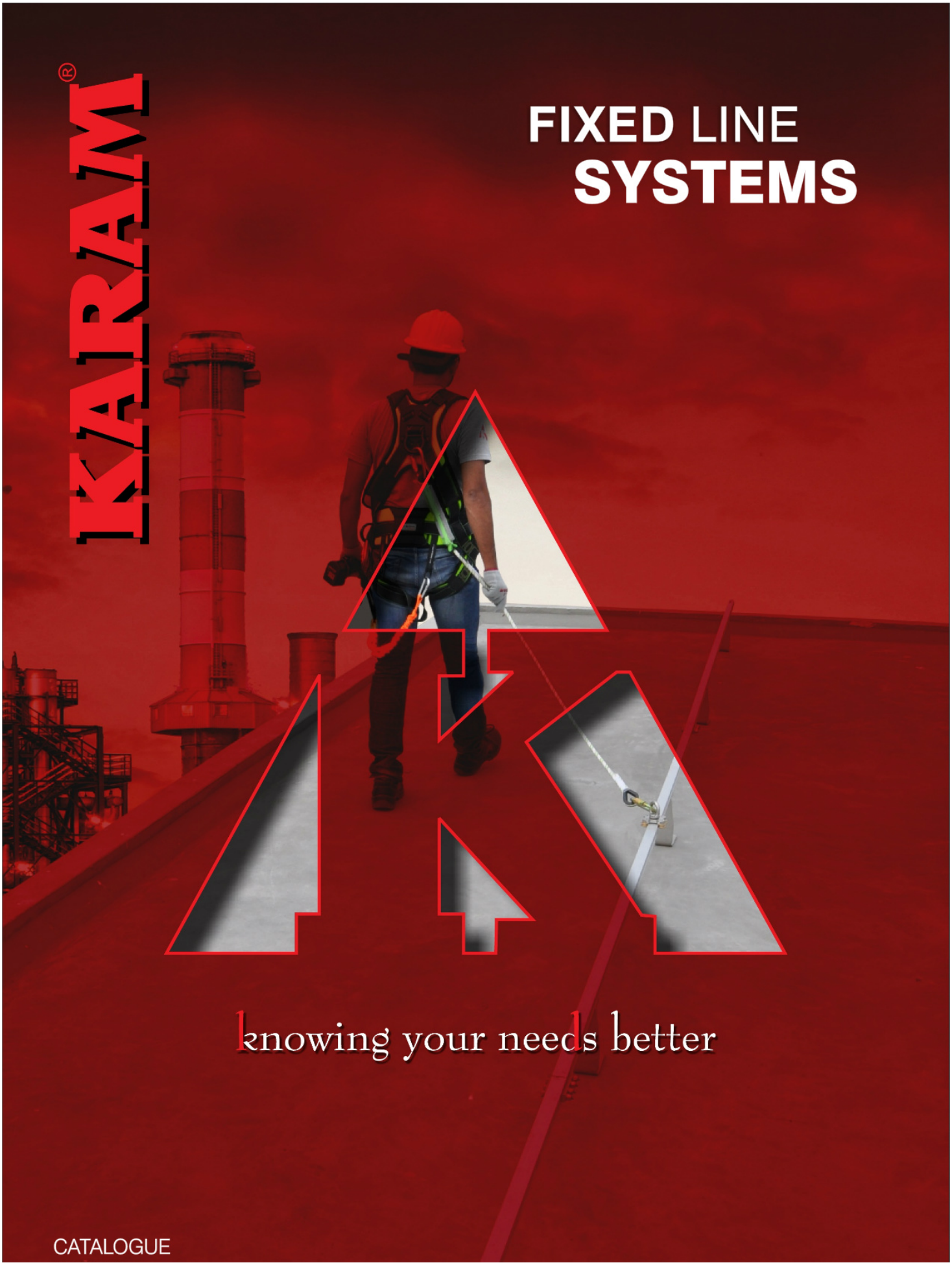
KARAM®

FIXED LINE SYSTEMS



knowing your needs better

CATALOGUE

2018-19

OUR ORGANIZATION /// experts in safety solutions



KARAM Metal Processing Unit
Lucknow (U.P.)

KARAM 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 in 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 30 acres, houses more than 2400 product certifications and a team of over 2600 dedicated individuals, working collectively as a team, towards a common purpose. Aptly supported by the finest machinery, the Manufacturing in 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-UK.

This edition of KARAM Catalogue has been compiled with a view to reach out to a maximum number of our valued Customers- enabling them to easily browse through innovative products in the range of Fixed Anchorages and Fixed Life Line Systems, KARAM hopes to provide the best in safety.

Besides this, KARAM range of products is exhaustive, comprising of Full Body Harness, Lanyards, Connectors, Fall Arrest

Blocks, Confined Space entry and egress, Rope Access, Rescue, Head Protection, Eye and Face Protection, Ear Protection, Hand Protection, Protective Work wear and Safety Foot wear.

KARAM offers Training in Block Servicing, Work at Height Training, Fixed Lines Installation and Fixed Life Line Systems Inspection through a dedicated Training cell, equipped with world class training infrastructure.

KARAM stands committed to provide the best quality- in product and service, with a view to achieve its mission.







KARAM Manufacturing Unit
Sitarganj(Uttarakhand)

KARAM

TESTING & QUALITY ASSURANCE

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



Harness Static Load Testing



Dynamic Performance Testing



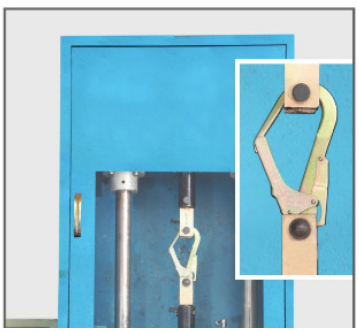
FLS Testing



Salt Spray Testing



Spectro Photo Meter Test

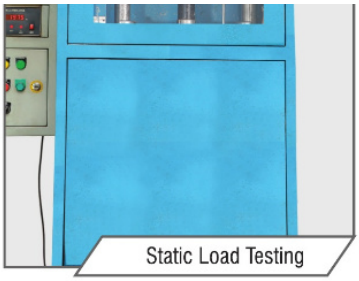




100% Visual Inspection

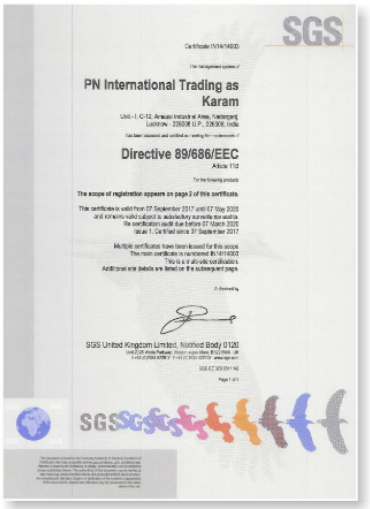


Hardness Testing

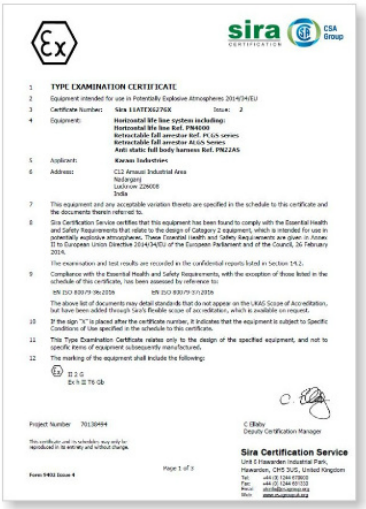


Static Load Testing

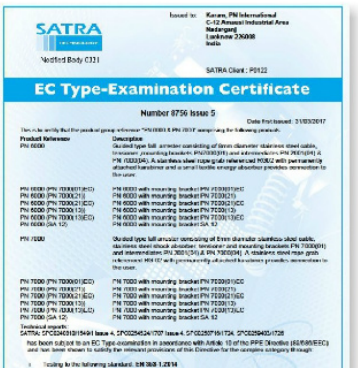
Certifications














Standards for Fixed Line Systems

Types of Anchors

A reliable anchor device is an essential component of any personal fall protection system.

Type A
Anchor device with one or more stationary anchor points



Type B
Transportable Anchor device easily carried and assembled on site



Type C
Continuous Anchor device using a flexible anchor line. (Eg. Steel wire rope/webbing/ synthetic ropes)



Type D
Anchor device using a rigid anchor line. (Eg. Aluminium Rails)



Type E
Dead weight Anchor device for use on surfaces up to 5° from the horizontal.



Single User anchor devices:

Applicable standard: EN795:2012

This European Standard is intended to use as a standard guideline for Horizontal Life Line Systems used in fall protection.

The scope and the requirements are based on the philosophy that anchor devices are rated to sustain the maximum dynamic force generated in a fall from a height by the mass of **one person**, including any equipment carried. The static strength tests are based on a minimum factor of safety of two to allow for foreseeable misuse of equipment.

A static load of 12kN is required to be held for a minimum of three minutes without failure.

A dynamic performance and integrity test, where a shock load (9 kN at Mobile anchor point) is created by using a test mass of 100kg freely falling from a specific height connected to a synthetic lanyard. The life line is further subjected to a static pull of 300kgs for a period of 3 minutes to ensure that the same life line can be used for rescue after a fall.

The life lines can be of single span of different lengths (e.g. Truck Loading /unloading activities), or long lifelines with multiple spans (e.g. Installed on roof). The multi span lifelines may also have a corner. All configurations and lengths may not be possible to test, hence EN795 propose dynamic and integrity test where the manufacturer is required to predict the forces at extremity and displacement in the cable in set configurations of the lifeline. The forces predicted and the displacement of the cable measured during tests should be within a tolerance of 20%.

As a result of static and dynamic test the system should not release the mobile anchor (carriage body).

Multi-user anchor devices:

Applicable standard: CEN/TS 16415:2013

In many situations, anchor devices are required for more than one user. Some jobs are carried out by more than one person. To ensure that everyone has the same level of protection from fall, there needs to be a different and more stringent approach.

In 2013 a technical sheet CEN/TS 16415:2013 was added to EN795:2012 to address the test requirements, if the life line is used by multiple users. The

tests according to CEN/TS 16415:2013 is performed in addition to the test requirements of EN795.

The static load test increases the usual single user requirement in EN 795:2012 by 1.0 kN per extra user claimed. (e.g. 13kN for 2 users, 14 kN for 3users and 15 kN for 4 users and so on)

The dynamic performance and integrity test requires a 200 Kg test mass to represent two simultaneous users. For each additional user, a further dynamic performance test using a 100 Kg mass is carried out on the same system to simulate multiple users falling on the same anchor device (Life Line).

The life line is further subjected to a static pull of 600kgs after the dynamic fall of 200 Kg for a period of 3 minutes to ensure that the same life line can be used for rescue after a fall. Thereafter for each additional user the static force is increased by 150 kgs. (750 Kg for 3 users, 900 Kg for 4 user and so on).

After each dynamic drop test, the forces predicted and the displacement of the cable measured during tests should be within a tolerance of 20%.

The maximum Dynamic force recorded during the tests should not be greater than 50% of the system strength.

The desired results of dynamic and static tests are that the system does not release the mobile anchor.

Multiple user anchor devices are not considered 'personal' protective equipment. For devices that will always be used by two or more people simultaneously, it is recommended that before buying or using these devices, checks are made on the manufacturer's quality system and that evidence is sought to demonstrate compliance with **TS 16415:2013.**

Vertical Life Line Systems on wire rope and aluminium rail systems

Applicable standard: 353-1:2014

This European Standard is intended to use as a standard guideline for Vertical Life Line Systems used in personal fall protection systems.

The scope and the requirements are based on the philosophy that a guided type fall arrester including a rigid anchor line is rated to sustain the maximum dynamic load generated in a fall from a height by the mass of one person, including any equipment carried.

This European Standard applies to rigid anchor lines which are intended to be installed vertically.

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VERTICAL ANCHORAGE LINE SYSTEM
ON RIGID CABLE LINE

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Conforms : EN 353-1:2014

CE

VERTICAL ANCHORAGE LINE SYSTEM ON RIGID CABLE LINE
System Ref: VERTEX PN 6000

System Specifications

Conforming to the Norm EN 353-1:2014 this Vertical Fall Arrest System is an integrated solution to arrest the fall of a user who has to constantly climb up & down a ladder.

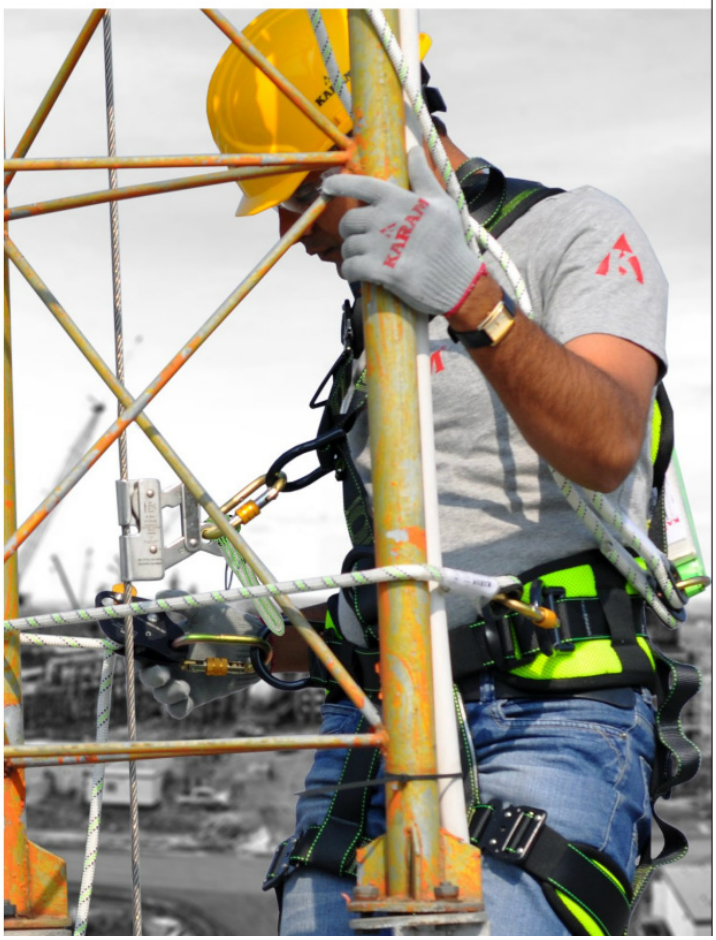
The Vertical Anchorage Line is made of Stainless Steel Wire Rope & is maintained in the rigid position by use of 2 mounting brackets-one at the top & other at the bottom.

A Stainless Steel Rope Grab moves up & down the anchorage line accompanying the user who is connected to it with the help of a small shock absorbing lanyard.

To maintain rigidity & tension in the anchorage line, a screw type mechanical tensioner is provided at the end of the anchorage line at the bottom, connecting it to the lower mounting bracket.

Intermediates are provided at regular intervals to prevent dislocation of the anchorage line from its mean position due to wind pressure or mechanical movement.

Options of wire rope terminations available : Swaging type, Swageless type and U bolt thimble termination. (U bolt thimble termination only to be used at the bottom side)



Significant Features are:

- It is simple and easy to install requiring minimum effort for installation.
- The Rope Grab comes with special anti-inversion mechanism which enables it to be fitted always in the correct position.



Mounting Bracket using Two Ladder

Mounting brackets using two ladder rungs for installing Vertical Life line Systems available in Stainless Steel and Hot dipped Galvanized Steel.



PN 7000(13) PN 7000(13)(EC)

Ref. No.	Material	Finish	Minimum Breaking Strength	Net Weight	Conforms to
PN 7000(13)	Stainless Steel	Electro Polished	23kN	1.11Kgs ± 0.005Kgs	EN 795:2012 Type A
PN 7000(13)(EC)	Alloy Steel	Hot Dip Galvanized	23kN	1.10Kgs ± 0.005Kgs	

Optional



PN 7000(06)

REF: VERTEX PN 6000

CE

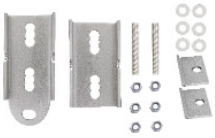


Wire Rope (Cable Wire)

Ref. PN 9XXXSL (Where XXX is the Length of the wire rope in meters)

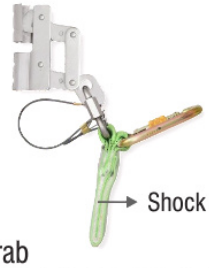
- Material: Stainless Steel 316
- Diameter: 8mm
- Construction: 7x19





Mounting Bracket
Ref. PN 7000 (01)

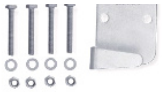
- Material: Stainless Steel 316
- Breaking Strength > 23 kN
- Complies with EN 795 Type A



Rope Grab
Ref. RG 02(PN 600(S))112

- Material of Rope Grab: Stainless





Intermediate
Ref. PN 2001 (04)

- Material: Stainless Steel Grade 316
- Recommended Installation - Every 10 m



Steel Grade 316
- Anti inversion mechanism
- Material of Karabiner: Alloy Steel



Set of 2 U-Bolts & 1 Thimble
Ref. PN 6000(01)

- U- Bolts : Qty- 2 nos.
  Material : Stainless Steel 316
- Thimble : Qty- 1 no.
  Material : Stainless Steel 316



Wire Rope Cap
Ref. PN 7000 (12)

- Material : Aluminium Alloy

Inspection Plate
Ref. PN 6000(03)



Tensioner
Ref. PN 7000 (05)

- Regulates tensioning of the cable. Equipped with a Tension Indicator
- Material: Stainless Steel Grade 316.
- Quantity: 1 nos.

* Also supplied with hot dipped galvanized mounting bracket PN 7000 EC(01) for value engineering

VERTICAL ANCHORAGE LINE SYSTEM ON RIGID CABLE LINE

Conforms : EN 353-1:2014

System Ref: VERTEX PN 7000

CE

System Specifications

Conforming to the Norm EN 353-1:2014 this vertical Fall Arrest system is an integrated solution to arrest the fall of a user who has to constantly climb up & down a ladder.

The Unique Feature of this system is a permanently installed Stainless Steel Shock Absorber at the top of the line which offers distinct advantage over the textile absorber used in other lines in term of UV degradation and resistance to harsh climate Conditions. Also the Shock Absorber is constructed of unique design that helps in easy installation of the system.

The Vertical Anchorage Line is made of Stainless Steel wire rope & is maintained in the rigid position by the use of 2 mounting brackets- one at the top & other at the bottom.

The Stainless-steel Rope Grab is directly connected to the Harness of the user without any additional lanyard.

To maintain the rigidity & high tension in the anchorage line, a screw type mechanical tensioner is provided at the end of the anchorage line at the bottom, connecting it to the lower mounting bracket. The Tensioner is provided with a unique tension indicator which helps



ensure appropriate tension is attained, and maintained in the line.

The system also has an Inspection Name Plate which is installed on the first rung of the ladder for identification, traceability and maintenance of inspection records.

Mounting Bracket using Two Ladder

Mounting brackets using two ladder rungs for installing Vertical Life line Systems available in Stainless Steel and Hot dipped Galvanized Steel.





PN 7000(13)



PN 7000(13)(EC)

Ref. No.	Material	Finish	Minimum Breaking Strength	Net Weight	Conforms to
PN 7000(13)	Stainless Steel Grade 316	Electro Polished	NA	1.11Kgs ± 0.005Kgs	EN 795:2012 Type A
PN 7000(13)(EC)	Alloy Steel	Hot Dip Galvanized	23kN	1.10Kgs ± 0.005Kgs	

Optional



PN 7000(06)

VERTICAL ANCHORAGE LINE SYSTEM
ON RIGID CABLE LINE

KARAM®
knowing your needs better

REF: VERTEX PN 7000

Shock Absorber
PN 7000 (02)

- Material: Stainless Steel 316
- Limits the impact of force in the event of fall to less than 6 kN

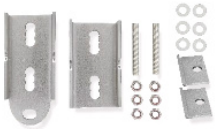




Wire Rope (Cable Wire)

Ref. PN 9XXXSL (Where XXX is the Length of the wire rope in meters)





Mounting Bracket
Ref. PN 7000 (01)

- Material: Stainless Steel 316
- Breaking Strength > 23 kN
- Complies with EN 795 Type A

CE

- Material: Stainless Steel 316
- Diameter: 8mm
- Construction: 7x19



Intermediate
Ref. PN 2001 (04)

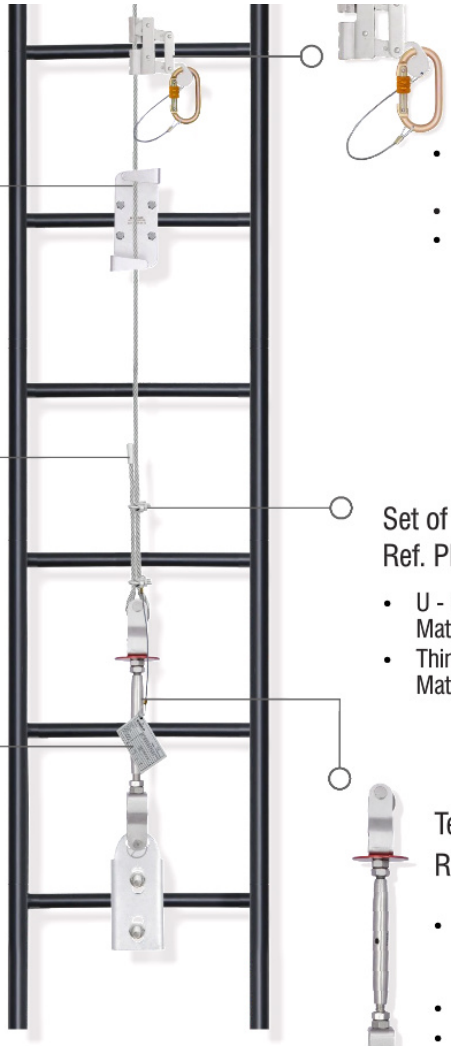
- Material: Stainless Steel 316
- Recommended Installation- Every 10 m



Wire Rope Cap
Ref. PN 7000 (12)

- Material : Aluminium Alloy

Inspection Plate
Ref. PN 7000(16)



Rope Grab
Ref. RG 02 (112)

- Material of Rope Grab: Stainless Steel 316
- Material of Karabiner: Alloy Steel
- Anti inversion mechanism



Set of 2 U-Bolts & 1 Thimble
Ref. PN 6000(01)

- U - Bolts : Qty - 2 nos.
  Material : Stainless Steel 316
- Thimble : Qty - 1 no.
  Material : Stainless Steel 316

Tensioner
Ref. PN 7000 (05)

- Regulates tensioning of the cable. Equipped with a Tension Indicator
- Material: Stainless Steel 316.
- Quantity: 1 nos.

* Also supplied with hot dipped galvanized mounting bracket PN 7000 EC(01) for value engineering

VERTICAL ANCHORAGE LINE SYSTEM ON RIGID ALUMINIUM RAIL

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Conforms : EN 353-1:2014
System Ref: VERTEX PN 8000

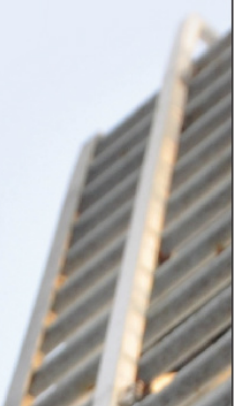
CE

System Specifications

This Vertical fall Arrest Anchorage system (Conforming to EN 353-1:2014) is an integrated Fall Arrest solution made of a Vertical Aluminium Alloy Guide Rail over which glides a Guided-Type Fall Arrest Trolley.

The line is constructed by attaching the Aluminium rail Intermediates of length 3 mtrs. in series using a Junction to connect them to each other, and Rung Clamps to affix them to the ladder rungs. The trolley moves up and down on the line accompanying the user who is connected to it with an Auto-locking Steel Karabiner.

In the event of a fall, the trolley which is inbuilt with Shock



Absorption feature, immediately locks over the Rail, thus arresting the fall. Also, while not in use, the Uni-directional locking system of the Trolley prevents it from sliding down on its own.

The Rail comes with an Extension Arm that curves at the Ladder-end over the working platform. This allows the climbers to be connected with the trolley even at the Ladder termination, ensuring complete safety.

The bottom most section is the Aluminium Rail Extremity which is equipped at the end with a lock that prevents the trolley from moving out of the rail.

The system also has an Inspection Name Plate which is installed on the first rung of the ladder for identification, traceability and maintenance of inspection records. One stainless steel cable ties are used to fasten the System Name Plate to the structure. At time of installation, the relevant details are punched on the plate by a number punch. The revalidation dates are punched each year on the plates after inspection and revalidation.

This system can be used on telecommunication towers, radio and TV masts, power supply and hydroelectric installations, wind power facilities, construction, chimney and industrial plants, buildings and facades, crane installations, shafts and manholes, aircraft hangars and for loading/ unloading of trains and vehicles, petrochemical plants, on-shore and off-shore oil rigs, and ship-building.



Support for Alu Extension



Ref. PN 8000(05)
For Trapezoidal Roof



Ref. PN 8000(06)
For Standing Seam Roof

- Support for Alu Extension on the Landing Platform

VERTICAL ANCHORAGE LINE SYSTEM
ON RIGID ALUMINIUM RAIL

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REF: VERTEX PN 8000

CE





Alu Extension
Ref. PN 8000 (02)

- Material : Extruded Aluminium Alloy
- Length : 1.5m



Junction
Ref. PN 5000 (08)

- Used to connect two rails together.
- Material: Stainless Steel 316





Aluminium Rail Intermediate
Ref. PN 5000 (01)

- Material : Extruded Aluminium Alloy
- Length : 3.0m



Karabiner
Ref. PN 111

- Quarter Turn Auto-locking Steel Karabiner
- Material : Alloy Steel



Vertical Trolley
Ref. PN 8000 (01)

- Material : Stainless Steel (316) Trolley with Brass wheel which provides frictionless movement
- Anti Inversion Pin



Rung Clamp
Ref. PN 8000 (03)

- Material: Stainless Steel 316
- Helps to Clamp the system onto the underlying ladder

Aluminium Rail Extremity
Ref. PN 5000 (02)

- Material : Extruded Aluminium Alloy. Locking Jib to prevent unintentional release of trolley from the rail.
- Length : 3 meter

Inspection Plate
Ref. PN 8000(09)

-06-

VERTICAL ANCHORAGE LINE SYSTEM
ON RIGID ALUMINIUM RAIL



Conforms : EN 353-1:2014

System Ref: VERTEX PN 9000

CE

System Specifications

This is a complete Fall protection Ladder System which consists of Hot dipped galvanized Steel Ladder Rungs over which is fixed the Vertical Anchorage Rail made of Aluminium Alloy. This system is an ideal choice for use where there are no pre-fabricated ladders or

ideal choice for use where there are no pre-fabricated ladders or climbing structures available for climbing and can be fitted over various structures using different types of fasteners.

The system conforms to EN 353-1:2014

The Rungs of the Ladder, made of Galvanized Steel, are fitted at a suitable distance from the underlying structure/ profile to allow enough foot space. The rungs also have a grooved surface that allows a slip-free grip while climbing.

The Aluminium Anchorage Rail fitted on to the center of the Rungs of the ladder is smooth and allows the Guided type Fall-Arrest Trolley to glide effortlessly over its length. This trolley moves up and down accompanying the user who is connected to it with the help of an Auto-locking Karabiner.

The Trolley is made of Stainless Steel and has wheels made of Brass, making the system highly corrosion resistant and extremely smooth in working.

In the event of a fall, the trolley immediately locks over the Rail, thus arresting the fall. Also, while not in use, the Uni-directional locking system of the Trolley does not allow it to fall freely down the Rail.

The system comes with an Extension Arm that curves at the Ladder-end over the working platform. This allows the climbers to be connected with the trolley even at the Ladder termination, ensuring complete safety.

The bottom most section is the Aluminium Rail Extremity which is equipped at the end with a lock that prevents the trolley from moving out of the rail.

The system also has an Inspection Name Plate which is installed on the first rung of the ladder for identification, traceability and maintenance of inspection records.

This system can be used on telecommunications towers, radio and TV masts, power supply and hydroelectric installations, wind power facilities, construction, chimney and industrial plants, buildings and facades, crane installations, shafts and manholes, aircraft hangars and for loading/ unloading of trains and vehicles, petrochemical plants, on-shore and off-shore oil rigs, ship-building.

Support for Alu Extension



Ref. PN 8000(05)
For Trapezoidal Roof



Ref. PN 8000(06)
For Standing Seam Roof

- Support for Alu Extension on the Landing Platform



Extendable Brackets for Vertical Lifeline

Ref. PN 9000 (13)

Ref. PN 9000 (13)EC

- Extendable Bracket for vertical aluminium rail lifeline systems on side cladding of pre engineered building
- Telescopic adjustment to adjust the clearance of the line from the vertical column & purlin

VERTICAL ANCHORAGE LINE SYSTEM
ON RIGID ALUMINIUM RAIL

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knowing your needs better

REF: VERTEX PN 9000



Alu Extension
Ref. PN 8000 (02)

CE

- Material : Extruded

Aluminium Alloy
- Length : 1.5m

Stainless Steel Ceiling Mounting Bracket Ref. PN 5000 (06)



- Material: Stainless Steel 316
- Help to mount the ladder on to the underlying structure.

Stainless Steel Mounting Nut Ref. PN 5000 (03)



- To connect the rail to the mounting Bracket.
- Material : Stainless Steel 316
- Also available in Galvanized Steel version Ref. PN 5000 (06)R

Aluminium Rail Intermediate with Rung Ref. PN 9000 (03)



- Material : Extruded Aluminium Alloy
- Length : 3.0m

Karabiner Ref. PN 111



- Quarter Turn Auto-locking Steel Karabiner
- Material : Alloy Steel



Vertical Trolley Ref. PN 8000 (01)

- Material: Stainless Steel (316) Trolley with Brass wheels which provide frictionless movement. Anti inversion pin to prevent unintentional release of trolley from the rail.

Junction Ref. PN 5000 (08)



- Used to connect two rails together
- Stainless Steel 316



Ladder Rung Assembly Ref. PN 9000 (01)

- Ladder Rung Material : Hot dipped galvanized Steel

Aluminium Rail Extremity with Rung Ref. PN 9000 (02)

- Material : Extruded Aluminium Alloy.
- Length : 3 m

Inspection Plate Ref. PN 9000(12)

* Also supplied with hot dipped galvanized mounting bracket PN 5000 (06)R and hot dipped galvanized mounting nut PN 5000 (06)R for value engineering





VERTICAL ANCHORAGE LINE SYSTEM ON
FLEXIBLE STEEL CABLE LINE

KARAM®



RECOMMENDED PPE

for Vertical Life Line System



• Safety Spectacles



• Hand Protection



• Full Body Harness



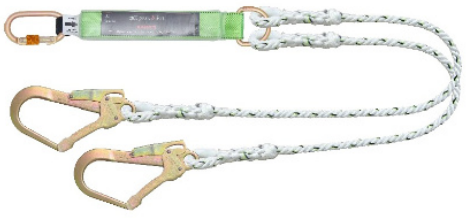
• Safety Shoes



• Safety Helmet



• Work Positioning Lanyard with Grip Adjuster



• Forked Lanyard with Energy absorber



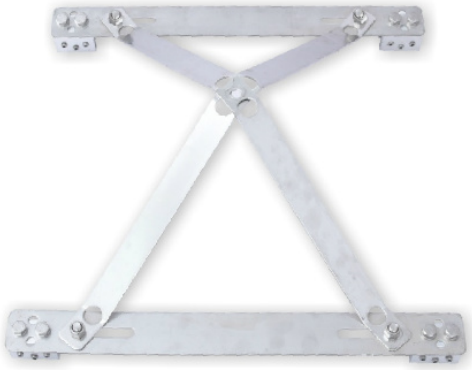
Roof Top Anchor Post Extremity
Ref. SA07 E

CE

Roof Top Anchor Post Extremity is designed to be fixed on standing seam roof top at the ends of a horizontal lifeline installed on the roof.

The slots in the base plate makes the post adjustable and allows it to be installed on roof sheets of different seam distance.

Suitable for seam distance between 535mm to 605mm



Roof Top Anchor Post Intermediate
Ref. SA07 F

CE

Roof Top Anchor Post Intermediate is designed to be fixed on standing seam roof top as Intermediate of a horizontal lifeline installed on the roof.

Suitable for seam distance between 535mm to 605mm

NEW



Roof Top Anchor Post Extremity for Galvolume Trapezoidal Roof
Ref. SA07 G

CE

Roof top anchor post extremity is designed to be fixed on trapezoidal roof top at the ends of a horizontal lifeline installed on the roof.

The width of the base has an adjustable opening to adopt to the type of roof

The base plate has series of holes to fit on galvolume/ trapezoidal sheets of different pitch/rib

Anchorage eye on the top provides universal connection and used as an anchorage point.

NEW



Roof Top Anchor Post Intermediate for Galvolume Trapezoidal Roof
Ref. SA07 H

CE

Roof top anchor post intermediate is designed to be fixed on trapezoidal roof top as intermediate of a horizontal lifeline installed on the roof.

The width of the base has an adjustable opening to adopt to the type of roof

The base plate has series of holes to fit on galvolume/ trapezoidal sheets of different pitch/rib

Ref. No	Material	Finish	Weight	Min. Breaking Strength	Conforms to
SA07 E	SS Grade 316	Electro Polished	5.00kgs	15kN	EN795:2012 TYPE-A,TS16415:2013
SA07 F	SS Grade 316	Electro Polished	4.25kgs	NA	NA
SA07 G	SS Grade 316	Electro Polished	3.40kgs	15kN	EN795:2012 TYPE-A, TS16415:2013
SA07 H	SS Grade 316	Electro Polished	3.19kgs	NA	NA

FIXED ANCHORAGES

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NEW



Roof Top Anchor Post Extremity for Standing Seam Roof

CE

Ref. SA07 I

Roof top anchor post extremity is designed to be fixed on standing seam roof top at the ends of a horizontal lifeline installed on the roof.

The base plate has series of holes to fit on standing seam roof with different seam distance between 300mm to 500mm

NEW



Roof Top Anchor Post Intermediate for Standing Seam Roof

CE

Ref. SA07 J

Roof top anchor post intermediate is designed to be fixed on standing seam roof top as intermediates of horizontal lifeline installed on the roof.

The base plate has series of holes to fit on standing seam roof with different seam distance between 300mm to 500mm

NEW



Roof Top Anchor Post Extremity with blank base plate for Trapezoidal Roof

CE

Ref. SA07 K

Roof top anchor post extremity is designed to be fixed on trapezoidal roof top at the ends of a horizontal lifeline installed on the roof.

Anchorage eye on the top provides universal connection and used as an anchorage point

Comes with a blank bottom plate in order to allow the user to drill holes as per the profile of the trapezoidal sheet.

NEW



Roof Top Anchor Post Intermediate with blank base plate for Trapezoidal Roof

CE

Ref. SA07 L

Roof top anchor post intermediate is designed to be fixed on trapezoidal roof top as intermediate of a horizontal lifeline installed on the roof.

Comes with a blank bottom plate in order to allow the user to drill holes as per the profile of the trapezoidal sheet.

Ref. No	Material	Finish	Weight	Min. Breaking Strength	Conforms to
SA07 I	SS Grade 316	Electro Polished	4.99kgs	15kN	EN795:2012 TYPE-A,TS16415:2013
SA07 J	SS Grade 316	Electro Polished	4.83kgs	NA	NA
SA07 K	SS Grade 316	Electro Polished	3.17kgs	15kN	EN795:2012 TYPE-A,TS16415:2013

SA07 L	SS Grade 316	Electro Polished	2.98kgs	NA	NA

HORIZONTAL ANCHORAGE LIFELINE SYSTEM
ON RIGID CABLE LINE

KARAM®
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System Ref: HORIZON PN 4000 (Roof Mounted)

CE

The line also has a Shock Absorber at one end which reduces the impact of fall both on the user as well as on the extremities.

The system also has an Inspection Name Plate for identification, traceability and maintenance of inspection records. One Stainless Steel Cable tie is used to fasten the System Name Plate to the structure. At time of installation, the relevant details are punched on the plate by a number punch. The revalidation dates are punched each year on the plates after inspection and revalidation.

The System is versatile and can be installed on Walls, Floors, Ceilings as well as on Pre-engineered Building Roofs, Fragile Roofs, Airports using the same components by using appropriate posts to install the system to the client's receiving structure.



Wire Rope (Cable Wire)

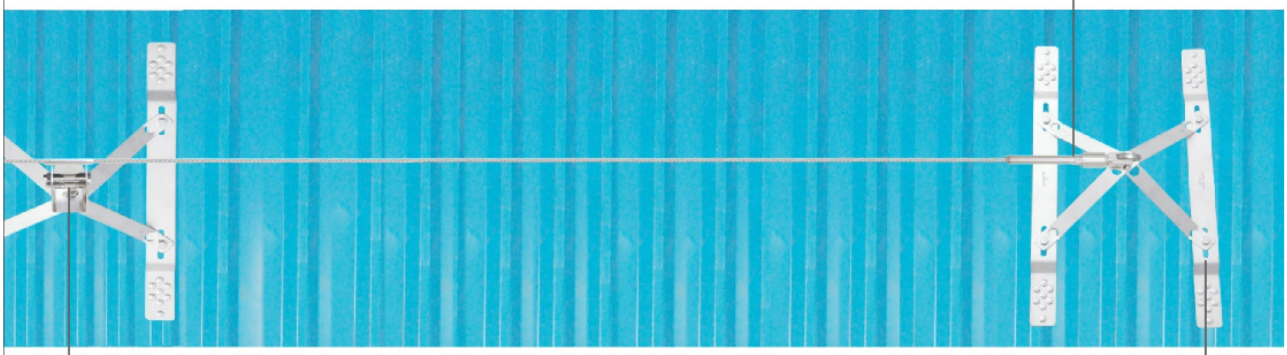
Ref. PN 9XXXS (Where XXX is the Length of the wire rope in meters)

- Material: Stainless Steel 316
- Diameter: 8mm
- Construction: 7x19

Swaged Cable Extremity
Ref. PN 4000 (15)



- Allows crimping of the cable wire at the desired length, and eliminates danger of any loose wire.
- Material: Stainless Steel 316.
- Feature: Swaged termination





Intermediate
Ref. PN 4000 (10)

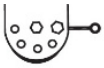
- Material: Stainless Steel 316
- Recommended Installation- every 15 mtrs.



Roof top anchor post extremity
Ref. SA07 A

- Material: Stainless Steel 316

Intermediate Brackets Orientation for different Installation



Ceiling Mounting



Floor Mounting



Wall Mounting

FIXED ANCHORAGES

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Roof Top Anchor Post Extremity
Ref. SA07 A

CE

Roof Top Anchor Post Extremity is designed to be fixed on Galvolume / Trapezoidal roof top at the ends of a horizontal lifeline installed on the roof.

The slots in the base plate makes the post adjustable and allows it to be installed on roof sheets of different pitch/rib

Minimum adjustable opening 225.0 mm

Maximum adjustable opening 360.0 mm



Roof Top Anchor Post Intermediate
Ref. SA07 B

CE

Roof Top Anchor Post Intermediate is designed to be fixed on Galvolume / Trapezoidal roof as Intermediate of a horizontal lifeline installed on the roof.

The slots in the base plate makes the post adjustable and allows it to be installed on roof sheets of different pitch/rib

Minimum adjustable opening 225.0 mm

Maximum adjustable opening 360.0 mm



Roof Top Anchor Post Extremity
Ref. SA07 C

CE

Roof Top Anchor Post Extremity is designed to be fixed on standing seam roof at the ends of a horizontal lifeline installed on the roof.

The slots in the base plate makes the post adjustable and allows it to be installed on roof sheets of different seam distance.

Minimum adjustable opening 225.0 mm

Maximum adjustable opening 400.0 mm



Roof Top Anchor Post Intermediate
Ref. SA07 D

CE

Roof Top Anchor Post Intermediate is designed to be fixed on standing seam roof top as Intermediate of a horizontal lifeline installed on the roof.

Minimum adjustable opening 225.0 mm

Maximum adjustable opening 400.0 mm

Ref. No	Material	Finish	Weight	Min. Breaking Strength	Conforms to
SA07 A	SS Grade 316	Electro Polished	3.7kgs	15kN	EN795:2012 TYPE-A, TS16415:2013
SA07 B	SS Grade 316	Electro Polished	3.5kgs	NA	NA
SA07 C	SS Grade 316	Electro Polished	4.75kgs	15kN	EN795:2012 TYPE-A,TS16415:2013
SA07 D	SS Grade 316	Electro Polished	4.00kgs	NA	NA

Ref. PN 4000 (21) 60° NEW Ref. PN 4000 (21) 90° NEW Ref. PN 4000 (21) 120°



Corner Piece
Ref. PN 4000(21)

CE

Corner piece Bend for a floor/ Ceiling mounted lifeline
The Corner piece is designed to Install the Anchorage Line on Curved \ Bend Area.
Available in : PN4000(21)60°, PN4000(21)90°, PN4000(21)120°

Ref. PN 4000 (23) 60° NEW Ref. PN 4000 (23) 90° NEW Ref. PN 4000 (23) 120°



Corner Piece
Ref. PN 4000(23)

CE

Corner piece Internal Bend for a wall mounted lifeline
Available in : PN4000(23)60°, PN4000(23)90°, PN4000(23)120°

Ref. PN 4000 (25) 60° NEW Ref. PN 4000 (25) 90° NEW Ref. PN 4000 (25) 120°



Corner Piece
Ref. PN 4000(25)

CE

Corner piece External Bend for a wall mounted lifeline

The Corner piece is designed to Install the Anchorage Line on Curved \ Bend Area.
Available in : PN4000(25)60°, PN4000(25)90°, PN4000(25)120°

Ref. No	Material	Finish	Weight	Min. Breaking Strength	Conforms to
PN4000(21)	SS Grade 316	Electro Polished	1.0 KG	15kN	EN795:2012 TYPE-C TS16415:2013
PN4000(23)	SS Grade 316	Electro Polished	1.0 KG	12KN	EN795:2012 TYPE-C TS16415:2013
PN 4000(25)	SS Grade 316	Electro Polished	1.0 KG	15kN	EN795:2012 TYPE-C TS16415:2013

NEW



Constant Force Energy Absorber Post for Standing Seam Roof
Ref. SA 51A

CE

Constant force energy absorber post designed for 4 users to be installed on standing seam roof

Designed with an inbuilt shock absorption mechanism which activates in an event of a fall & reduces the forces on the user.

Easy & Quick to install

The post deploys in event of a fall to absorb the energy & hence protects the roof from damage.

The base plate has series of holes to fit on standing seam roof with different seam distance between 300 mm to 500 mm

NEW



Aluminium Anchor for Standing Seam Roof
Ref. SA 52

CE

Roof top anchor device is designed to be fixed on metal standing seam.

Trolley lateral hinge (Swivel anchorage eye) on the top provides universal connection and used as an anchorage point.

The anchor is fixed on to the roof top by use of socket set.

NEW



Stand Alone Post for Retractable Fall Arrester on Standing Seam Roof

CE

NEW



Stand Alone Post for Retractable Fall Arrester on Trapezoidal Roof

CE

Ref. SA 71

Anchor post designed to be fixed on standing seam roofs.

Compatible with all the KARAM range of retractable fall arrester blocks, allowing 360° rotation

Easy to install & reusable.

Ref. SA 72

Anchor post designed to be fixed on trapezoidal roof or wooden roof with suitable fasteners

The base plate has series of holes to fit on galvolume/ trapezoidal sheets of different pitch/rib

Ref. No	Material	Finish	Weight	Min. Breaking Strength	Conforms to
SA 51A	SS Grade 316	Electro Polished	10.00 kgs	15kN	EN795:2012 TYPE-A, TS16415:2013
SA 52	SS Grade 316	Electro Polished	834 gms±10gms	12kN	EN795:2012 TYPE-A
SA 71	SS Grade 316	Electro Polished	18.59kgs	12KN	EN795:2012 TYPE-A
SA 72	SS Grade 316	Electro Polished	11.72kgs	12KN	EN795:2012 TYPE-A

NEW



Energy Absorber Post for Trapezoidal Roof CE
Ref. SA 38

Constant force energy absorber post designed for 4 users to be installed on trapezoidal roof top

Designed with an inbuilt shock absorption mechanism which activates in event of a fall & reduces the forces on the user.

Easy & Quick to install

The post deploys in an event of a fall to absorb the energy & hence protects the roof from damage.

The base plate has series of holes to fit on galvolume/ trapezoidal sheets of different pitch/rib

Comes with series of holes to adopt different metal pitched roof. It is compatible with below mentioned pitch:- 217.0 mm, 275.0mm, 285.0mm, 333.0mm, 347.0mm, 397.0mm, 405.0mm and 465.0mm

NEW



CE

Constant Force Energy Absorber Post for Trapezoidal Roof
Ref. SA 38A

Constant force energy absorber post designed for 4 users to be installed on trapezoidal roof top

Designed with an inbuilt shock absorption mechanism which activates in event of a fall & reduces the forces on the user.

Easy & Quick to install

The post deploys in event of a fall to absorb the energy & hence protects the roof from damage.

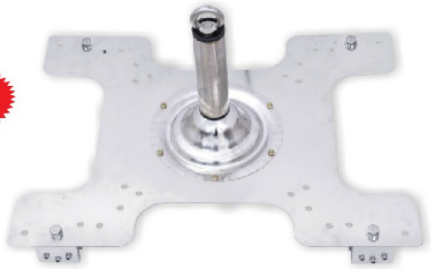
The base plate has series of holes to fit on galvolume/ trapezoidal sheets of different pitch/rib

Comes with series of holes to adopt different metal pitched roof. It is compatible with below mentioned pitch:- 217.0 mm, 275.0mm, 285.0mm, 333.0mm, 347.0mm, 397.0mm, 405.0mm and 465.0mm

NEW



NEW



CE

Energy Absorber Post for Standing Seam Roof



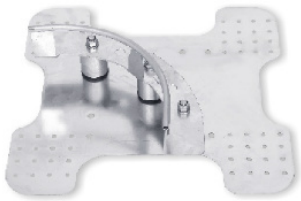
Toggle Type Anchor
Ref. SA 45

Anchors designed for 4 users to be installed on the roof purlins into a pre-defined hole of dia 36mm
Can be used as individual anchor point & also to form a horizontal lifeline over the roof.
Inbuilt shock absorption to lower impact forces.

Ref. SA 51

Universal Constant Force Energy Absorber Post designed for 4 users to be installed on variety of standing seam roof profiles.
It is designed to be installed on standing seam roof top with help of specially designed seam clips.
Designed with in built shock absorption mechanism which activates in event of a fall & reduces the forces on the user.
Easy & quick to install with help of seam clips.
The post deploys in an event of a fall to absorb the energy & hence protects the roof from damage.
Universal constant force energy absorber post designed for 4 users to be installed on variety of standing seam roof profiles having pitch with in a range of :- 247.0 mm, 300.0mm, 305.0mm, 310.0mm, 333.0mm, 367.0mm, 400.0mm, 410.0mm, 429.0mm, 434.0mm, 500.0mm and 600.0mm

Ref. No	Material	Finish	Weight	Min. Breaking Strength	Conforms to
SA 38	SS Grade 316	Electro Polished	10.56kgs	15kN	EN795:2012 TYPE-A,TS16415:2013
SA38 A	SS Grade 316	Electro Polished	12.71kgs	15kN	EN795:2012 TYPE-A,TS16415:2013
SA 45	SS Grade 316	Electro Polished	2.10kgs	15kN	EN795:2012 TYPE-A, TS16415:2013
SA 51	SS Grade 316	Electro Polished	7.70kgs	15kN	EN795:2012 TYPE-A,TS16415:2013



Ref. PN 4000(26) 60°



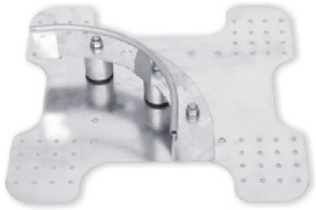
Ref. PN 4000(26) 90°

NEW

Corner Post
Ref. PN 4000(26)

Roof top Corner post is designed to be fixed on galvolume/trapezoidal roof at the curve of 60°, 90°, 120° of horizontal lifeline installed on the roof.

The base plate has series of holes to fit on galvolume/trapezoidal sheets of different pitch/rib



Ref. PN 4000(26) 120°





Ref. PN 4000(27) 60° Ref. PN 4000(27) 120°

NEW



NEW





Ref. PN 4000(28) 60° Ref. PN 4000(28) 90°





Ref. PN 4000(27) 90^0



Ref. PN 4000(28) 120^0

Corner Post
Ref. PN 4000(27)

Standing Seam Roof top corner post is designed to be fixed on standing seam roof top at the curve of 60^0, 90^0, 120^0 of horizontal lifeline installed on the roof.

The base plate has series of holes to fit on standing seam roof with different seam distance between 300 mm to 500 mm

Corner Post
Ref. PN 4000(28)

Standing Seam Roof top corner post is designed to be fixed on standing seam roof top as intermediate at the curve of 60^0, 90^0, 120^0 of horizontal lifeline installed on the roof.

The base plate has series of holes to fit on standing seam roof with different seam distance between 300 mm to 600 mm

Ref. No	Material	Finish	Weight	Min. Breaking Strength	Conforms to
PN 4000(26)	SS Grade 316	Electro Polished	3.86kgs	15kN	EN795:2012 TYPE-C, TS16415:2013
PN 4000(27)	SS Grade 316	Electro Polished	4.0kgs	15kN	EN795:2012 TYPE-C TS16415:2013
PN 4000(28)	SS Grade 316	Electro Polished	4.26kgs	15kN	EN795:2012 TYPE-C TS16415:2013

HORIZONTAL ANCHORAGE LIFELINE SYSTEM
ON RIGID CABLE LINE

KARAM®
knowing your needs better

System Ref: HORIZON PN 4000 (Roof Mounted)

System Specifications

Horizon PN 4000 provides permanent anchorage to a user who has to constantly move along an elevated horizontal track. It comprises of a Stainless Steel Wire Rope (grade 316) of 8mm diameter running all along the horizontal track, and is installed at the ends using special End Extremity Posts. The Intermediate brackets hold the wire in position all along the length of the wire, and are installed at an interval of 5-15mtrs. The Wire Rope is maintained in tension with the help of Tensioner at one end, while the other end has a swageless termination on to the Eye of the End Extremity Post.

The Stainless Steel Carriage Body connects the user to the line with the help of a Lanyard and moves smoothly without interruption along the entire length of the Horizontal line and also through the Intermediate Brackets, thus ensuring 100% anchorage of the user at all times.

Conforms : EN 795:2012 Type C, TS 16415:2013

Shock Absorber
Ref. PN 4000MU (02)
Material : Stainless Steel 304



Carriage body
Ref. PN 4000 (08)

- Material : Stainless Steel 316
- Feature : Friction Free movement









Swaged Tensioner

Ref. PN 4000 (03)

- Regulates tensioning of the cable.
- Material: Stainless Steel 316.
- Feature: Swage termination.



Inspection Plate

Ref. PN 4000 (20)

Optional



Cable Extremity

Ref. PN 7000(03)



Tensioner

Ref. PN 4000 (03) SL

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NEW



Roof Top Anchor Post Extremity with blank base plate for Standing Seam Roof

Ref. SA07 M

Roof top anchor post extremity is designed to be fixed on standing seam roof at the ends of a horizontal lifeline installed on the roof.

Comes with a blank bottom plate in order to allow the user to drill holes as per seam distance of the standing seam roof.

Anchorage eye on the top provides universal connection and used as an anchorage point.

The base plate has series of holes to fit on standing seam roof with different seam distance between 300mm to 500mm

NEW



Roof Top Anchor Post Intermediate with blank base plate for Standing Seam Roof

Ref. SA07 N

Roof top anchor post intermediate is designed to be fixed on standing seam roof top as intermediate of a horizontal lifeline installed on the roof.

Comes with a blank bottom plate in order to allow the user to drill holes as per the seam distance of the standing seam roof.

The base plate has series of holes to fit on standing seam roof with different seam distance between 300mm to 500mm



Roof Top Anchor Post Extremity for Standing Seam Roof

CE

Ref. SA07 O

Roof top anchor post extremity is designed to be fixed on standing seam roof top as intermediate at the ends of horizontal lifeline installed on the roof.

Anchorage eye on the top provides universal connection and used as an anchorage point.

The base plate has series of holes to fit on standing seam roof with different seam distance between 300 mm to 650 mm



Roof Top Anchor Post Intermediate for Standing Seam Roof

CE

Ref. SA07 P

Roof top anchor post intermediate is designed to be fixed on standing seam roof top as intermediate of a horizontal lifeline installed on the roof.

The base plate has series of holes to fit on standing seam roof with different seam distance between 300 mm to 650 mm

Ref. No	Material	Finish	Weight	Min. Breaking Strength	Conforms to
SA07 M	SS Grade 316	Electro Polished	4.78kgs	15kN	EN795:2012 TYPE-A,TS16415:2013
SA07 N	SS Grade 316	Electro Polished	4.61kgs	NA	NA
SA07 O	SS Grade 316	Electro Polished	4.99kgs	15kN	EN795:2012 TYPE-A,TS16415:2013
SA07 P	SS Grade 316	Electro Polished	4.82kgs	NA	NA

HORIZONTAL ANCHORAGE LIFELINE SYSTEM ON RIGID ALUMINIUM RAIL

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Installations Using Different Types of Mounting Brackets


Wall Mounted Installation (with Recess)


Wall Mounted Installation (Flush Type)


Floor Mounted Installation


Ceiling Mounted Installation

Curved Aluminium Rail
Material:
Extruded Aluminium Alloy


(Outer Wall Mounted)
Ref. PN 5000 (09A)


(Inner Wall Mounted)
Ref. PN 5000 (09B)

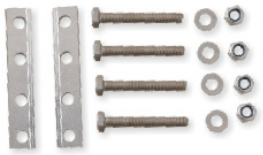

(Ceiling/ Floors)
Ref. PN 5000 (10)

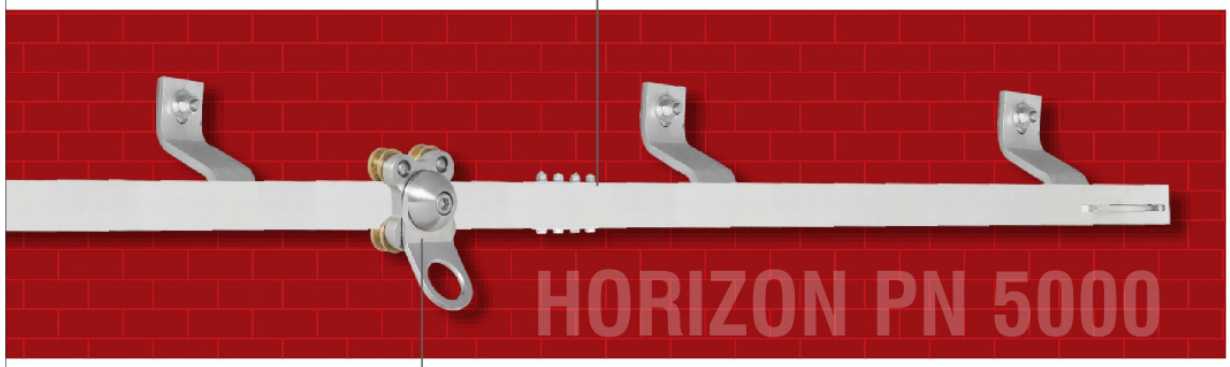
System Ref: HORIZON PN 5000

CE

Junction
Ref. PN 5000 (08)

- Used to Connect Two rails together.
- Material : Stainless Steel 316







Trolley for Wall
Ref. PN 5000 (12)



Trolley For Ceiling/Floor
Ref. PN 5000 (13)



Mounting Nut
Ref. PN 5000 (03)

- Material : Stainless Steel 316 Trolley with Brass wheels which provide frictionless movement.
- Material: Stainless Steel 316 to connect the rail to the mounting Bracket PN 5000(04) or PN 5000 (05)

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System Ref: HORIZON PN 4000 (Floor/Ceiling Mounted)

CE

System Specifications

Horizon PN 4000 provides permanent anchorage to max. 4 users simultaneously, who has to constantly move along an elevated horizontal track. It comprises of a Stainless Steel Wire Rope grade 316 of 8 mm diameter running all along the horizontal track. It is installed at the ends using special Universal Extremity Plates. The Intermediate brackets hold the wire in position all along the length of the wire, and are installed at intervals of 5 mtrs. to 15 mtrs. The line is maintained in tension with the help of Tensioner at one end, while the other end has a swage less termination on to the Universal Extremity plate.

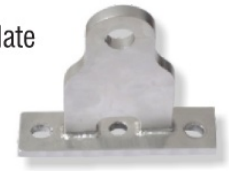
The Stainless Steel Carriage Body connects the user to the line with the help of a lanyard/ retractable block, and moves smoothly without interruption along the entire length of the Horizontal line and also through the Intermediate Brackets, ensuring 100% anchorage of the user at all times.

The system also has an Inspection Name Plate for identification, traceability and maintenance of inspection records. One Stainless Steel Cable Tie are used to fasten the System Name Plate to the structure. At time of installation, the relevant details are punched on the plate by a number punch. The revalidation dates are punched each year on the plates after inspection and revalidation.

Conforms : EN 795:2012 Type C, TS 16415:2013

Universal Extremity Plate
Ref. PN 4000 (09)

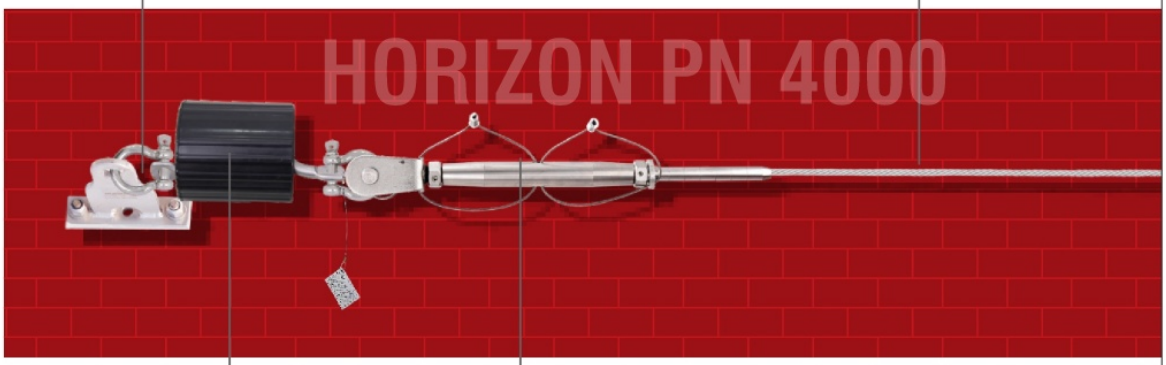
- Material : Stainless Steel 316



Wire Rope (Cable Wire)
Ref. PN 9XXXS (Where XXX is the Length of the wire rope in meters)

- Material : Stainless Steel 316
- Diameter : 8mm
- Construction : 7x19







Shock Absorber
Ref. PN 4000MU (02)

- Material : Stainless Steel 304



Swaged Tensioner
Ref. PN 4000 (03)

- Regulates tensioning of the cable.
- Material : Stainless Steel 316. Feature : Swaged termination.

System Ref: HORIZON PN 4000 (Floor/Ceiling Mounted)

CE

The System is versatile and can be installed on Walls, Floors, Ceilings, as well as on Roof Tops, using the same components by just altering the orientation of the Intermediate Brackets & selection of suitable anchor point

Horizon PN 4000 has the unique distinction of being certified by Sira for ATEX to comply with use in potentially explosive atmosphere (as per Potentially Explosive Atmospheres Directive 2014/34/EU), and conforms to Norms EN ISO 80079-36:2016, and EN ISO 80079-37:2016. The system is certified to be intrinsically safe, hence is an ideal choice for use in Industries like Petroleum/ Petro-Chemical Plants without fear of causing explosion due to any sparking. The system can also be used in Truck Loading / unloading, Advertisement Bill Boards, Industrial Cranes, Oversized machines, Reactors, Turbines etc.

The System is Conforms to EN 795:2012 Type C, TS 16415:2013 & Atex approved & for use in potentially explosive areas.



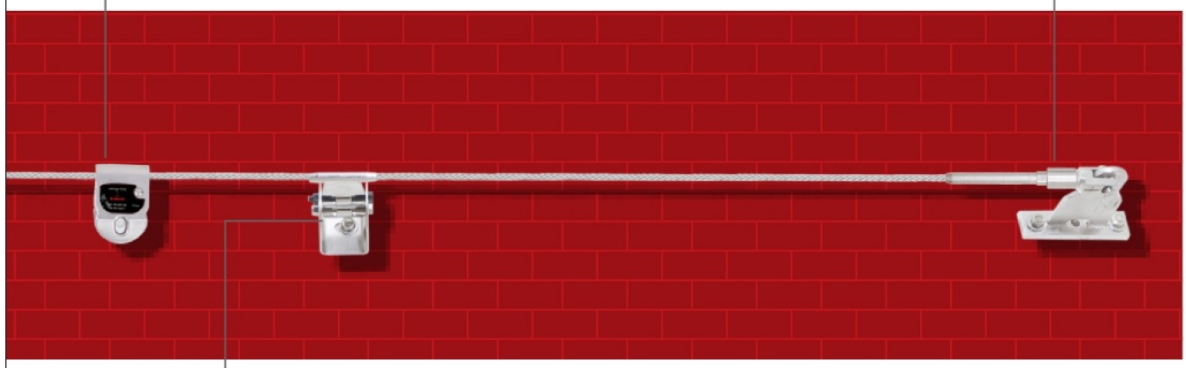
Carriage body
Ref. PN 4000 (08)

- Material : Stainless Steel 316
- Feature : Friction Free movement

Swaged Cable Extremity
Ref. PN 4000 (15)

- Allows crimping of the cable wire at the desired length, and eliminates danger of any loose wire.
- Material : Stainless Steel 316.
- Feature : Swage termination







Intermediate
Ref. PN 4000 (10)

- Material: Stainless Steel 316
- Recommended Installation- every 15 mtrs.



Inspection Plate
Ref. PN 4000 (20)

Optional



Cable Extremity
Ref. PN 7000(03)



Wheel Type
Carriage Body
Ref. PN 4000 (17)



Tensioner
Ref. PN 4000 (03) SL



Double Tandem
Pulley Small
with SS Sheaves
Ref. AP 016

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System Ref: HORIZON PN 5000

System Specifications

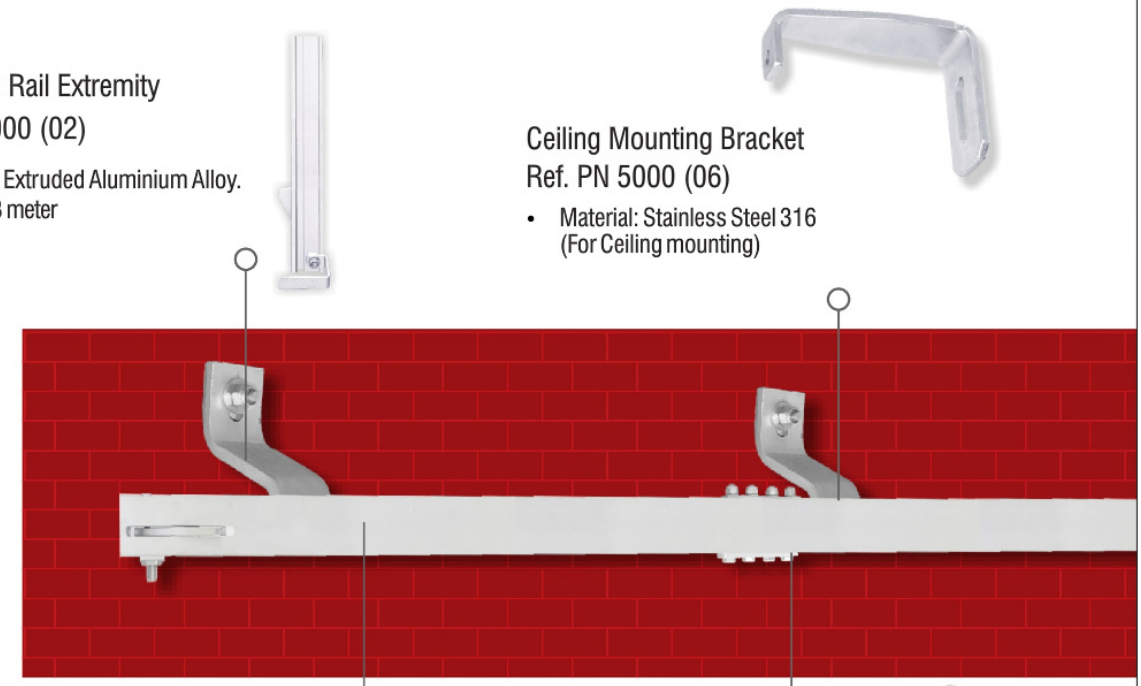
CE

This Anchorage Rail system complies with EN 795:2012 Type D and is designed to provide safe anchorage for horizontal movement while working at height. The Worker wears a Full body Harness and uses a Lanyard (or other Connector compliant with EN 354/EN 355) to connect to the eye of the Trolley, which glides along the Aluminium horizontal Rail. For overhead applications a Self Retractable Fall Arrester can be used to provide the most effective means of fall protection.

The Horizon PN 5000 can be fitted on to floors, wall and on ceilings using special mounting brackets. The Wall-mounting brackets can be flushed along the surface of the wall. Alternately, special mounting brackets which allow a recess between the rail and the wall may be used so as not to interrupt underlying structures like pipes and wires.

The rail is available in straight as well as curved forms (for corners and bends). The specially fixed junctions between different lengths of the rail allow an extremely smooth movement of the Trolley.
The system also has an Inspection Name Plate for identification, traceability and maintenance of inspection records.

Conforms : EN 795:2012 Type D



Aluminium Rail Extremity
Ref. PN 5000 (02)

- Material : Extruded Aluminium Alloy.
- Length : 3 meter

Ceiling Mounting Bracket
Ref. PN 5000 (06)

- Material: Stainless Steel 316 (For Ceiling mounting)

Alu. Rail Intermediate
Ref. PN 5000 (01)

- Material : Extruded Aluminium Alloy
- Length : 3 Meter.

Wall Mounting Bracket Flush Type
Ref. PN 5000 (04)

- Material : Stainless Steel 316 (for Flush type wall Mounting)

Wall Mounting Bracket with Recess
Ref. PN 5000 (05)

- Material : Stainless Steel 316 (for Wall Mounting with Recess)

For Extremity

- Compatible with Minimum Flange width: 150.0 mm
- Compatible with Maximum Flange width: 220.0 mm





Ref. SA 22 CE



Ref. SA 22SS CE

Ref. No	Material	Finish	Weight	Min. Breaking Strength	Conforms to
SA 22	Alloy Steel	Hot Dip Galvanized	12.45kgs	15kN	EN795:2012 TYPE-A, TS16415:2013
SA 22SS	SS GRADE 316	Electro Polished	10.18kgs	15KN	EN795:2012 TYPE-A, TS16415:2013

For Intermediate

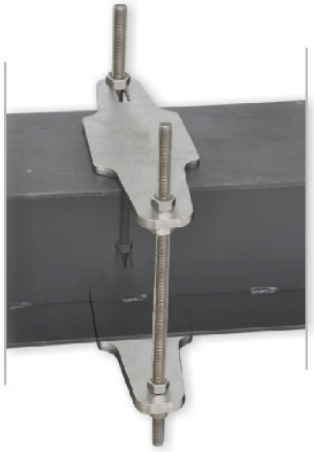
- Compatible with Minimum Flange width: 150.0 mm
- Compatible with Maximum Flange width: 220.0 mm



Ref. SA 23 CE



Ref. SA 23SS CE



Ref. No	Material	Finish	Weight	Min. Breaking Strength	Conforms to
SA 23	Alloy Steel	Hot Dip Galvanized	3.87kgs	NA	NA
SA 23SS	SS GRADE 316	Electro Polished	3.19kgs	NA	NA

Fitted on the flange of an I-Beam

- Compatible with Minimum Flange width: 150.0 mm
- Compatible with Maximum Flange width: 220.0 mm



Ref. SA 24 CE



Ref. SA 24SS CE



Ref. No	Material	Finish	Weight	Min. Breaking Strength	Conforms to
SA 24	Alloy Steel	Hot Dip Galvanized	10.52kgs	15kN	EN795:2012 TYPE-A, TS16415:2013
SA 24SS	SS GRADE 316	Electro Polished	8.60kgs	15KN	EN795:2012 TYPE-A, TS16415:2013

- Anchor designed to be fixed to install a horizontal lifeline
- The base have slots to fit on variable size of structure
- Compatible with Universal Extremity Plate; Ref. PN 4000(09) and Intermediate Ref. PN 4000(10)
- Available Lengths: 300mm, 500mm & 750mm
- Compatible with minimum flange width: 150mm
- Compatible with maximum flange width: 220mm



Ref. SA 25 CE



Ref. SA 25 SS CE

Ref. No	Material	Finish	Weight	Min. Breaking Strength	Conforms to
SA25(300)	Alloy Steel	Hot Dip Galvanized	18.30kgs	15kN	EN795:2012 TYPE-A, TS16415:2013
SA25(500)	Alloy Steel	Hot Dip Galvanized	20.07kgs	15KN	EN795:2012 TYPE-A, TS16415:2013
SA25(750)	Alloy Steel	Hot Dip Galvanized	22.15kgs	15KN	EN795:2012 TYPE-A, TS16415:2013
SA25(300)(SS)	SS GRADE 316	Electro Polished	17.80kgs	15KN	EN795:2012 TYPE-A, TS16415:2013
SA25(500)(SS)	SS GRADE 316	Electro Polished	19.20kgs	15KN	EN795:2012 TYPE-A, TS16415:2013
SA25(750)(SS)	SS GRADE 316	Electro Polished	21.03kgs	15KN	EN795:2012 TYPE-A, TS16415:2013

Fixed Line System Design & Installation Service

The Anchorage forms an important part of Fall Protection System. In the event of movement at height, along the vertical or a horizontal axis, we require an Anchorage System that spans across this movement. The Fixed Line Systems are such specially engineered systems.

It is important to understand that the Forces experienced over system and underlying structures in the event of a fall, are extremely complex to calculate and define.

KARAM offers exceptional expertise to combat the problem. KARAM has a dedicated Team of trained Engineers who, by virtue of their experience and knowledge, are able to suggest optimal solutions for the requirement of FLS.

This offers following advantage to the Client:

- Provide a safe solution for anchorage
- Optimize the cost of the solution through Engineered products
- Safeguard the underlying structure on which the Line is installed.

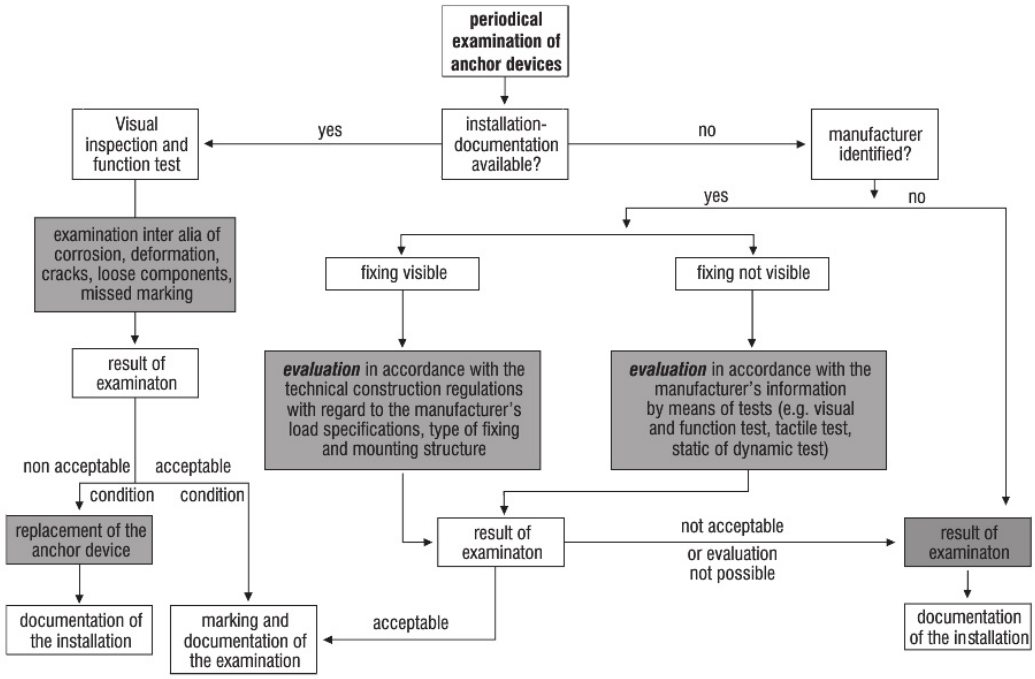
KARAM uses the latest Design software like CAD, and Structural Design Software like StaadPro to accurately design Anchorage Line System, and simulate the forces in the event of a fall.

It is also extremely important for the Client to be confident of the system installed. Team KARAM uses specialized Onsite Testing and Proof-loading Equipment from HydraJaws UK, to provide this specialized service.
KARAM also provides services for Annual on-site Inspection and Revalidation of these Systems.

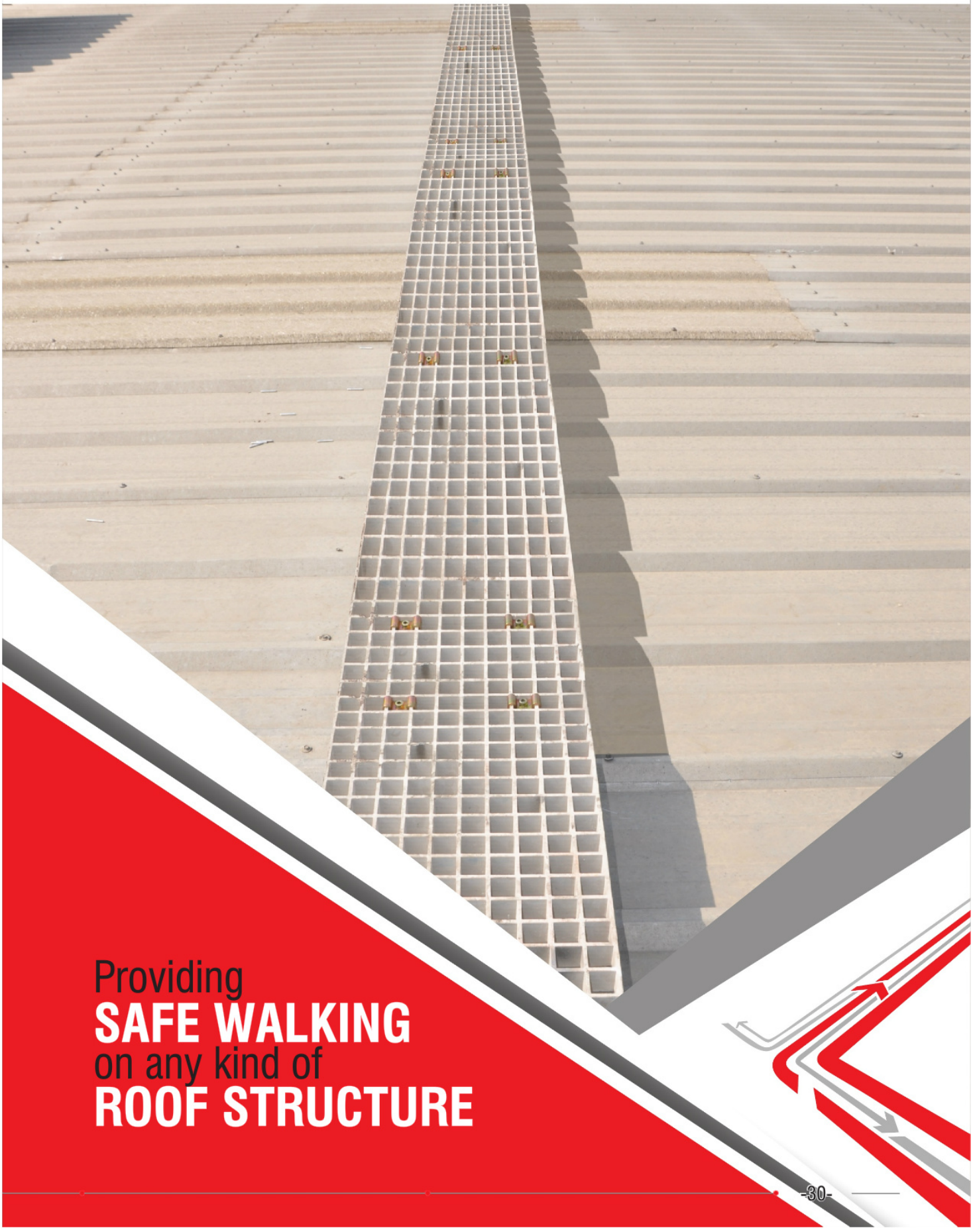
Why is Revalidation of Fall Protection Equipment important ?

Fall Protection Equipment are life saving products. As per the EN 365 of PPE Directives, it is mandatory to have a 'Competent Authority' inspect the Fall Protection Equipment at least once annually.

PERIODIC EXAMINATION CHART



For Further information write to us at customercare@karam.in



Providing SAFE WALKING on any kind of ROOF STRUCTURE

VERTICAL ANCHORAGE LINE SYSTEM ON
FLEXIBLE STEEL CABLE LINE

KARAM®
knowing your needs better



RECOMMENDED PPE

for Horizontal Life Line System



- Full Body Harness



- Safety Spectacles



- Hand Protection



- Safety Helmet



- Safety Shoes



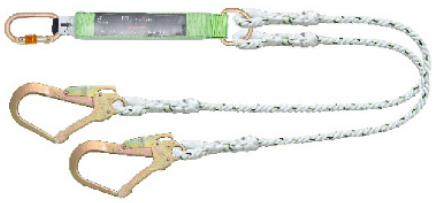
- Guided Type Fall Arrester on Flexible Anchorage Line



- Fall Arrester Block



- Work Positioning Lanyard with Grip Adjuster



- Forked Lanyard with Energy absorber



KARAM®
TRAINING & CONSULTANCY

50,000 + Trained on

Fall Protection and Rescue Competency

Key Highlights

- South East Asia's only GWO (Global Wind Organization) approved Training Provider.
- Only Training Center in India to impart Training as per NFPA standards on Technical Rescue: NFPA 1670 and NFPA 1006.
- Approved Training Provider (ATP) of TRARAsia, Singapore.
- Associate member of Industrial Rope Access Trade Association, UK (IRATA).
- 20,000 sq. ft. dedicated facility with Advanced Simulation of Height, Confined Space and Rescue and has Fully equipped Training Halls.
- Experienced faculty of 30+ local language Trainers.
- Latest and EN certified Training Equipment.
- Post-training support to implement principles and techniques at work-site.



QR Coded ID Card

Standards Followed

- BS 8454: 2006 'Code of Practice for Delivery of Training and Education for Work at Height and Rescue.'
- GWO Basic Safety Training Standard.
- NFPA 1670 and NFPA 1006.
- IRATA ICOP.
- TRARASIA C-TRAIL.
- VODAFONE STANDARDS VOD001, VOD002.1 & VOD003.1



Certifications

Inspection and Revalidation

Fall Protection Equipment is a life saving product. As per the EN 365 of PPE Directives89/686/EEC, It is mandatory to have a 'Competent Authority' to inspect the Fall Protection Equipment at least once annually.

KARAM Kare Inspection software takes care of the equipment for at least 10 years.

Kare

- Cloud Based Online as well as off line software.
- Captures Geo Coordinates where the system is installed.
- RFID / Bar code compliant.
- Generates Report in real time.
- Reminds user of items due for inspection.
- Captures images of components.
- user customizable.
- Can be integrated to client software.
- Reports can be shared with multiple recipients in real time

Kare

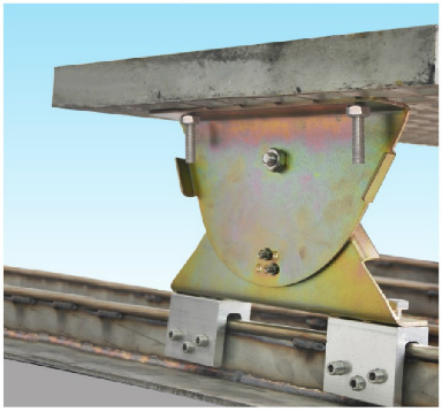
Reports can be shared with multiple recipients in real time.

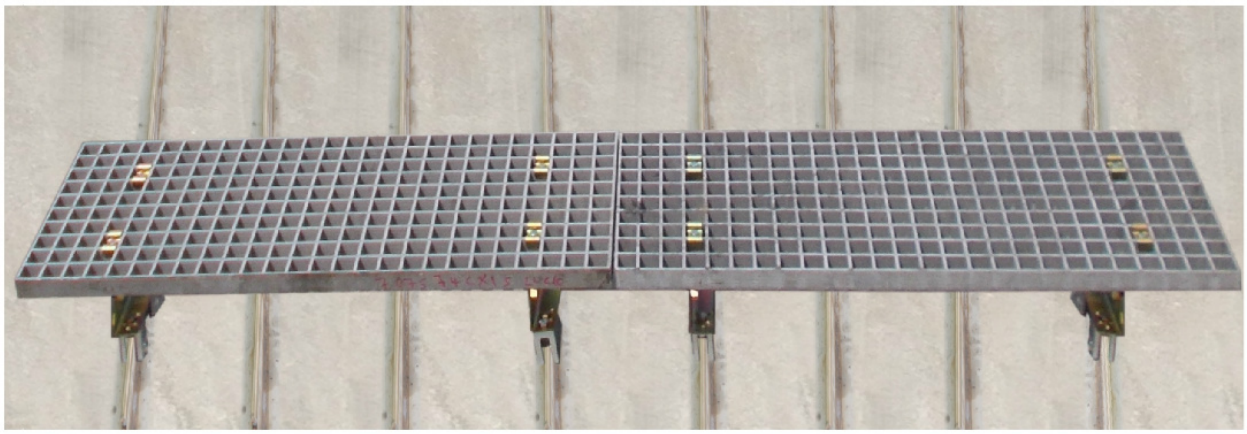
Walkways, Treads and steps for Roofs

KARAM®
knowing your needs better

FEATURES

- For providing safe walking on any roof surface
- Meets the test requirements of EN 516:2006 Class 1-C (Prefabricated Accessories for Roofing
- Installations for roof access - Walkways, treads and steps)
- Available in pre-assembled lengths
- Available as steps for steep slopes with hand rails
- Designed for all type of roofing like trapezoidal, clip on and standing seam profiles.
- Flexible for installation at site and can be adjusted from 0 ° to 50°
- Easy to install at site
- Tailor made solutions are also available
- Indigenously made
- Fire retardant
- Corrosion and moisture resistant material.
- Long life span
- It can be used along with horizontal life line systems designed for over the roof.





WALK WAYS

Application	:	Provided safe walking on Kind of roof structure.
Material of Constructions (MOC)	:	FRP walkways with Hot Dipped Galvanised / SS316 Mounting Brackets
Operating temperature	:	-30° to + 60°C
Life Span	:	10 Years
Recommended Inspection Frequency	:	Annual
Complies to	:	EN 516:2006 Class 1-C

Tools

KARAM
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TOOLS



Ring Spanner



Double End Spanner



Socket Set



Tensioner Tightening Tool



Crimping Plier



Allen Key



Bolt Cutter

MACHINES



Cordless Drill Machine



Hammer Drill Machine



Cordless Impact Wrinch



Hydra Jaws
Lifeline Testing



Swaging Tool



Hydraulic Crimping Head



Power Bird Riveting Machine

MEASURING TOOLS




Tape


Detect


Digital Torque Wrench


Distance Meter


Laser Tool


Vernier

CONSUMABLES, MISCELLANOUS TOOLS


Dust Pump


Hole Saw Cutter


Hot Air Gun


Blower


Paint Brush


Drill Bit


Impact Drill


Setting Tool


Chemical Applicator

WRENCH SIZE					
Hex Bolt	6	8	10	12	16
Wrench Size	10	13	16	19	24
Socket Size	10	13	16	19	24

ALLEN KEY SIZE				
Allen Bolt Size	6	8	10	12
Allen Key Size	4	6	8	10
Allen Grub Screw Key Size	3	4	5	6

TORQUE CHART						
Bolt size	6 mm	8 mm	10 mm	12 mm	14 mm	16 mm
Recommended Torque:	9 Nm	22 Nm	29 Nm	50 Nm	80 Nm	125 Nm

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Roof Post Size Chart

Component Code	Type of Roof	Sizes in mm
SA07 A	Trapezoidal	225 to 360
SA07 B	Trapezoidal	225 to 360
SA07 G	Trapezoidal	217/275/285/333/347/397/405/465
SA07 H	Trapezoidal	217/275/285/333/347/397/405/465
SA 38	Trapezoidal	217/275/285/333/347/397/405/465
SA38 A	Trapezoidal	217/275/285/333/347/397/405/465
SA72	Trapezoidal	217/275/285/333/347/397/405/465
PN4000(26)90	Trapezoidal	217/275/285/333/347/397/405/465
SA07 C	Standing seam/Klip Lock	225 to 400
SA07 D	Standing seam/Klip Lock	225 to 400
SA07 E	Standing seam/Klip Lock	535 to 605
SA07 F	Standing seam/Klip Lock	535 to 605
SA07 I	Standing seam/Klip Lock	300/333/350/400/405/434/450/500
SA07 J	Standing seam/Klip Lock	300/333/350/400/405/434/450/500
SA07 O	Standing seam/Klip Lock	300/310/333/350/364/400/434/450/500/600/610/650
SA07 P	Standing seam/Klip Lock	300/310/333/350/364/400/434/450/500/600/610/650
SA51	Standing seam/Klip Lock	247/250/275/300/305/333/367/400/429/434/500/600
SA51A	Standing seam/Klip Lock	247/250/275/300/305/333/367/400/429/434/500/600
PN4000(27)90	Standing seam/Klip Lock	300/333/350/400/405/434/450/500
PN4000(28)90	Standing seam/Klip Lock	300/310/333/350/364/400/434/450/500/600/610/650

⚠ Disclaimer

Working at height remains one of the biggest causes of fatalities and major injuries.

Common cases include:-

- Fall from height, like ladders, towers, etc. due to loss of balance
- Fall while working at height through fragile rooftops etc.

KARAM Fall Protection Equipment save the wearer from the risk of all such falls.
However, awareness to hazards at height is the responsibility of the worker.

KARAM equipment saves the fall – Subject to the below mentioned points: -

- Proper training of the user - Adequate training regarding hazards, equipment use, etc. must be provided to the user.
- Proper care of the equipment - The equipment should be used and maintained as per the Instructions Manual of the products.
- Medical Condition of the user - The User / Authority must ensure that the user is medically fit for work at height.
- The equipment should always be used under the supervision of Trained & Competent personnel.

A detailed Rescue Plan should also be in place and should be followed strictly in case of any emergency.

Information provided in this movie / catalogue / brochure is duly checked and is up to date. It is acquired through passing the product through several stringent quality checks by the Quality assurance team at KARAM.

Wherever required and necessary, KARAM reserves the right to change the product specification.

KARAM cannot be held responsible in case of any inaccuracies or omissions while use of product.
To seek advice in case of any doubt, please connect with authorized KARAM personnel.

FIXED ANCHORAGES

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Steel Anchor
Ref. SA 56

CE

Anchor designed to be fixed on metal I Beam to install horizontal lifeline

The base has an adjustable opening to fit on the top flange of various sizes of I-Section.

Compatible with minimum flange width : 150.0mm

Compatible with maximum flange width : 220.0mm

Compatible with universal extremity plate PN 4000(09), point anchor & intermediate PN 4000(10)

Available lengths(L) : 300mm - 12.149 kg ± 0.050 kg
: 500mm - 12.969 kg ± 0.050 kg
: 750mm - 14.149 kg ± 0.050 kg



Steel Anchor
Ref. SA 56SS

CE

Anchor designed to be fixed on metal I Beam to install horizontal lifeline

The base has an adjustable opening on the top flange of various sizes.

Compatible with minimum flange width : 150.0mm

Compatible with maximum flange width : 220.0mm

Compatible with universal extremity plate PN 4000(09) point anchor & intermediate PN 4000(10)

Available lengths(L) : 300mm - 12.149 kg ± 0.050 kg
: 500mm - 12.969 kg ± 0.050 kg
: 750mm - 14.149 kg ± 0.050 kg

Ref. No	Material	Finish	Weight	Min. Breaking Strength	Conforms to
SA56(300)	Alloy Steel	Hot Dip Galvanized	12.15kgs	15kN	EN795:2012 TYPE-A, TS16415:2013
SA56(500)	Alloy Steel	Hot Dip Galvanized	12.97kgs	15KN	
SA56(750)	Alloy Steel	Hot Dip Galvanized	14.15kgs	15KN	

SA56(300)(SS)	SS GRADE 316	Electro Polished	12.15kgs	15KN	TS16415:2013
SA56(500)(SS)	SS GRADE 316	Electro Polished	12.97kgs	15KN	
SA56(750)(SS)	SS GRADE 316	Electro Polished	15.15kgs	15KN	



Anchor
Ref. SA 57

CE

Anchors designed to be fixed on concrete structures using chemical fasteners to install Horizontal Lifelines
The base has an adjustable opening to fit on the top flange of various sizes of I-section.
Compatible with universal & extremity plate PN 4000(09) & Intermediate PN 4000(10)
Available lengths(L) :300mm - 10.380 kg±0.10 kg
:500mm - 12.800 kg±0.10 kg

Ref. No	Material	Finish	Weight	Min. Breaking Strength	Conforms to
SA57(300)	Alloy Steel	Hot Dip Galvanized	10.38kgs	15kN	EN795:2012 TYPE-A, TS16415:2013
SA57(500)	Alloy Steel	Hot Dip Galvanized	12.80kgs	15kN	EN795:2012 TYPE-A, TS16415:2013

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Karam Authorized Sevice Center (Fall Arrest Blocks)

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