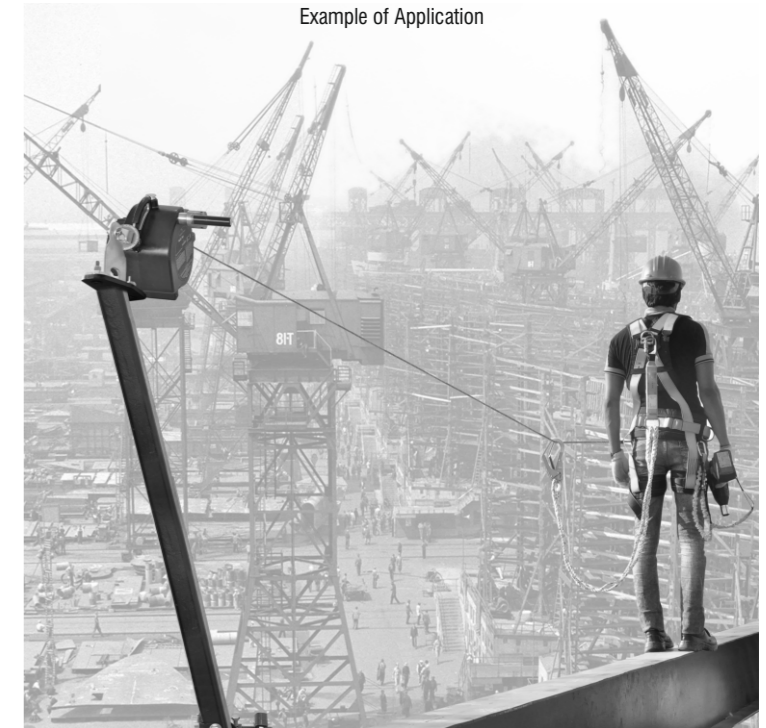
Scan here for a virtual tour of the product

**FEATURES**

- Housing made of durable and high strength polymer.
- Handy and portable design.
- Extremely easy to install; retractable lifeline is simply pulled out for installation up to the required length and retracted back with the built-in winch into an easy-to-carry case.
- Inbuilt Winch for easy retraction of rope back into the housing/case for fast, simple and safe dismantle. Hence, eliminating large and bulky coils of cable that are difficult to set-up and store.
- Has inbuilt shock absorption mechanism to limit the impact forces during fall arrest.
- Molded and padded handle for easy carriage.
- Comes with Hook PN 162 at the termination end for easy connection.
- Can be used by maximum 2 users simultaneously.
- Has tension indicator to indicate required tension in the line.
- Impact Indicator on the hook turns red in the case of a fall.

**KG** 13.42 kg ± 0.01 kg

Example of Application



**TECHNICAL SNAPSHOT**



<b>Material of Rope</b>	7x19 Galvanized Steel Wire Rope of dia 6.0mm	<b>Max. Span Length of Wire Rope</b>	Upto 18.0 mtrs
<b>System Breaking Strength</b>	22 kN	<b>Conforms to</b>	EN 795:2012 Type C TS 16415:2013 Type C (for upto 2 users)

**EDGE FIX ANCHOR POST**

**SA 28**

KARAM introduces a portable and extremely easy to install Anchor Post for installation of Horizontal Line on steel construction I-Beam sections.



**FEATURES**

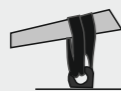
- Span lengths are adjustable with the help of intermediates.
- The post comes with a unique tilted design to allow unobstructed movement of the user during the construction of roofs or metal structures.
- Can be used by maximum 4 users simultaneously.
- Compatible with beam having flange width of 150 mm to 220 mm.
- Comes with universal extremity plate PN 4000(09) for making connections.

**KG** 12.80 kg ± 0.01 kg



Scan here for a virtual tour of the product

**TECHNICAL SNAPSHOT**



**Material** ED coated high strength Alloy Steel  
**Breaking Strength** 15 kN

**Conforms to** EN 795:2012 Type B  
TS 16415:2013 Type B

**TEMPORARY VERTICAL ANCHORAGE LINE SYSTEMS**

KARAM introduces Temporary Vertical Anchorage Line Systems which are quick and easy to install. All these systems have uniquely designed Rope Grabs that grab onto the Anchorage Line on which they move, thus arresting the fall immediately.

**GUIDED TYPE FALL ARRESTER SYSTEM ON FLEXIBLE ANCHORAGE LINE**

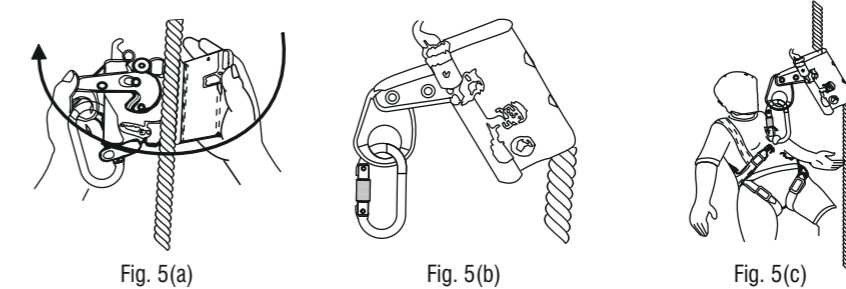
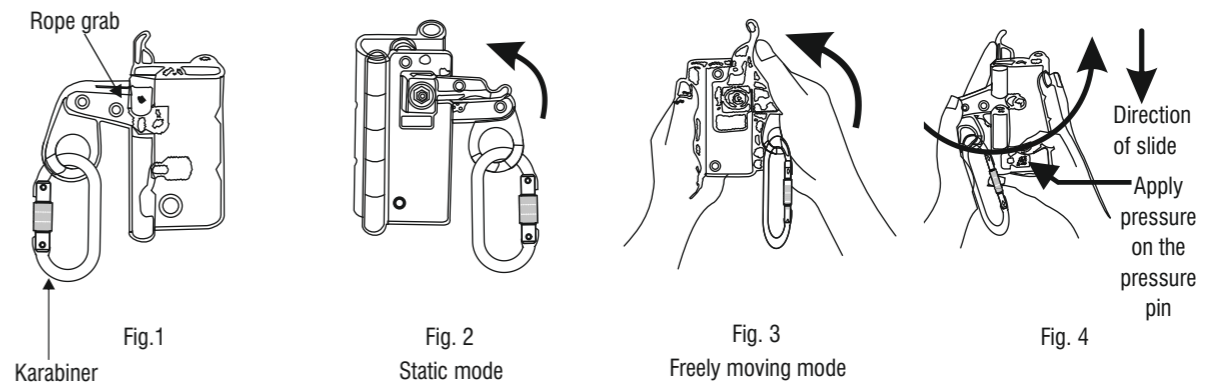
**PN 2000A**



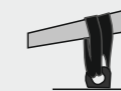
**FEATURES**

- The System consists of an openable Rope Grab Device, made up to high strength Galvanized steel which moves freely along the polyamide twisted rope anchorage line (14mm to 16mm), attached at its eye with the user, while he moves up and down.
- The Rope Grab immediately 'grabs' on the line in the event of a fall, thereby arresting the fall.
- The Anchorage Line has coloured tracer yarn which loses its colour in due course of time, to show that the rope is now unfit for further use.

**INSTALLATION STEPS**



**TECHNICAL SNAPSHOT**



**Rope Grab** Galvanized Steel Openable Rope Grab for fibre rope: RG 01  
**Attachment Element** Steel Screw Locking Karabiner PN 112

**Anchorage Line** Polyamide Twisted rope of dia 14mm to 16mm  
**Certified to** EN 353-2:2002

PN 2006(11)

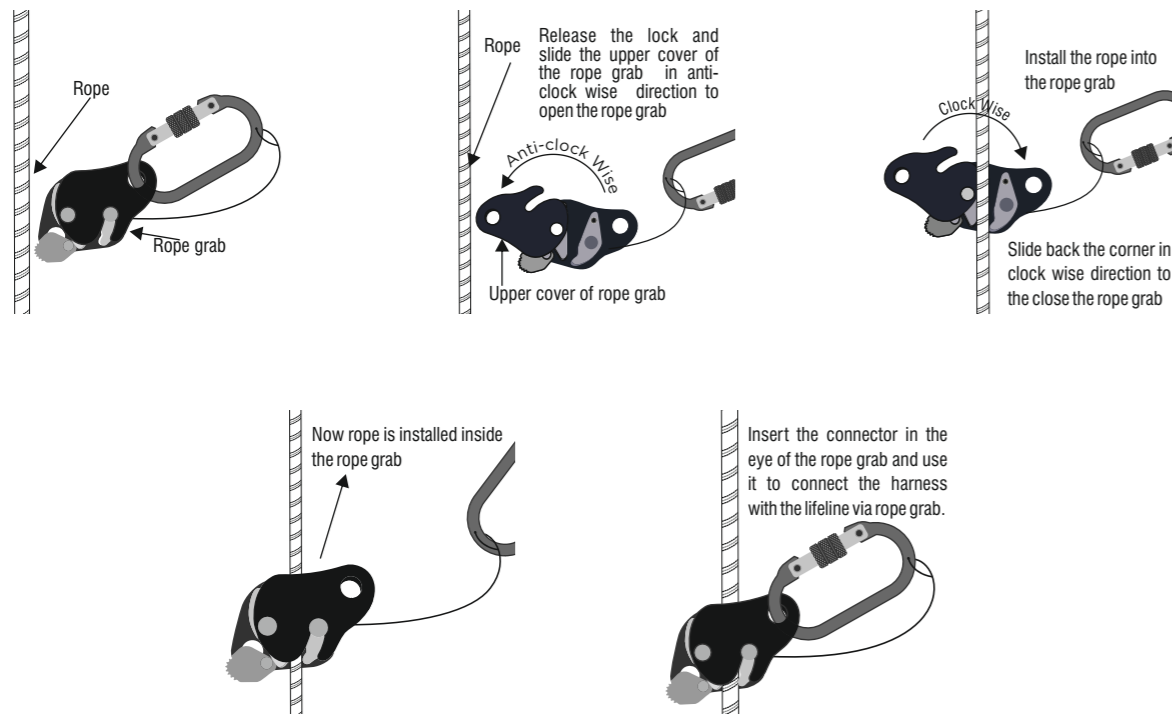


**FEATURES**

- This Rope grab is Openable, and is constructed of high strength Aluminium Alloy, which is extremely light in weight, and is highly corrosion resistant.
- Works on 12mm Kernmantle Rope Anchorage Line, without any manual intervention.
- Has a manual lock position to allow work on inclined roof, and also restraint positioning.
- Has one side loop for Connector and other side a stop knot.
- Abrasion resistant thimble to protect the loops from being damaged by metallic contact.
- The termination is cross-stitched, and is protected with a strong transparent covering sleeve which not only protects the end but also makes the stitches visible for easy inspection prior to use.
- Available in lengths of 5mtrs to 100mtrs.

\*The Anchorage Line has coloured tracer yarn which loses its colour in due course of time, to show that the rope is now unfit for further use.

**INSTALLATION STEPS**



**TECHNICAL SNAPSHOT**

<b>Rope Grab</b>	Openable Aluminium Rope Grab Blocker: RG 07
<b>Attachment Element</b>	Steel Screw Locking Karabiner PN 112 permanently attached with wire sling

<b>Anchorage Line</b>	Kernmantle rope of dia 12 mm
<b>Certified to</b>	EN 353-2:2002



TEXTILE ROPES FOR ANCHORAGE LINES

KARAM introduces Textile Anchorage Lines in both Twisted and Kernmantle Ropes made of polyamide and polyester, available in different lengths to suit application. These Anchorage Lines are certified as a system only when used with specific KARAM Rope Grab Fall Arresters.

TWISTED ROPE ANCHORAGE LINE

PN 920 (14mm)



**FEATURES**

- Made of 3-strand Polyamide Twisted Rope of dia 14mm.
- One side loop; other side stop knot.

**TECHNICAL SNAPSHOT**

Anchorage Line	Ref.	Length
Twisted Rope Anchorage Line (14mm)	PN 920	20 mtrs
	PN 930	30 mtrs
	PN 950	50 mtrs
Twisted Rope Anchorage Line (16mm)	PN 920	20 mtrs
	PN 930	30 mtrs
	PN 950	50 mtrs

KERMANTLE ROPE ANCHORAGE LINE

PN 930 (12mm)



**FEATURES**

- Made of Polyester Kernmantle Rope of dia 12mm.
- One side loop; other side end stop knot.

**TECHNICAL SNAPSHOT**

Anchorage Line	Ref.	Length
Kernmantle Rope Anchorage Line (12mm)	PN 920 (KRAL 12)	20 mtrs
	PN 930 (KRAL 12)	30 mtrs
	PN 950 (KRAL 12)	50 mtrs

KERMANTLE ROPE ANCHORAGE LINE

PN 930 (11mm)



**FEATURES**

- Made of Polyester Kernmantle Rope of dia 11mm.
- One side loop; other side end stop knot.

**TECHNICAL SNAPSHOT**

Anchorage Line	Ref.	Length
Kernmantle Rope Anchorage Line (11mm)	PN 920 (KRD 11)	20 mtrs
	PN 930 (KRD 11)	30 mtrs
	PN 950 (KRD 11)	50 mtrs



# RETRACTABLE FALL ARRESTER BLOCKS

## WHAT IS A RETRACTABLE FALL ARRESTER BLOCK?

Retractable Fall Arrester Block is a vertical lifeline that is used as part of a complete fall arrest system. The lifeline, much like the seat and shoulder belt in a car, pulls out and retracts easily. Subjected to a quick jerk, however, an internal mechanism acts to engage a braking system. When the tension is released, the lifeline moves freely again. During a fall event, the internal braking system of the Block functions to disperse the energy of the fall over a short distance, thus limiting the force applied to a user's body.

## CHALLENGES FACED DURING WORK AT HEIGHT

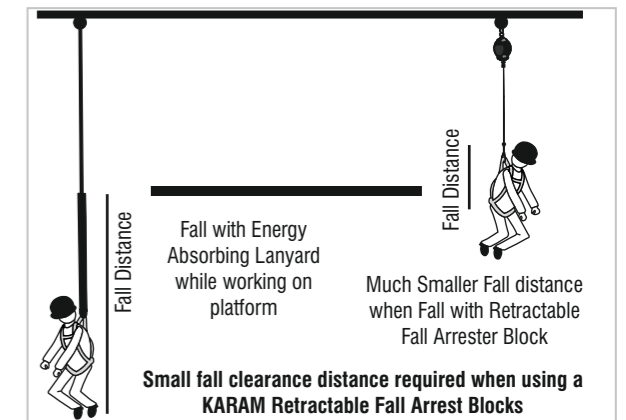
- Work in areas having less clearance distance
- Repeated work on a defined site, at a height
- Lack of enough suitable Anchorage points
- Confined Spaces

**KARAM Retractable Fall Arrester Blocks - The perfect solution for such tricky situations.**

## FEATURES OF KARAM RETRACTABLE BLOCKS

- Can be anchored to a single point and allows the user to move uninhibited at different levels.
- The connecting lanyard is such that it retracts or extends to different lengths as required and is always taut with no slack.
- In the event of a fall, the block locks immediately with minimum fall distance and lowers the impact of force to **less than 6 kN**.

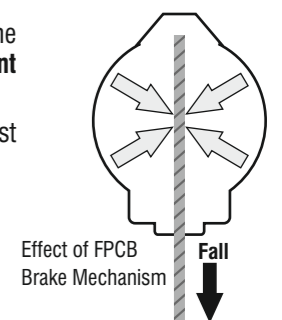
- Casing** : Available in both Polymer Casing and in Aluminium Casing
- Lock Mechanism** : Unique centrifugal Braking Mechanism
- Applications** : Ideal for Vertical use in various hazardous conditions for personnel weighing upto 136 Kgs
- Retractable Life Line** : Available in both Webbing & Galvanized Iron (GI) wire rope
- Harness End Connector** : Swivel Snap Hook with Load Indicator PN 162 which indicates a warning line when a Fall has occurred
- Conformity** : Tested and Certified EN 360:2002



## FOUR POINT CENTRIFUGAL BREAKING (FPCB) MECHANISM FOR FOOL-PROOF LOCKING

Most Fall Arrest Blocks manufactured in the world have only 2 Braking Powels which are responsible for the locking during a fall. In contrast, the KARAM Retractable Block comes with the unique **KARAM Four Point Centrifugal Breaking (FPCB) Mechanism**.

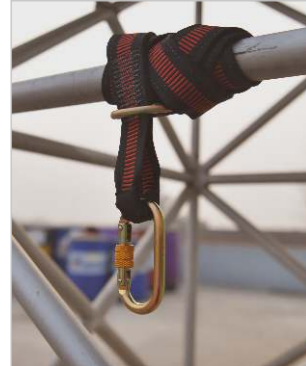
This provides Fool-Proof Locking by applying a brake that is multiplied by a large factor of 4, to give the highest level of safety in the event of a fall.



KARAM Retractable Blocks are made of high impact strength polymer, to prevent breakage and is nearly indestructible. It can sustain any kind of impact which may be encountered in the toughest of the conditions.

Retractable Blocks come with a unique swivel action of the Anchorage Eye. This prevents any undue twist of the user and subsequent injurious impact in the event of a fall.

## DOS AND DONTs OF RETRACTABLE FALL ARRESTER BLOCKS



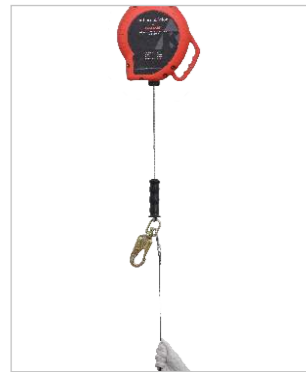
### Always Check for the Anchorage point

It should sustain a minimum load of 12kN and should be securely connected.



### Do not operate...

If the angle from the Block to the ground level is greater than 40 degrees, to avoid the pendulum effect.



### Always Check for the free end of the Retractable Lanyard

When not in use, pull down the Lanyard of the block slowly using the tag line.



### Do not leave the Retractable Lanyard off the jerk!

It can damage the reel function of the Block.

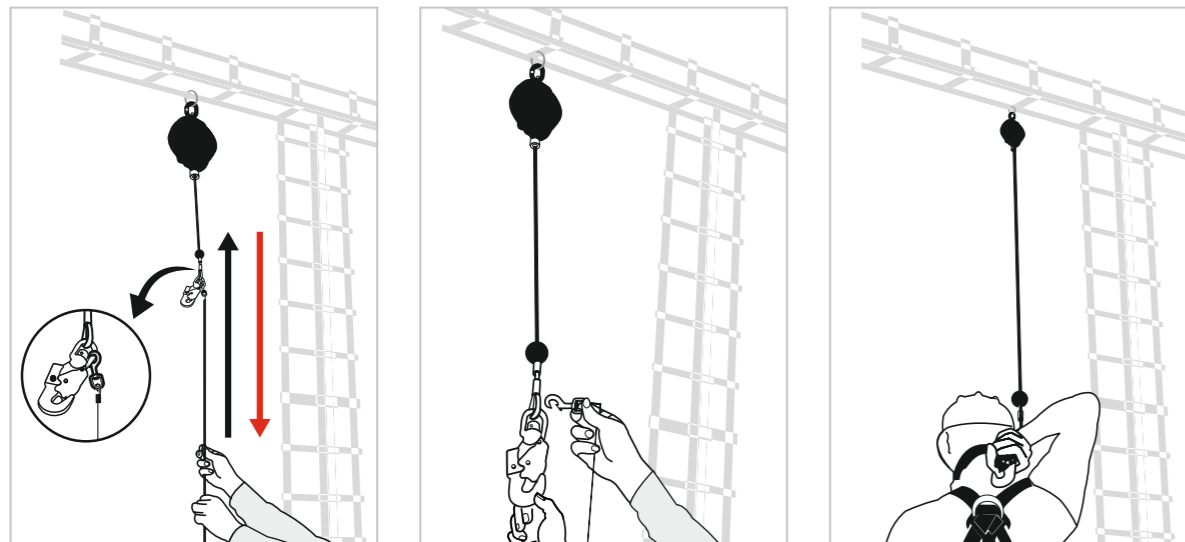
## PULL DOWN THE LANYARD OF BLOCK USING THE TAG LINE

### A tag line is always provided along with KARAM Retractable Blocks

Always allow the retractable lanyard to recoil into the Block casing under control using the same Tag line. The Retractable Block may lock if the Rope is suddenly released. Always use the Tag line.

### Important

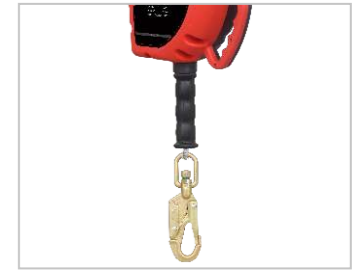
The Damper Spring at the base of the block can be pushed up to release the block in the event the Block Wire gets blocked.



## KARAM RETRACTABLE WIRE ROPE BLOCKS ARE PROVIDED WITH A 'HOLDING SNOOT' MADE OF SOFT THERMOPLASTIC ELASTOMER

### The Snout minimizes the accidental locking of the Block when the wire rope is released suddenly:

The Holding snout provides dampening of the impact experienced on to the Block casing when the wire rope is released suddenly. This prevents the Block to 'lock' accidentally in such cases, and hence allows better usage.



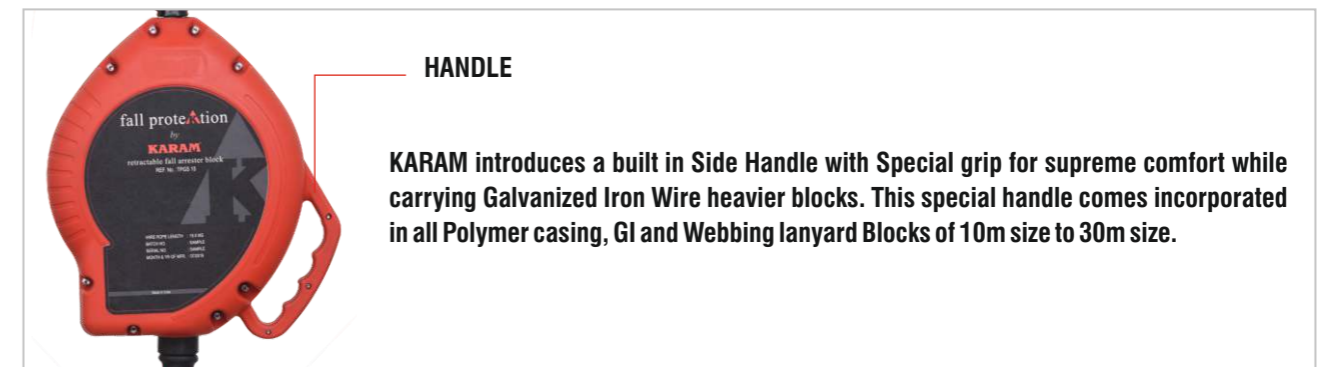
### It allows a safer and more comfortable grip on the wire rope when the Block is inspected for retraction and locking prior to use.

It is mandatory as for all other PPE to inspect the Block for its working (which includes retraction and locking of the wire rope) prior to each use. In the absence of the Holding Snout you may feel discomfort while retracting the wire rope to inspect the Block. The Holding Snout allows you to grip the wire rope safely as you retract it to test the Block for locking and retraction without any discomfort.



## KARAM ADVANTAGE

KARAM handle is placed on the side of the block. This enables easy carriage of the block and also prevents the retractable line to hit against the ground while walking (which may be a case if the handle were placed at the top).

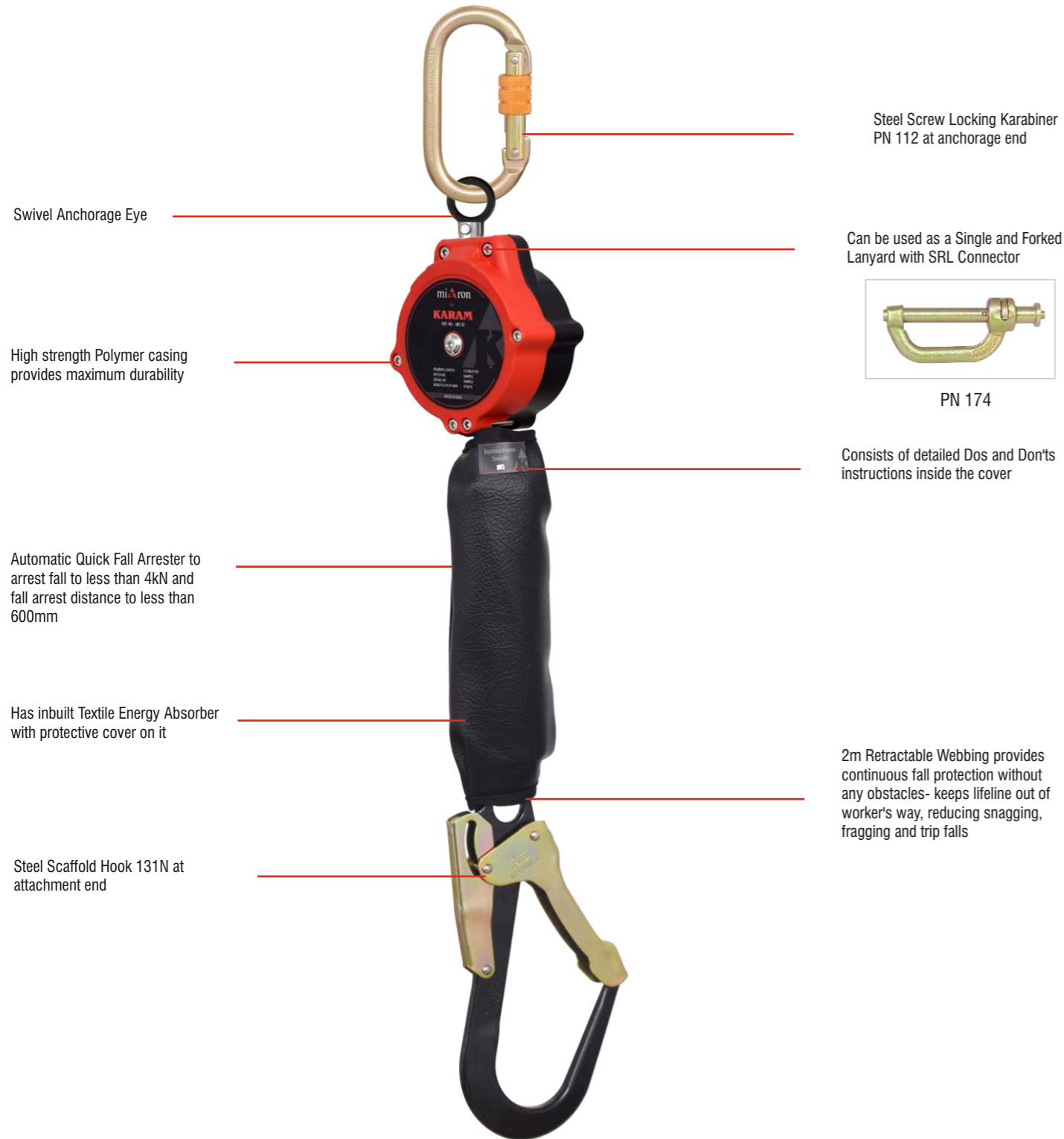


**KARAM introduces a built in Side Handle with Special grip for supreme comfort while carrying Galvanized Iron Wire heavier blocks. This special handle comes incorporated in all Polymer casing, GI and Webbing lanyard Blocks of 10m size to 30m size.**

# MIKRON BLOCK

## MIC 02

The ergonomically designed Mikron is easy to use and is ideal for direct connection to most harnesses. It is virtually unnoticeable on your back, stays out of the way and can be easily used as a lanyard replacement. Whether your application requires single or twin leg configurations, mounting to an overhead anchor or for connection directly to harness, KARAM Mikron comes with all the possible connections for you to choose as per your suitability. Mikron locks quickly—stopping a fall within inches—providing more protection at low heights. Also, the tension is always kept on the lifeline, which reduces snapping, dragging and trip falls.



Swivel Anchorage Eye

High strength Polymer casing provides maximum durability

Automatic Quick Fall Arrester to arrest fall to less than 4kN and fall arrest distance to less than 600mm

Has inbuilt Textile Energy Absorber with protective cover on it

Steel Scaffold Hook 131N at attachment end

Steel Screw Locking Karabiner PN 112 at anchorage end

Can be used as a Single and Forked Lanyard with SRL Connector



PN 174

Consists of detailed Dos and Don'ts instructions inside the cover

2m Retractable Webbing provides continuous fall protection without any obstacles- keeps lifeline out of worker's way, reducing snagging, fraying and trip falls

### FEATURES

- Smart and Stylish design.
- Incorporated with Robust and Durable casing, the Mikron Block is extremely Light in weight & easy to carry (almost pocket size).
- Made of the finest material for Longevity and Extended use.
- Ideal for direct connection to most Harnesses and can be easily used as a lanyard replacement. Best suited for situations where an anchor point is available at foot level.
- Extremely light in weight, weighing less than 600 gms (excluding hook) for easy user carriage.
- Locks quickly; arresting a fall within inches providing more protection at low heights.
- Meets the Sharp Edge Test and Passes the Dynamic Test of Fall Factor 2.
- Can be used Horizontally.
- Minimum Breaking Strength: 13.34 kN
- Fall Distance is minimal as compared to Energy Absorbing Lanyards making retrieval of fall victim easier.



PN 131N



KG 160.0 gm (excluding Hook)

### TECHNICAL SNAPSHOT



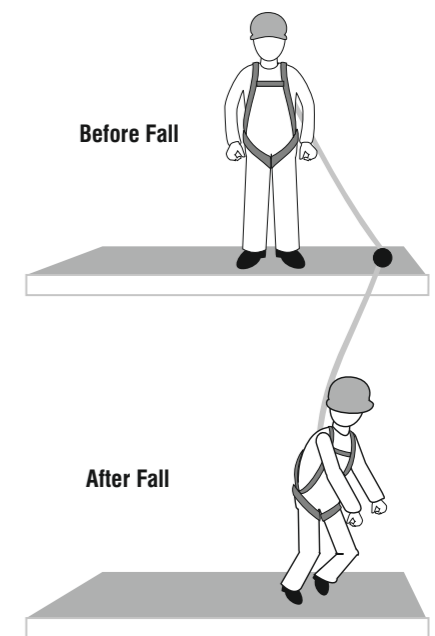
**Material Casing** High Strength Polymer  
**Material Lifeline** Webbing  
**Application** Ideal for Vertical use in various hazardous conditions

**Anchorage end** Steel Screw Locking Karabiner PN 112  
**Termination end** Steel Scaffold Hook PN 131N  
**Certified to** EN 360:2002, VG 11 CNB/11.060

Example of Application



Can also be used when Anchor Point is the foot level which means Micron complies to Fall factor 2



Fall Factor 2

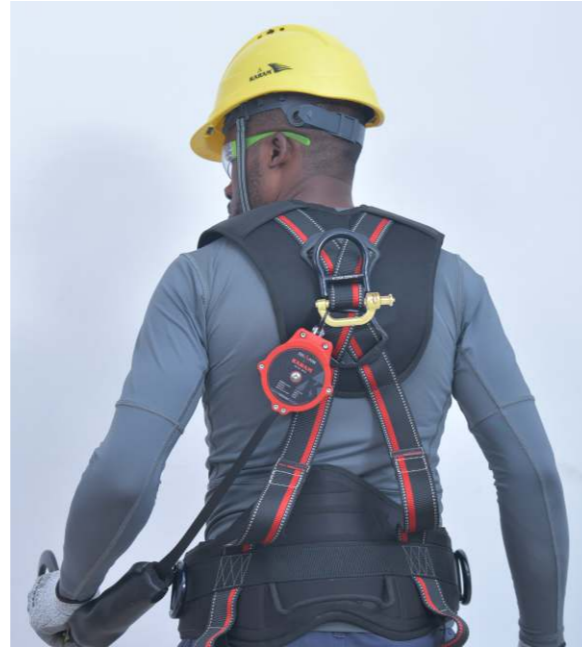
## TWIN SRL CONNECTOR

PN 174

KARAM offers a unique Twin SRL Connector to use Mikron as both Single and Forked Lanyards.



Example of Application



### FEATURES

- Mikron can be used as a single or Forked Lanyard as per requirement.
- No additional connector is required.
- Reduces the length of the swing during the fall thereby preventing the Mikron from hitting the head of the user.
- Can be attached to any of the Harnesses.
- Is installed on the webbing of the Harness. Dorsal D-ring is free for attaching other equipment or rescue.
- Snug fit design.
- Provides 100% tie off Configuration.
- Provides Mobility when moving from one location to another.



Scan here for a virtual tour of the product

### How to use Mikron as a Twin Lanyard with Twin SRL Connector



Open connector by pushing the two locking buttons and slide the pin out.



Slide connector through loosened web straps placed below the Dorsal D-ring, then pull straps tight.



Push the pin inside the grooves of the connector to ensure locking.

**KG** 149.0 gm ± 10.0 gm

### TECHNICAL SNAPSHOT



**Material** Alloy Steel  
**Minimum Breaking Strength** 23 kN  
**Process** Forged

**Finish** Zinc plated with yellow passivation

## RETRACTABLE BLOCKS

**140 kg**



Polymer Casing Retractable Block with Galvanized Iron Wire Rope

Polymer Casing Retractable Block with Webbing Retractable Lanyard

## KARAM RETRACTABLE BLOCKS IN POLYMER CASING WITH GALVANIZED STEEL WIRE ROPE

- KARAM offers an exhaustive range of Retractable Blocks with Galvanized Steel Wire Rope Lanyard.
- Casing is made of High Impact Strength Polymer to prevent breakage and is nearly indestructible.
- These blocks have a swivel anchorage eye and hook PN 162 with impact indicator at the attachment end.
- Minimum breaking strength of these blocks is 12kN.
- They are certified to EN 360:2002.
- These blocks are also available with Stainless Steel Wire Rope Lanyard instead of Galvanized Wire Rope.
- KARAM also offers Retractable Blocks of Steel Wire Rope which are ATEX certified for use in potentially explosive atmosphere as per Directive 2014/34/EU.

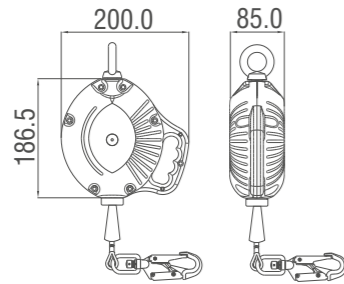


WITH GALVANIZED STEEL WIRE ROPE LANYARD

TPGS 07



Side Dimensions (mm)

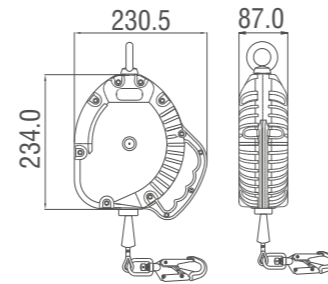


**KG** 3.08 kg ± 0.01 kg

TPGS 10



Side Dimensions (mm)



**KG** 2.09 kg ± 0.01 kg

### TECHNICAL SNAPSHOT

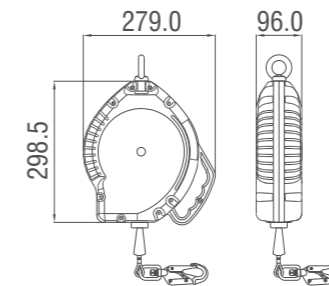


Model	Material of Casing	Material and Dia of Lifeline	Minimum Breaking Strength	Attachment end	Anchorage End	Certified to
TPGS 07	High Impact Strength Polymer	4.5mm Dia Galvanized Steel Wire Rope	12kN	Steel Screw Locking Karabiner PN 112	Steel Swivel Hook PN 162	EN 360:2002 and VG11 RfU 11.060
TPGS 10	High Impact Strength Polymer	4.5mm Dia Galvanized Steel Wire Rope	12kN	Steel Screw Locking Karabiner PN 112	Steel Swivel Hook PN 162	EN 360:2002 and VG11 RfU 11.060

TPGS 15



Side Dimensions (mm)

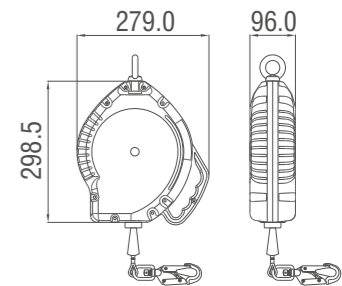


**KG** 5.65 kg ± 0.01 kg

TPGS 20



Side Dimensions (mm)



**KG** 6.05 kg ± 0.01 kg

### TECHNICAL SNAPSHOT



Model	Material of Casing	Material and Dia of Lifeline	Minimum Breaking Strength	Attachment end	Anchorage End	Certified to
TPGS 15	High Impact Strength Polymer	4.5mm Dia Galvanized Steel Wire Rope	12kN	Steel Screw Locking Karabiner PN 112	Steel Swivel Hook PN 162	EN 360:2002 and VG11 RfU 11.060
TPGS 20	High Impact Strength Polymer	4.5mm Dia Galvanized Steel Wire Rope	12kN	Steel Screw Locking Karabiner PN 112	Steel Swivel Hook PN 162	EN 360:2002 and VG11 RfU 11.060

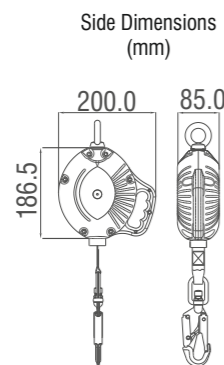
## KARAM RETRACTABLE BLOCKS IN POLYMER CASING WITH 25MM WIDE WEBBING LANYARD

- These Blocks are lighter in weight and are ideal choice in conditions where it is required that the lanyard offers less abrasion to objects around it.
- Such conditions are encountered for use in fall protection on external fascades, window cleaning, etc. The Retractable Block allows movement to the user at normal speeds, within a recommended working area. In case of a fall, the self braking system within the Block activates and locks the fall, also reducing the impact of fall to less than 6kN.



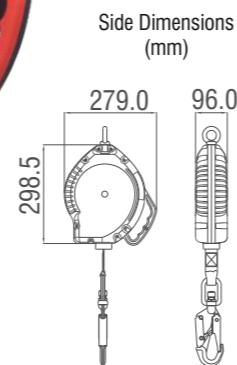
WEBBING LANYARD

TPWB 06



KG 2.31 kg ± 0.02 kg

TPWB 12



KG 6.22 kg ± 0.02 kg

TECHNICAL SNAPSHOT



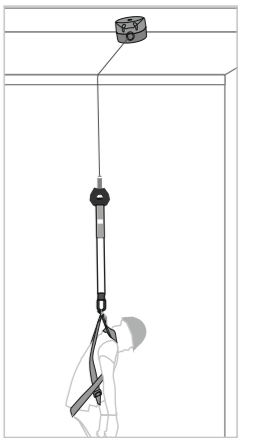
TPWB 06	<b>Material of Casing</b>	High Impact Strength Polymer	<b>Attachment end</b>	Steel Screw Locking Karabiner PN 112	
	<b>Material and Width of Lifeline</b>	25mm wide Webbing Lanyard		<b>Anchorage End</b>	Steel Swivel Hook PN 162
	<b>Minimum Breaking Strength</b>	15kN		<b>Certified to</b>	EN 360:2002 and VG11 RfU 11.060
TPWB 12	<b>Material of Casing</b>	High Impact Strength Polymer	<b>Attachment end</b>	Steel Screw Locking Karabiner PN 112	
	<b>Material and Width of Lifeline</b>	25mm wide Webbing Lanyard		<b>Anchorage End</b>	Steel Swivel Hook PN 162
	<b>Minimum Breaking Strength</b>	15kN		<b>Certified to</b>	EN 360:2002 and VG11 RfU 11.060

## SHARP EDGE TESTED KARAM RETRACTABLE BLOCKS

The ideal position of a Retractable Block when used as a part of Personal Fall Arrest System, is directly overhead, or to an anchor point that is placed above the level of the Dorsal D-Ring of the user's harness. However, while working on rooftops, beams, etc, the blocks may be required to be anchored horizontally. Not all blocks can be anchored at this level. KARAM Sharp Edge tested Blocks can be used in horizontal condition, and in such conditions where the worker is exposed to a sharp edge hazard. The integrated energy absorber pack helps to reduce the impact of forces of the cable, as it comes in contact with the sharp edge. Each Block in this range is constructed in such a way that if subjected to contact with a sharp edge in the event of a fall from a roof/terrace etc, the retracted lanyard remains intact, while arresting the fall immediately. These blocks are equipped with an external energy absorber (with protective cover) which reduces the dynamic load impact felt on the user in the event of a fall, to less than 6kN even when the lifeline is fully drawn.

Certified for the vertical usage as per EN 360:2002 and Horizontal usage as per VG11 RFU # 11.060. This KARAM range of Sharp Edge tested Retractable Fall Arrester Blocks comes in both GI Wire Rope and in Webbing.

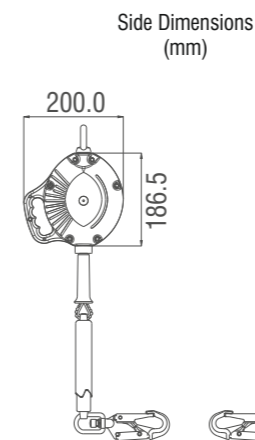
Example of Application



## SHARP EDGE TESTED RETRACTABLE BLOCKS IN POLYMER CASING WITH GALVANIZED STEEL WIRE ROPE

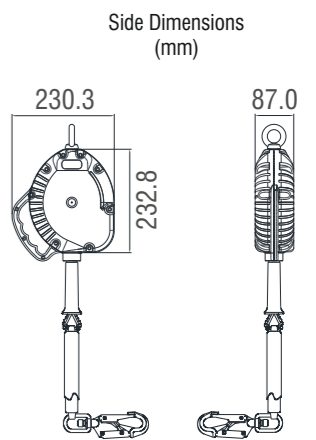
Area of Use: In conditions where the person is exposed to sharp edge hazard

TPGS 07 SE



KG 4.28 kg ± 0.01 kg

TPGS 10 SE



KG 4.48 kg ± 0.01 kg

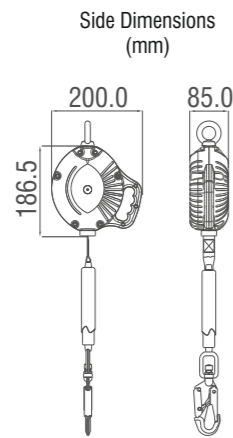
TECHNICAL SNAPSHOT



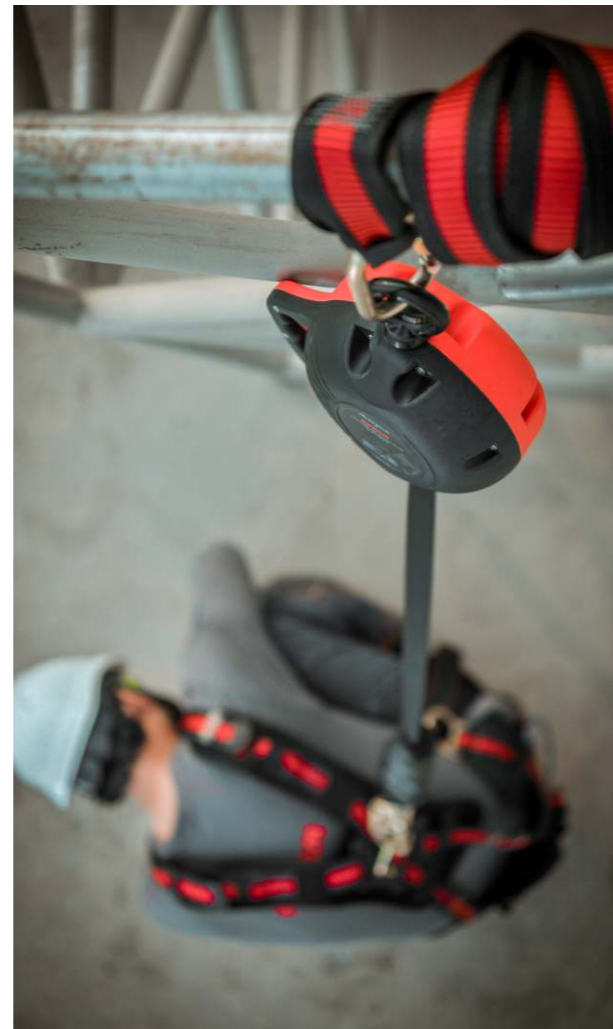
TPGS 07 SE	<b>Material of Casing</b>	High Impact Strength Polymer	<b>Attachment end</b>	Steel Screw Locking Karabiner PN 112	
	<b>Material and Dia of Lifeline</b>	4.5mm Dia Galvanized Steel Wire Rope		<b>Anchorage End</b>	Steel Swivel Hook PN 162
	<b>Minimum Breaking Strength</b>	12kN		<b>Certified to</b>	EN 360:2002 and VG11 RfU 11.060
TPGS 10 SE	<b>Material of Casing</b>	High Impact Strength Polymer	<b>Attachment end</b>	Steel Screw Locking Karabiner PN 112	
	<b>Material and Dia of Lifeline</b>	4.5mm Dia Galvanized Steel Wire Rope		<b>Anchorage End</b>	Steel Swivel Hook PN 162
	<b>Minimum Breaking Strength</b>	12kN		<b>Certified to</b>	EN 360:2002 and VG11 RfU 11.060

**SHARP EDGE TESTED RETRACTABLE BLOCKS IN POLYMER CASING WITH 25MM WIDE WEBBING LANYARD**

TPWB 06 SE



Example of Application



**KG** 2.51 kg ± 0.02 kg

**TECHNICAL SNAPSHOT**



**Area of Use:** In conditions where the person is exposed to sharp edge hazard

**TPWB 06 SE** **Material of Casing** High Impact Strength Polymer  
**Material and Width of Lifeline** 25mm wide Webbing Lanyard  
**Minimum Breaking Strength** 15kN

**Attachment end** Steel Screw Locking Karabiner PN 112  
**Anchorage End** Steel Swivel Hook PN 162  
**Certified to** EN 360:2002 and VG11 RfU 11.060

**RETRIEVAL RETRACTABLE BLOCKS**



KARAM offers a unique range of Retrieval Fall Arrest Blocks to enable easy retrieval of a victim of fall. These Blocks allow the fall to arrest and also allow easy hoist of the victim with the help of their inbuilt Winch mechanism when mounted on Megapods, Tripods, K-Pods etc.

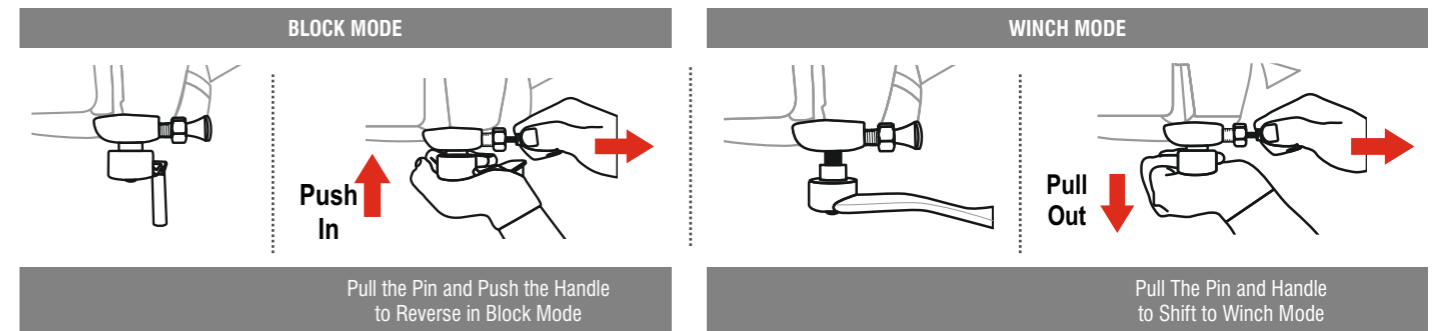
**Features of KARAM Retrieval Retractable Blocks -**

- KARAM Retrieval Blocks come with Retractable Life Line made of Galvanized Steel Wire Rope. This Life Line is constructed of 4.5mm dia Steel Wire Rope.
- The locking pin on the side of the casing at the base of the handle allows this dual system to work in independent Fall Arrest and Winch modes.
- Can be easily mounted on the leg of KARAM Tripod PN 800(DP), K-Pod using specialized brackets.
- Certified to EN 360:2002 and EN 1496:2017 Class B

**Unique Features -**

- Retractable mode- enables easy movement of the user while working in confined space.
- Winch mode- enables easy retrieval of the victim post fall arrest.
- Comes with PN 162 Swivel Snap Hook with Impact Indicator.

It is easy to shift to Winch mode from Block mode (and vice versa) following the given steps



Retractable mode-enables easy movement of the user while working in confined space.  
 Winch mode-enables easy retrieval of the victim post fall arrest.

These fall arrest blocks are manufactured by KARAM and certified to EN360 and EN1496, and fitted with an integrated rescue handle to enable rescue of a casualty after the fall has been arrested.

Retrieval blocks are often fitted to confined space systems, though are also often used as a stand alone fall arrest and rescue system.

Having the winch built in to the Retractable Block, indicates that the user already has a Rescue plan, which is the requirement of the Fall Protection directive for work at height.

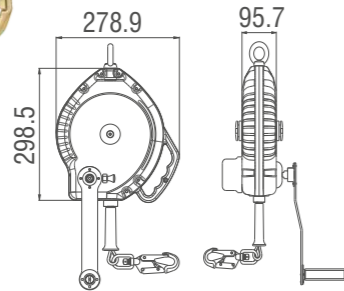


RETRIEVAL RETRACTABLE BLOCKS

PCGS 20R(N)



Side Dimensions (mm)

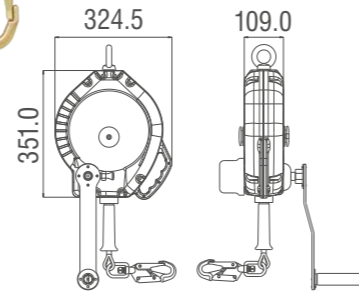


KG 9.41 kg

PCGS 30R



Side Dimensions (mm)



KG 14.5 kg

TECHNICAL SNAPSHOT



PCGS 20R(N)	<b>Material of Casing</b>	High Impact Strength Polymer	<b>Attachment End</b>	Steel Screw Locking Karabiner PN 112
	<b>Material and Dia of Lifeline</b>	4.5mm Dia Galvanized Steel Wire Rope	<b>Anchorage End</b>	Steel Swivel Hook PN 162
	<b>Minimum Breaking Strength</b>	12kN	<b>Certified to</b>	EN 360:2002 and EN 1496:2017 Class B.
PCGS 30R	<b>Material of Casing</b>	High Impact Strength Polymer	<b>Attachment End</b>	Steel Screw Locking Karabiner PN 112
	<b>Material and Dia of Lifeline</b>	4.5mm Dia Galvanized Steel Wire Rope	<b>Anchorage End</b>	Steel Swivel Hook PN 162
	<b>Minimum Breaking Strength</b>	12kN	<b>Certified to</b>	EN 360:2002 and EN 1496:2017 Class B.

MINI BLOCK (SWIVEL)

PN 2002(SW)



FEATURES

- Has a protective casing.
- Having a swivel arrangement at anchorage end with fall indicator.
- Has a retractable webbing of width 47mm.
- Incorporated with an Energy Absorber for shock absorption.
- Supplied with Steel Screw Locking Karabiner PN 112 at anchorage and attachment end.

KG 1.56 kg

TECHNICAL SNAPSHOT



<b>Width of Retractable Webbing</b>	47mm
<b>Maximum Length</b>	2.5m
<b>Minimum Breaking Strength</b>	15kN

Certified to EN 360:2002



# CONFINED SPACE ENTRY

## DEFINING A TRIPOD

A particularly challenging area of activity is when the worker is required to move into confined spaces. Not only is it required that the descent into such a space is made smooth and safe, but incase the depth into such areas is large, it becomes almost equivalent to working at a height. Hence, to protect the worker from falling into deep and narrow confinement also becomes the focus of concern.

KARAM Tripod is one such product that can be used for easy access by a worker into confined spaces such as Man-holes, Tanks, etc. It provides a means of controlled ascent and descent, as well as protection from falls, should the depth of the space require it.



### ALUMINIUM EYE BOLTS

Two auxiliary eye bolts as attachment points tested to sustain a force of more than 23kN static force as per EN 795:2012 Type B.



### TRIPOD HEAD

Robust Aluminium Alloy cast head with double integral head mounted pulleys permanently incorporated in the Tripod head and provides independent passing over of cable from a Winch and a Retrieval Block.



### TELESCOPIC LEGS

Fully Adjustable Aluminium Alloy telescopic legs for use on level or uneven surfaces.



### PRE- INSTALLED ATTACHMENTS

Has pre-installed universal mounting attachments to easily mount the Winch and Retrieval Blocks onto the Tripod.



### STURDY RUBBER SHOES

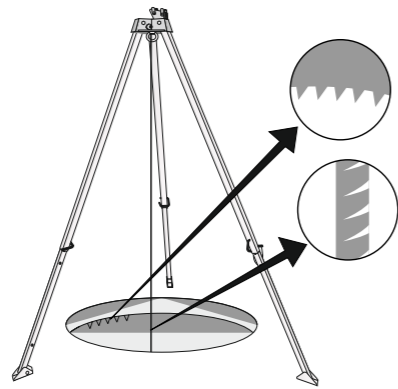
Steel support-shoes provided with rubber sole to increase friction and impart more stability.



**POINTS TO REMEMBER WHILE USING THE TRIPOD**



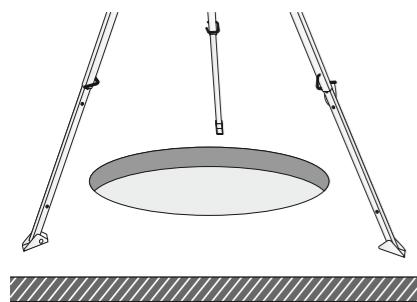
The Tripod must be mounted where it can be leveled using the leg adjustments.



Avoid positioning the Tripod where the working line may abrade against sharp edges.



Position the Tripod such that the lifeline will be directly over the intended work area when installed.



The mounting surface onto which the Tripod is erected must meet minimum strength of static load of at least 12kN for Personnel Riding and Rescue.



The pins on the legs of Tripod must be securely locked for supporting the intended loading.



Never allow the working line to extend outside the legs of the Tripod. Tipping of the Tripod could occur.

**TRIPOD  
PN 800(DP)**

Tripod is one such product that can be used for easy access by a worker into confined spaces such as man-holes, tanks, etc. It provides a means of controlled ascent and descent, as well as protection from fall, should the depth of the space require it.



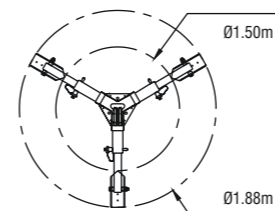
**FEATURES**

- Comes with double integral head mounted pulleys which is permanently incorporated in the cast aluminum head of the Tripod and provides independent passing over of cable from a Winch and a Retrieval Block.
- Consists of two auxiliary eye bolts as attachment points.
- Material of cast head and legs: Aluminium Alloy.
- Consists of Steel support-shoes provided with rubber sole to increase friction and impart more stability.
- Strength of anchorage point is greater than 23 kN.
- Every Tripod is provided with pre-installed universal mounting attachments to easily mount the Winch and Retrieval Blocks.
- Can be used with Winches PN 801(DP), PN 817(DP), when used with PN 800(44) Winch Bracket and Retrieval Blocks PCGS 20R(N), and PCGS 30R when used with PN 800(45) Retrieval Bracket.
- Comes with a sturdy bag to pack.

**KG 12.25 kg**  
PN 800(DP) 7 ft

**KG 16.9 kg**  
PN 800(DP) 10 ft

Mounting Brackets for Tripod	Picture	Bracket used for Mounting
PN 800(44)		Winches PN 801(DP), PN 817(DP)
PN 800(45)		Retrieval Blocks PCGS 20R(N), PCGS 30R



Scan here for a virtual tour of the product



**TECHNICAL SNAPSHOT**



**PN 800 (DP) 7 ft**

**Material** Aluminium Alloy  
**Wheelbase Footprint (Ø)** 1.5mtrs  
**Height** 7 ft

**Maximum Load Capacity Certified to** 500 kg  
EN 795:2012Type B

**PN 800 (DP) 10 ft**

**Material** Aluminium Alloy  
**Wheelbase Footprint (Ø)** 2.0mtrs  
**Height** 10 ft

**Maximum Load Capacity Certified to** 500 kg  
EN 795:2012Type B

**K-POD  
PN 900**

KARAM offers K-Pod which provides a safe and secure system for easy access to confined spaces. The K-Pod is an ideal choice to provide overhead anchorage which can be mounted on different bases.



**FEATURES**

- Made of highly corrosion resistant stainless steel, and can swivel a complete 360 degrees on its mounted base, hence providing a versatile reach and access.
- Height of the Cantilever arm of the K-Pod is adjustable. This enables the use of the K-Pod even in those areas where the roof height is small.
- Can be easily mounted on the floor as well as on the wall through special floor and wall mounting brackets which are made available as per need. The K-pod can also be mounted on the floor of heavy vehicles, hence making it extremely versatile in use.
- Cantilever is equipped with universal mounting bracket PN 900(14) to install Winches PN 801 (DP) and PN 817 (DP) onto the K-Pod.
- Retrieval Fall Arrester Block PCGS 30R, PCGS 20R(N) can also be installed for easy retrieval and arresting the fall of the user using the specialized mounting bracket PN 900(06) and PN 900(07) respectively.

Mounting Brackets for K-Pod	Picture	Bracket used for Mounting
PN 900(06)		30m Retrieval Block PCGS 30R
PN 900(07)		20m Retrieval Block PCGS 20R(N)

**ACCESSORIES OF K-POD**



**Floor mounting bracket**  
PN 900(01)



**Wall mounting bracket**  
PN 900(02)

Setting	Upper	Middle	Lower
<b>3 Point Adjustable Height</b>			
Distance from Bar	0.72mtrs	1.0mtrs	1.08mtrs
Height of Arm	2.3mtrs	1.9mtrs	1.5mtrs



Scan here for a virtual tour of the product

**TECHNICAL SNAPSHOT**



**Material** Stainless Steel

**Conforms to Certified to** EN 795:2012 Type A  
AS/NZ 5532:2013

**WINCHES**

Winches are the perfect solution for raising or lowering of personnel or material into confined spaces.

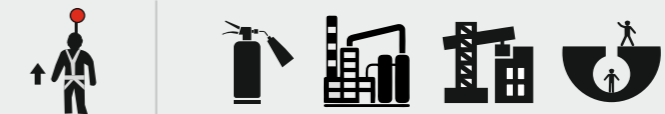
**WINCH  
PN 801 (DP)**



**FEATURES**

- Equipped with Advanced Dual Load Advantage (DLA) Gear System to give an effortless use of the Winch.
- Equipped with bolting fixture for robust fitting on to the Tripod PN 800(DP).
- To be used with a Retractable Fall Arrester when deployed for raising or lowering a person.
- Can be mounted on Tripod and K-pod with the help of their universal mounting brackets respectively.

**TECHNICAL SNAPSHOT**



**Winch Line Material** Galvanized Steel Wire Rope of dia 4.5mm  
**Length of Cable** 20.0mtrs and 25.0mtrs

**Connector** Steel Screw Locking Karabiner PN 112  
**Conforms to** EN 1496:2017 Class A

**WINCH  
PN 817 (DP)**



**FEATURES**

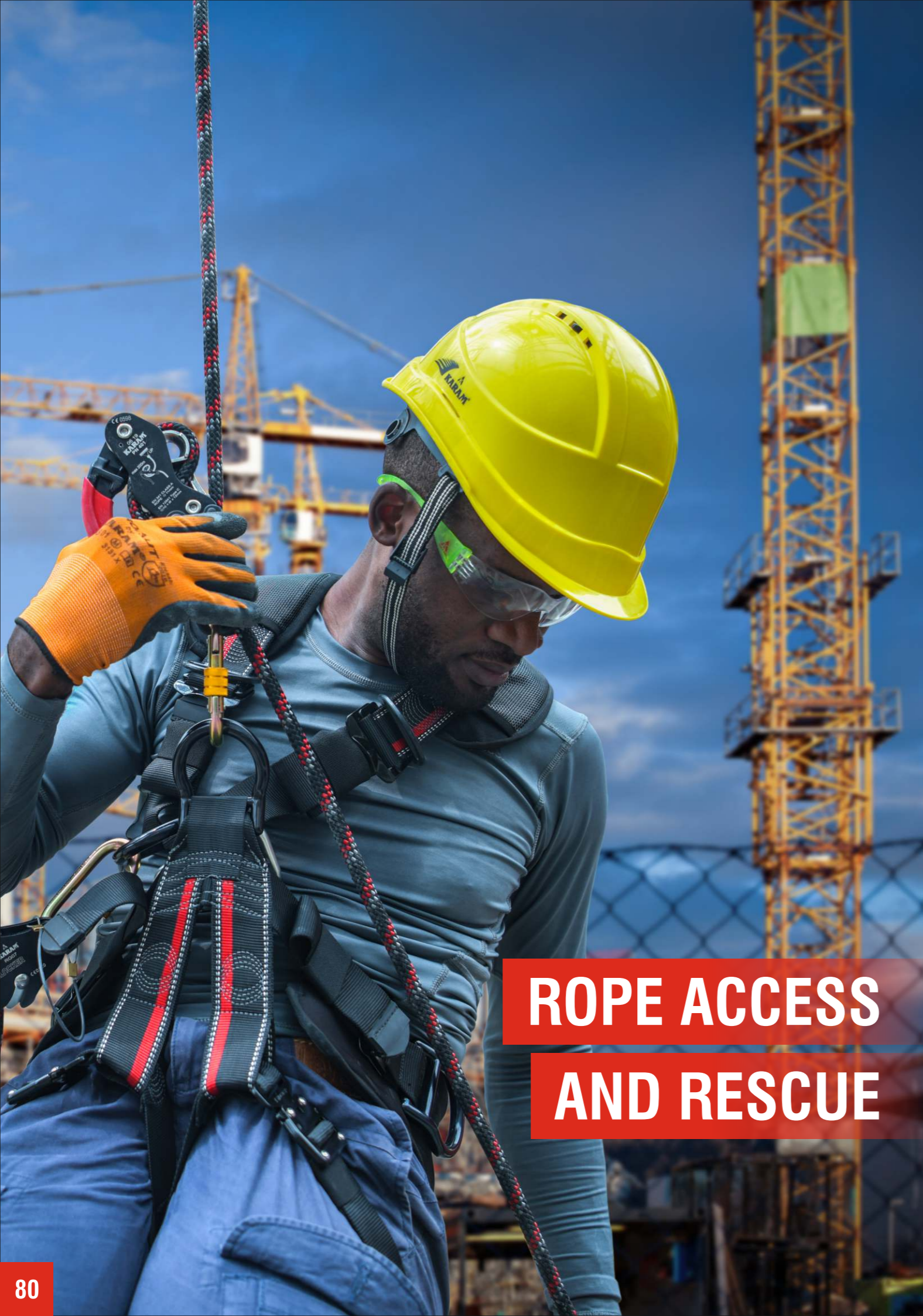
- Ideal for Rescue.
- Comes with Shock Absorbing Feature.
- To be used with a Retractable Fall Arrester when deployed for raising or lowering a person.
- Can be mounted on Tripod and K-pod with the help of their universal mounting brackets respectively.

**TECHNICAL SNAPSHOT**



**Winch Line Material** Galvanized Steel Wire Rope of dia 4.5mm  
**Length of Cable** 20.0mtrs

**Connector** Steel Swivel Snap Hook PN 162  
**Conforms to** EN 1496:2017 Class B



# ROPE ACCESS AND RESCUE

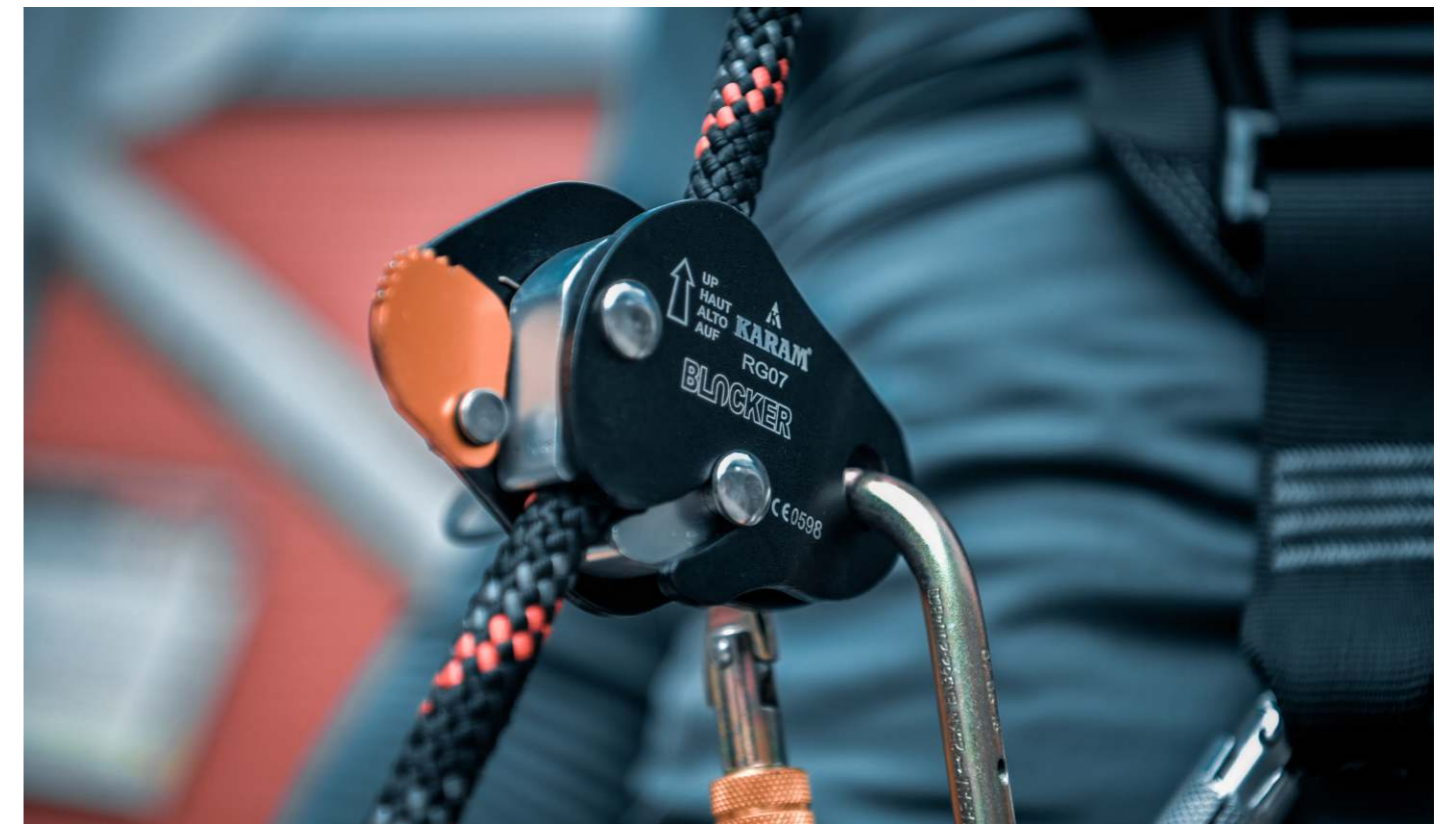
## WHAT IS ROPE ACCESS?

**Rope access** refers to a form of industrial climbing, with a set of techniques where ropes and specialized equipment like Pulleys, Karabiners, Rigging plates are used. These equipment are the primary means of access in difficult-to-reach locations without the use of **scaffolding, cradles** or an **aerial work platform**.

## WHY ROPE ACCESS?

Rope Access Equipment, Techniques, and Training can be combined to produce an exceptionally versatile, safe, cost-effective and efficient way to solve vertical access problems.

- Provides access to reach difficult locations.
- Quick Installation and dismantling of the system compared to the traditional methods.
- Less Manpower requirement.
- Rope Access requires far less time spent on site than in preparation for the traditional access method. For example, erection of scaffolding may take longer time than the actual time taken to do the job.
- Rope Access technique is extremely safe as compared to the traditional methods. In traditional access methods like erection of scaffolding or cradling, dropping of tools or trips can account for accidents.
- When scaffolding is erected to complete work on an existing structure it defaces the structure. It also disturbs those who work inside and walk beside the building. With Rope access technique, no such traces are found and it does not cause any disturbance to those working inside the building.



### GRIP DESCENDER PN 401

Various work applications like window cleaning, exterior facade maintenance, crack filling, bridge expansion etc., require the worker to be suspended from height. KARAM Grip Descender is a light-weight, easy to operate device that is used with a Suspension Harness (Magna 3). For additional comfort an Easy Seat can be used with the Suspension Harness.

It is a manually operated controlled descent device, ideal for descent on a single rope.

It is important to use appropriate fall arrest system along with the KARAM Grip Descender.

This is also an ideal device which can be used by trained personnel in an emergency situation for Rescue, to lower a casualty from an elevated work station.



#### FEATURES

##### Self Braking System

It is equipped with a unique self braking system which initiates the brake as soon as the handle is released, or clasped too tightly (in panic situations).

##### Polymer Coated Cover

Equipped with polymer coated cover to protect the user from the heat generated during descent.

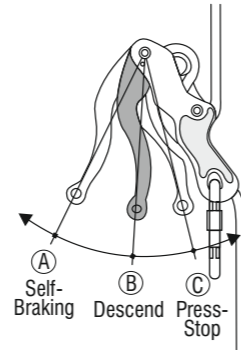
##### Light And Corrosion Resistant

Extremely light in weight and highly corrosion resistant.

##### Certified to

- EN 341:2011 Type 2 Class A
- EN 12841:2006 Type C

#### FUNCTIONING PRINCIPLES

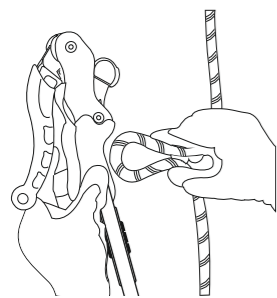


KARAM Grip Descender for positioning along with back up fall arrest system



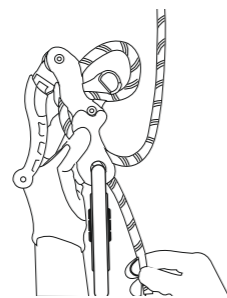
Scan here for a virtual tour of the product

#### INSTALLATION STEPS



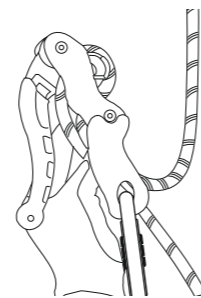
##### Put the rope into the Descender

To install the rope in the device rope handle of the descender has to be pushed in its extreme open position & pivoting pulley should also be rotated at its extreme open position.



##### Push the Rope into the Flanges of the Descender

Now the rope can be pushed in between both flanges at their lower end that is in between the karabiner and the pivoting pulley. Care to be taken that the load carrying end of the rope is situated by the pulley and the free end of the rope by Karabiner.

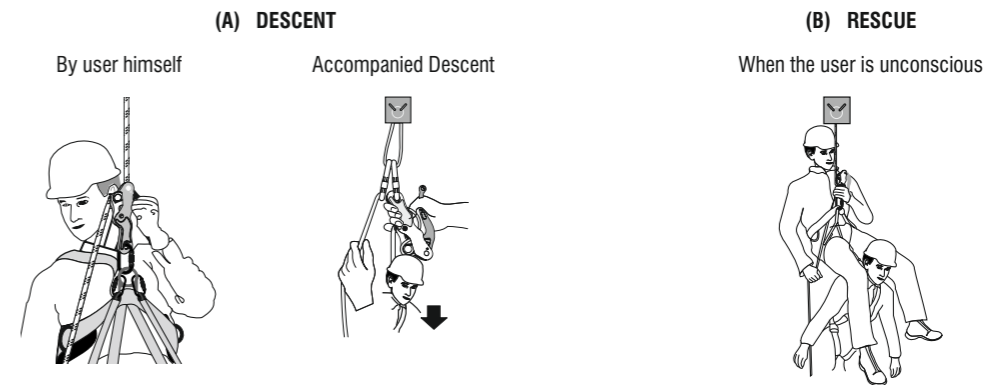


##### Now the Descender is ready to use

Then twist the ropes around the pulley between the upper end of either flange and thus embrace the pulley with the rope. Be careful that the jamming drive is located between either rope. Eventually move the pivoting pulley back in the device and thus the rope is installed in the descender. If the rope has not been inserted correctly the device will be of no use and will be unable to perform its function.

#### KARAM GRIP DESCENDER (PN 401) IDEAL FOR RESCUE AND DESCENT

After properly inserting the rope onto the device, hold the free end of the rope and hold the handle device from other hand. Then start pushing the handle slowly toward the descender's body which enables the victim to slide downwards at appropriate speed. Also, as the Descender is equipped with a unique braking system which initiates the brake as soon as the handle is released or clasped too tightly (in panic situation), thereby stopping the descent completely.



KG 340.0 gm

#### TECHNICAL SNAPSHOT



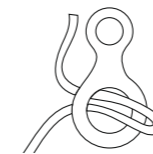
**Material** Aluminium Alloy  
**Application** Descent on a single rope  
**Works on** 10.0mm - 12.0mm dia Kernmantle Rope

**Finish** Coloured Anodized  
**Certified to** EN 341:2011 Type 2 Class A, EN 12841:2006 Type C

#### FIGURE OF 8 PN 431



#### INSTALLATION STEPS



Bringing the loop of the rope inside the bigger dia.



Then, bringing the loop of the rope behind the smaller dia.



Putting the Karabiner in the smaller dia. Now the product is ready to use.

#### FEATURES

##### Simple and Easy to use

The Rope runs smoothly through the device and is extremely easy to operate.

##### Compatibility with Rope

Can be used with any dia Kernmantle Rope.

##### Device Efficiency

The device does not get hot like other friction devices because of the ability to dissipate heat efficiently.

KG 136.0 gm

#### TECHNICAL SNAPSHOT



**Material** Aluminium Alloy  
**Application** Mountaineering activities, Caving, Rafting, Rescue  
**Inner Dia** Big: 52mm; Small: 26mm  
**Minimum Breaking Strength** 50 kN

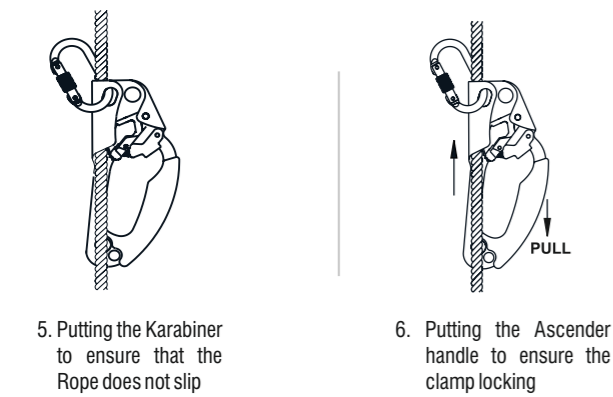
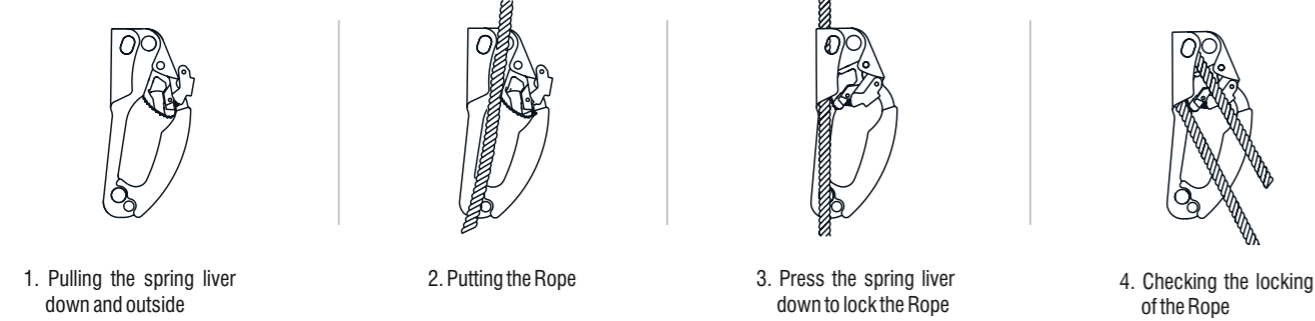
**Weight Holding Capacity** 136.0kgs  
**Height** 145mm  
**Finish** Natural silver/ Coloured, Anodized  
**Conforms to** EN 15151-2:2012

**ROPE CLAMP  
PN 402(L), PN 402(R)**

KARAM Rope Clamps can be used for progression on ropes and also for creating Haul Systems.



**INSTALLATION STEPS**



**FEATURES**

- Light and Corrosion Resistant**  
Extremely light in weight and highly corrosion resistant.
- Device Design**
  - The unique design of the Cam allows optimal grip on the rope without damaging it.
  - The Moulded Grip on the handle is ergonomically designed to allow easy and effortless grip.
  - It is available as both right and left hand models.

**KG 195.0 gm**

**TECHNICAL SNAPSHOT**

**Material** Aluminium Alloy  
**Application** During ascent and occasionally for hauling  
**Works on** 10.0mm to 12.0mm dia Kernmantle Rope



**Finish** Coloured, Anodized  
**Certified to** EN 567:2013

**ADJUSTABLE WEBBING FOOT LOOP  
PN 402(A)**



**Example of Application**



**FEATURES**

- Webbing**  
44mm Polyester Webbing.
- Use**  
Attaches to the Ascender for Rope Ascent.
- Adjustable Length**  
Length easily adjusted with the Combination Buckles.
- Abrasion-Resistant**  
Underfoot strap is abrasion-resistant and is slightly rigid to make it easier to step into.

**KG 260.0 gm**

**TECHNICAL SNAPSHOT**

**Material** 44mm Polyester Webbing



**Application** Ascent on a single rope

**ROPE CLAMP  
PN 405**



**FEATURES**

- Simple and Easy to use**  
The Rope runs smoothly through the device and is extremely easy to operate.
- Compatibility with Rope**  
Can be used with any dia Kernmantle Rope.
- Device Efficiency**  
The device does not get hot like other friction devices because of the ability to dissipate heat efficiently.

**KG 157.0 gm**

**TECHNICAL SNAPSHOT**

**Material** Aluminium Alloy  
**Application** Descent on a single rope  
**Works on** 10.0mm - 12.0mm dia Kernmantle Rope



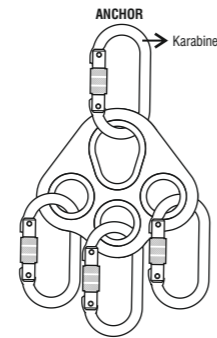
**Finish** Coloured Anodized  
**Certified to** EN 567:2013

**RIGGING PLATE  
PRP01, PRP02**

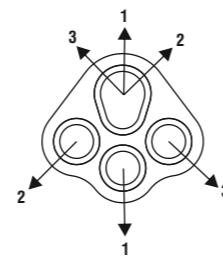
KARAM rigging Plate is designed to organize and provide multiple anchor points in multiple directions for superior versatility.



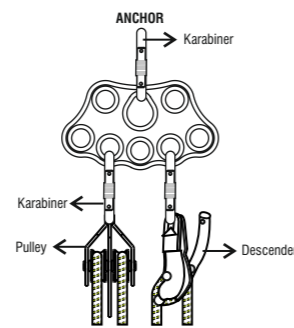
Application of PRP 01



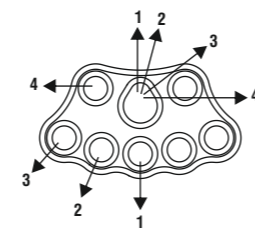
Direction of Loading of PRP 01



Application of PRP 02



Direction of Loading of PRP 02



**FEATURES**

**Multiple Anchor Points**  
KARAM Rigging Plate is designed to organize and provide multiple anchor points in multiple directions for superior versatility.

**Design**

- PRP 01 is a compact three hole anchor plate for small haul systems.
- PRP 02 is a versatile five hole anchor plate for big rigging.
- The holes in the anchor have sufficient space to allow easy pass through of locking sheaves of karabiners to pass through.

**Dia**  
Eye of the plate is capable to connect the Karabiners having dia of 19mm.

**KG** 53.5 gm  
PRP01

**KG** 210.0 gm  
PRP02

**TECHNICAL SNAPSHOT**

**Material** Aluminium Alloy  
**Application** For creating a multiple anchor points  
**Dia** 19mm



**Minimum Breaking Strength** 45kN  
**Finish** Natural silver/ Coloured, Anodized  
**Certified to** CNB/P/11.114



**PULLEYS**

KARAM offers a range of pulleys over which the rope is passed through to make it easier to lift.



**ALUMINIUM SMALL SINGLE PULLEY  
SINGLE SIDE ATTACHMENT  
AP 011A**

**KG** 165.0 gm



**ALUMINIUM SMALL SINGLE PULLEY  
SINGLE SIDE ATTACHMENT  
AP 012(SS)**

**KG** 430.0 gm



**ALUMINIUM DOUBLE PULLEY  
DOUBLE SIDE ATTACHMENT  
AP 013(SS)**

**KG** 810.5 gm



**ALUMINIUM SINGLE PULLEY  
DOUBLE SIDE ATTACHMENT  
AP 014(SS)**

**KG** 471.0 gm

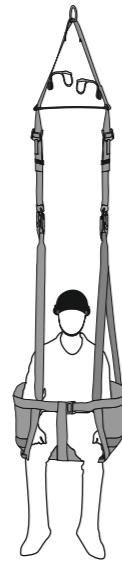


**TECHNICAL SNAPSHOT**



<b>AP 011A</b>	<b>Material</b> <b>Works on</b> <b>Minimum Breaking Strength</b>	Aluminium Alloy/ Stainless Steel Rope of dia 12.0mm 30kN	<b>Finish</b> <b>Certified to</b>	Natural silver/ Coloured, Anodized EN 12278:2007
<b>AP 012(SS)</b>	<b>Material/ Sheave Material</b> <b>Works on</b> <b>Minimum Breaking Strength</b>	Aluminium Alloy/ Stainless Steel Rope of dia 16.0mm 36kN	<b>Bearing Type</b> <b>Finish</b> <b>Certified to</b>	Dry Bearing Natural silver/ Coloured, Anodized EN 12278:2007
<b>AP 013(SS)</b>	<b>Material/ Sheave Material</b> <b>Works on</b> <b>Minimum Breaking Strength</b>	Aluminium Alloy/ Stainless Steel Rope of dia 16.0mm 36kN	<b>Bearing Type</b> <b>Finish</b> <b>Certified to</b>	Dry Bearing Natural silver/ Coloured, Anodized EN 12278:2007
<b>AP 014(SS)</b>	<b>Material/ Sheave Material</b> <b>Works on</b> <b>Minimum Breaking Strength</b>	Aluminium Alloy/ Stainless Steel Rope of dia 16.0mm 36kN	<b>Bearing Type</b> <b>Finish</b> <b>Certified to</b>	Dry Bearing Natural silver/ Coloured, Anodized EN 12278:2007

**SPREADER BAR  
IMP 003**



Example of Application

**FEATURES**

- To be used in conjunction with the KARAM Harness for raising and lowering a person during rescue.
- The attached webbing loops can be used to secure victim's arms when lifting or lowering.
- Keeps victim upright during rescue.
- Made from polyester webbing.
- Built-in spreader bar.
- Comes with adjustment buckles for adjusting all straps easily for a good fit.
- Consists of user friendly self-locking Steel Snap Hooks.
- Has High strength D-Ring tie-off point.

**KG** 1.4 kg ± 10 gm

**TECHNICAL SNAPSHOT**



**WEBBING**

**Material** 44mm Wide Polyester Webbing  
**Minimum Breaking Strength** 25 kN

**METAL COMPONENTS**

**Material** Alloy Steel  
**Finish** Silver/Golden Yellow Galvanized  
**Minimum Breaking Strength** 23 kN

**PILOT CHAIR  
IMP 005**



**FEATURES**

**Design**

- Ergonomic and comfortable working chair.
- For vertical ascent and descent.
- Equipped with Steel Screw Locking Karabiner PN 112 for anchorage.
- Is used in conjunction with spreader bar IMP 003.

**KG** 2.63 kg ± 10 gm

**TECHNICAL SNAPSHOT**



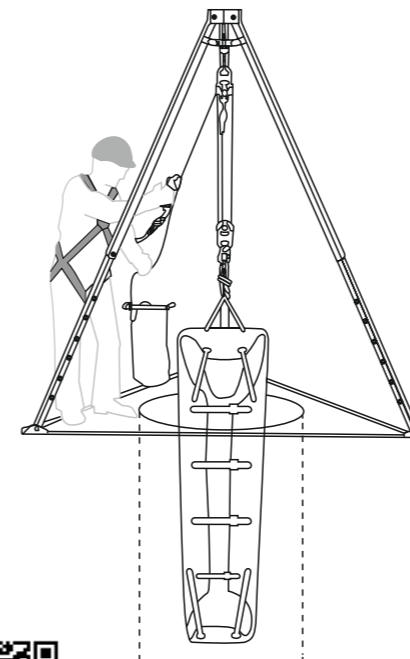
**Material of Chair** Cadura Cloth  
**Material of Webbing** 44mm Wide Polyester Webbing

**Minimum Breaking Strength** 23 kN  
**Conforms to** EN 1498

**KARAM RESPAC RECOVERY STRETCHER  
PN 403**

KARAM provides an easy-to-use Respac Recovery Stretcher for safe carrying of the wounded. The backpack able Karam Respac Recovery Stretcher has been configured as an extremely flexible rescue system useable in any context where patient transport is needed and particularly useful in morphologic and difficult climatic situations where a fast recovery is desired.

Example of Application



**FEATURES**

- Extremely flexible rescue system.
- Inert to all conditions, body fluids and blood.
- Allows safe carrying of the wounded.
- Highly durable, easy to use and store.
- Combination of optimum support and function.
- Can be used both vertically as well as horizontally.
- Comes with a special marking for identifying the head position of the victim when laid on the stretcher.
- Has Instruction labels consisting of technical description, usage instructions, general guidelines, care and maintenance and inspection grid for giving more comprehensive information of the Stretcher to the user.

**KG** 5.5 kg



Scan here for a virtual tour of the product

**TECHNICAL SNAPSHOT**



**Maximum Load** 200.0kgs  
**Total Weight with Bag and Belts** 8.0kgs

**Application** For safe carriage and transportation of the wounded user. It is particularly effective in morphological and difficult climatic conditions for a fast recovery.

**Loading Surface**

**Length** 8.0ft  
**Width** 3.0ft

**Material** High Strength Polymer  
**Material of Hooks (Material)** Alloy Steel

**Rope**

**Length** 9.0mtrs  
**Width** Dia 10.0mm

**Lifting Belts**

**Length** Feet zone 6.7ft/ Head zone 6.4ft  
**Width** Feet zone 5.0mm/ Head zone 5.0mm  
**Maximum Load Belts** 3000.0kg  
**Maximum Load Stitching** 2000.0kg

**Handles**

**Material** Polyester  
**Number of Handles on every longitudinal side** 2 Nos.

**PRODUCTS COMPATIBILITY CHART**

PRODUCT PIC	PRODUCT NAME	REF	COUPLED WITH PRODUCTS SUCH AS
	Grip Descender	PN 401	Kernmantle Rope, Rope Grab, Anchor Sling, Karabiner
	Figure of 8	PN 431	Kernmantle Rope, Karabiner certified as per UIAA, Anchor Sling, Aluminium Single Pulley Single Side Adjustment, Aluminium Single Pulley Double Side Adjustment, Rope Clamp, Adjustable Webbing Foot Loop
	Rope Clamp	PN 402(L) PN 402(R)	Descender, Adjustable Webbing Foot Loop, Rope Grab, Karabiners
	Adjustable Webbing Foot Loop	PN 402(A)	Rope Clamp, Karabiner
	Rope Clamp	PN 405	Kernmantle Rope, Rope Clamp, Adjustable Webbing Foot Loop, Karabiner
	Rigging Plate	PRP01 PRP 02	Descender, Aluminium Single Pulley Single Side Adjustment, Aluminium Single Pulley Double Side Adjustment, Kernmantle Rope, Rope Clamp, Karabiner
	Pulleys	AP 011A AP 012(SS) AP 013(SS) AP 014(SS)	Kernmantle Rope, Descender, Evacuation Triangle, Rope Clamp, Rigging plate, Karabiners
	Spreader Bar	IMP 003	Pilot Chair, Karabiner
	Pilot Chair	IMP 005	Kernmantle Rope, Aluminium Single Pulley Single Side Adjustment, Aluminium Single Pulley Double Side Adjustment, Descender, Rope Clamp, Spreader bar, Karabiners
	Respac Recovery Stretcher	PN 403	Aluminium Single Pulley Single Side Adjustment, Aluminium Single Pulley Double Side Adjustment, Rescue Winch, Tripod, Kpod, Karabiners

Ref. No.	Product Name	Page No.	Ref. No.	Product Name	Page No.
AP 011A	Aluminium Small Single Pulley Single Side Attachment	87	PN 809	Cross Arm Strap	47
AP 012(SS)	Aluminium Small Single Pulley Single Side Attachment	87	PN 813	Anchorage Steel Wire Rope Sling	47
AP 013(SS)	Aluminium Double Pulley Double Side Attachment	87	PN 817(DP)	Winch	79
AP 014(SS)	Aluminium Single Pulley Double Side Attachment	87	PN 800(44)	Mounting Bracket For Tripod	77
PN 2002(SW)	Mini Block (Swivel)	73	PN 800(45)	Mounting Bracket For Tripod	77
IMP 003	Spreader Bar	88	PN 800(DP)	Tripod	77
IMP 005	Pilot Chair	88	PN 801(DP)	Winch	79
MAGNA 2	Full Body Harness	24	PN 900	K-Pod	78
MAGNA 3	Full Body Harness	24	PN 900(01)	Floor Mounting Bracket	78
MIC 02	Mikron Block	62	PN 900(02)	Wall Mounting Bracket	78
PCGS 20R(N)	Retrieval Retractable Blocks	72	PN 900(06)	Mounting Bracket For K-Pod	78
PCGS 30R	Retrieval Retractable Blocks	72	PN 900(07)	Mounting Bracket For K-Pod	78
PN 10(S)+PN 324	Full Body Harness	17	PN 920 (14mm)	Twisted Rope Anchorage Line	57
PN 10(S)+PN 326	Full Body Harness	18	PN 930 (11mm)	Kernmantle Rope Anchorage Line	57
PN 10(S)+PN 361	(with Steel Scaffold Hooks)Full Body Harness	18	PN 930 (12mm)	Kernmantle Rope Anchorage Line	57
PN 10(S)+PN 361	(with Steel Snap Hooks)Full Body Harness	17	PRP01	Rigging Plate	86
PN 21(WB)+PN 324	Full Body Harness	19	PRP02	Rigging Plate	86
PN 21(WB)+PN 361	(with Steel Scaffold Hooks)Full Body Harness	19	SA 08	Beam Anchor	41
PN 24	Full Body Harness	21	SA 09	Aluminium Point Anchor	39
PN 41	Full Body Harness	21	SA 10	Steel Point Anchor	39
PN 42	Full Body Harness	22	SA 10A	Steel Point Anchor	40
PN 56	Full Body Harness	22	SA 11	Parapet Anchor	42
PN 112	Steel Screw Locking Karabiner	35	SA 12	Stainless Steel Chemical Point Anchor	40
PN 174	Twin Srl Connector	64	SA 13	Girder Steel Anchor	43
PN 244	Work Positioning Lanyard	31	SA 15A	Beam Anchor Trolley	42
PN 245	Work Positioning Lanyard	31	SA 16	Concrete Anchor	43
PN 2000A	Guided Type Fall Arrester System On Flexible Anchorage Line	55	SA 28	Edge Fix Anchor Post	54
PN 2006(11)	Guided Type Fall Arrester System On Flexible Anchorage Line	56	SA 48(SW)	Container Anchor Post With Swivel Anchorage Eye	44
PN 325(30)	Fall Arrest 30mm Webbing Lanyard	29	SA 49	Hinge Anchor	41
PN 329(30)	Fall Arrest 30mm Webbing Lanyard	29	STS 01(N)	Suspension Intolerance Strap	25
PN 361(30)	Forked Lanyard	30	TL 01(N)	Tools Lanyard	25
PN 361(30)	Forked Lanyard	30	TL 02(N)	Twin Tools Lanyard	25
PN 3000(BC)	Horizon Temporary Horizontal Webbing Anchorage Line For 2 Users	51	TPGS 07	KARAM Retractable Blocks In Polymer Casing With Galvanized Steel Wire Rope	66
PN 3001	Horizon 4 Man Temporary Horizontal Rope Anchorage Line	52	TPGS 07 SE	Sharp Edge Tested Retractable Blocks In Polymer Casing With Galvanized Steel Wire Rope	69
PN 401	Grip Descender	82	TPGS 10	KARAM Retractable Blocks In Polymer Casing With Galvanized Steel Wire Rope	66
PN 402(A)	Adjustable Webbing Foot Loop	85	TPGS 10 SE	Sharp Edge Tested Retractable Blocks In Polymer Casing With Galvanized Steel Wire Rope	69
PN 402(L)	Rope Clamp	84	TPGS 15	KARAM Retractable Blocks In Polymer Casing With Galvanized Steel Wire Rope	67
PN 402(R)	Rope Clamp	84	TPGS 20	KARAM Retractable Blocks In Polymer Casing With Galvanized Steel Wire Rope	67
PN 403	KARAM Respac Recovery Stretcher	89	TPGS 20	KARAM Retractable Blocks In Polymer Casing With Galvanized Steel Wire Rope	67
PN 405	Rope Clamp	85	TPWB 06	KARAM Retractable Blocks In Polymer Casing With 25Mm Wide Webbing Lanyard	68
PN 431	Figure Of 8	83	TPWB 06 SE	Sharp Edge Tested Retractable Blocks In Polymer Casing With 25mm Wide Webbing Lanyard	70
PN 4001	Handy Line Temporary Horizontal Lifeline	53	TPWB 12	KARAM Retractable Blocks In Polymer Casing With 25mm Wide Webbing Lanyard	68
PN 802	Door Anchor	45			
PN 803	Cross Arm Strap	46			
PN 804	Cross Arm Strap	46			
PN 805	Cross Arm Strap	46			
PN 806	Cross Arm Strap	46			
PN 807	Cross Arm Strap	46			