Fall Protection Experts

petrogold-eg.com

# Life Line System

CATALOG

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## About Us

At PG Life Line Systems, we are dedicated to engineering and manufacturing premium-quality fall protection systems that safeguard lives. As an emerging leader in safety equipment manufacturing, we combine innovative design with rigorous quality standards to deliver reliable life line solutions for various industrial applications.

## Our Vision

To become the trusted global leader in fall protection systems through continuous innovation and unwavering commitment to quality and safety.

## Our Mission

To protect lives by delivering superior fall protection solutions that exceed industry standards while providing exceptional customer support and technical expertise.

## Manufacturing Standards & Certifications

**Our life line systems are manufactured in strict compliance with international safety standards:**

### Core Certifications

- EN 795:2012 Type C for horizontal lifeline systems
- CEN TS 16415:2013 for multi-user applications
- ISO 9001:2015 Quality Management System
- OSHA compliance for fall protection equipment

## Materials & Manufacturing Excellence

### Premium Materials

Our products utilize only the highest grade materials:

- 316-grade stainless steel cables and components
- Aircraft-grade aluminum for structural components
- High-tensile steel with protective coating for anchoring systems

### Quality Control

Every component undergoes:

- Non-destructive testing
- Load testing to 5,000 pounds minimum breaking strength
- Dimensional accuracy verification
- Material composition analysis
- Corrosion resistance testing

## Lifelines:

- Lifeline systems serve as attachment points for fall protection lanyards and must be capable of supporting a minimum of 1000 kg.
- Lifelines can be mounted either vertically or horizontally and are primarily designed to allow mobility for personnel working at elevated locations.
- Horizontal lifelines must consist of at least three-eighths of an inch (3/8”) wire rope cable, adequately supported to endure an impact of at least 1000 kg. Softeners must be utilized.
- Horizontal lifelines should be installed to offer attachment points at waist level or higher for the personnel using them.
- Lifelines are strictly prohibited from being used for any purpose other than fall protection.
- Horizontal lifelines must be installed and maintained by the Rigging and Structural Department or a qualified professional.
- Vertical lifelines are crucial for personnel fall protection during vertical movements.
- They can be made up of static lifelines made from cable with approved sliding rope grabs, or may include self-retracting reel-type lanyards and lifelines that attach directly to safety harnesses.
- Only approved sliding rope grabs that correspond with the size of the wire rope should be used to attach a safety lanyard to a vertical lifeline. Lanyards must never be secured to lifelines using knots or loops.
- Rope grabs should be positioned on the lifeline at a height above the user’s shoulders.

## Additional devices that can be utilized include:

- Safety Nets – These may act as secondary fall protection in specific scenarios. Their installation and use require approval from the Safety Department, and the Rigging and Structural Department will manage net installation when needed.
- Connector Toggles – These devices fit into structural steel bolt holes, creating a secure attachment point for safety lanyards. Personnel working with structural steel should use these devices during steel erection.
- Concrete Form Tie-off – These devices attach to patented concrete forms, offering a connection point for safety lanyards. They should be utilized when placing concrete forms at heights where there is a potential fall risk.
- Lifeline Placement and Installation:
- Horizontal Lifelines:
- All horizontal lifelines installed in skeletal steel structures (such as pipe racks) must consist of at least three-eighths inch (3/8”) cable.
- They must be secured at both ends with no fewer than two (2) cable clamps. Sufficient intermediate support should be provided to reduce sag and vertical deflection under load, and softeners should be utilized.

- Horizontal lifelines must be installed and maintained by the Rigging and Structural Department or a designated competent individual.
- Priority should be given to the placement of lifelines as structures are constructed.
- Lifelines must be arranged to ensure adequate mobility throughout all areas of the structure while providing 100% fall protection for personnel.
- Lifelines should be positioned to create tie-off points at least waist height for users.
- Lifelines are strictly for fall protection and should not be used for any other purpose.
- Personnel installing lifelines must be protected from falls at all times by securing themselves to structural steel or similar supports.
- The Rigging and Structural Department or designated competent person will schedule regular documented inspections of all lifelines, at least weekly.
- Vertical Lifelines and Retractable Lifelines
- The use of vertical and retractable lifelines is as follows:
- Static Wire Rope:
- Lifelines must consist of wire rope that has been approved by the Safety Department.
- Lifelines should be utilized with approved rope grabs for attaching lanyards.
- Lifelines must be anchored at the top using means capable of supporting 1000 kg.
- NOTE: Softeners should be used in areas where lifelines may come into contact with sharp edges, such as beam flanges.
- Retractable Reel Lifelines, if applicable:
- Retractable lifeline devices must be attached to supports capable of withstanding an impact load of 1000 kg.
- These devices should be secured using shackles and wire rope chokers; synthetic or natural fiber ropes must not be used for securing.
- Each retractable lifeline device must have a rope tag line to allow extending the device to elevations below the attachment point.
- Where deemed necessary, retractable lifelines should also be utilized to provide fall protection for structural steel workers during erection, prior to the installation of other fall protection systems.

## Lifeline Systems Safety

Lifeline systems are essential for fall protection in elevated work environments. These systems provide secure attachment points for lanyards and are designed to ensure the safety of personnel working at heights. Lifelines can be installed either horizontally or vertically, depending on the specific requirements of the job site.

## Key Features of Lifeline Systems

### Horizontal Lifelines

- Constructed from a minimum of 3/8" wire rope cable.
- Must be capable of supporting an impact load of at least 1000 kg.
- Installed at waist level or higher to ensure maximum protection.
- Designed exclusively for fall protection purposes.
- Must be installed and maintained by qualified personnel, such as the Rigging and Structural Department.

### Vertical Lifelines

- Provide essential fall protection during vertical movements.
- Can be made from static wire rope or self-retracting reel-type lanyards.
- Use approved sliding rope grabs for secure attachment to safety harnesses.
- Rope grabs must be positioned above the user's shoulders for optimal safety.

## Additional Fall Protection Devices

### Safety Nets

- Serve as secondary fall protection in certain scenarios.
- Installation requires approval from the Safety Department.
- Managed by the Rigging and Structural Department when needed.

### Connector Toggles

- Designed to fit into structural steel bolt holes, providing a secure attachment point for lanyards.
- Ideal for use during steel erection work.

### Concrete Form Tie-offs

- Attach to patented concrete forms, offering a reliable connection point for lanyards during elevated concrete work.

## Installation and Maintenance Guidelines

### Horizontal Lifeline Installation

- Horizontal lifelines must consist of at least 3/8" cable and be secured at both ends with no fewer than two cable clamps.
- Intermediate supports should be used to minimize sag and vertical deflection under load.
- Softeners must be utilized at sharp edges to prevent damage to the lifeline.
- Lifelines should be installed in skeletal steel structures, such as pipe racks, to provide 100% fall protection while allowing mobility throughout the structure.
- Regular inspections of all lifelines must be documented and conducted weekly by a designated competent individual.

### Vertical and Retractable Lifeline Installation

- Vertical lifelines must consist of wire rope approved by the Safety Department and be anchored at the top with supports capable of withstanding a load of 1000 kg.
- Softeners should be used where lifelines may contact sharp edges like beam flanges.

### Retractable Lifeline Features

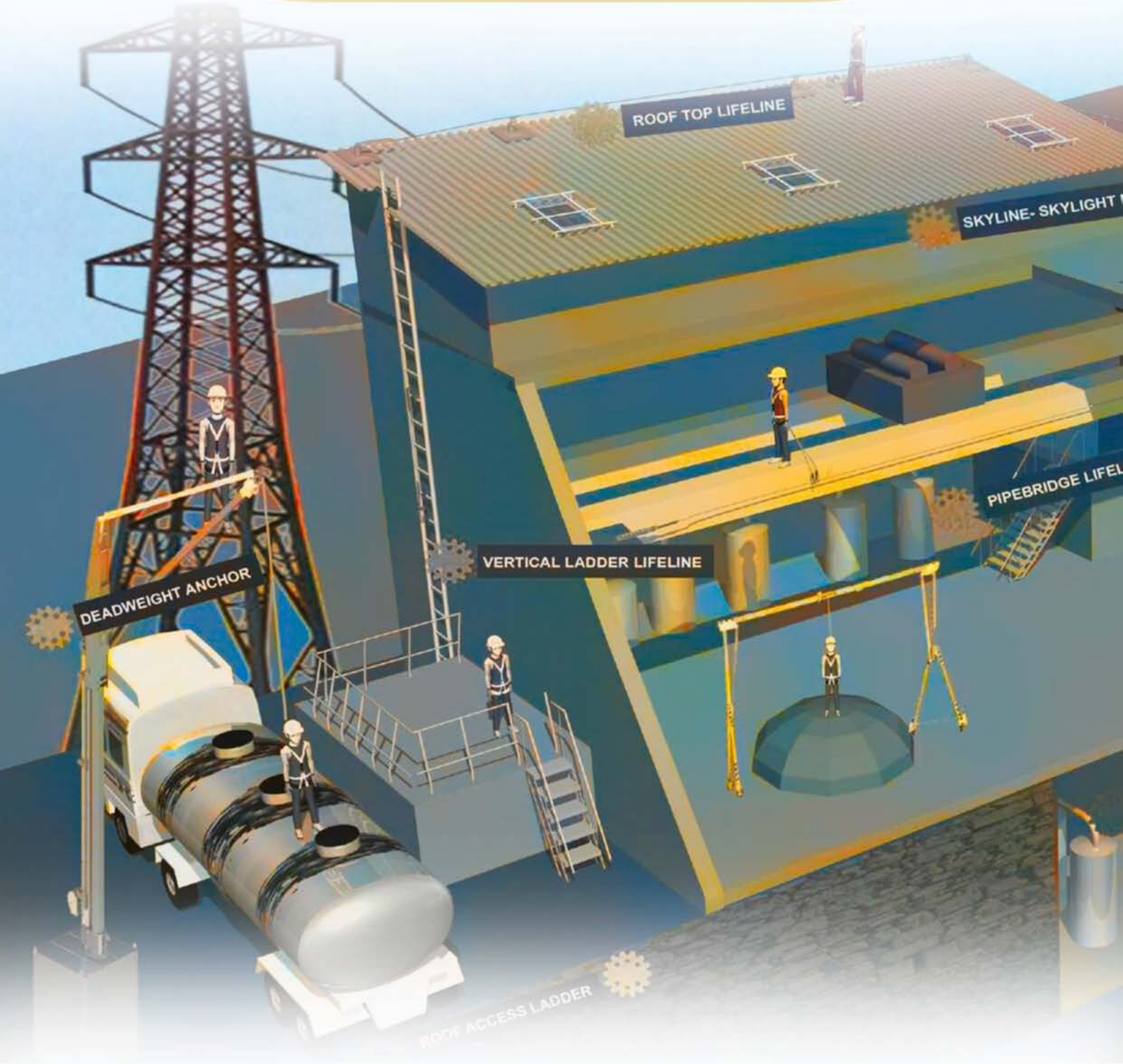
- Retractable reel lifelines must withstand an impact load of 1000 kg and should be secured using shackles and wire rope chokers (synthetic or natural fiber ropes are not allowed).
- Each retractable device should include a rope tag line to extend it to lower elevations when necessary.

## Compliance and Safety Standards

- All lifeline systems must comply with current safety regulations.
- Proper installation, regular maintenance, and ongoing inspections are critical to ensuring that these systems function effectively and provide the required level of fall protection.

## Manufacturing Process

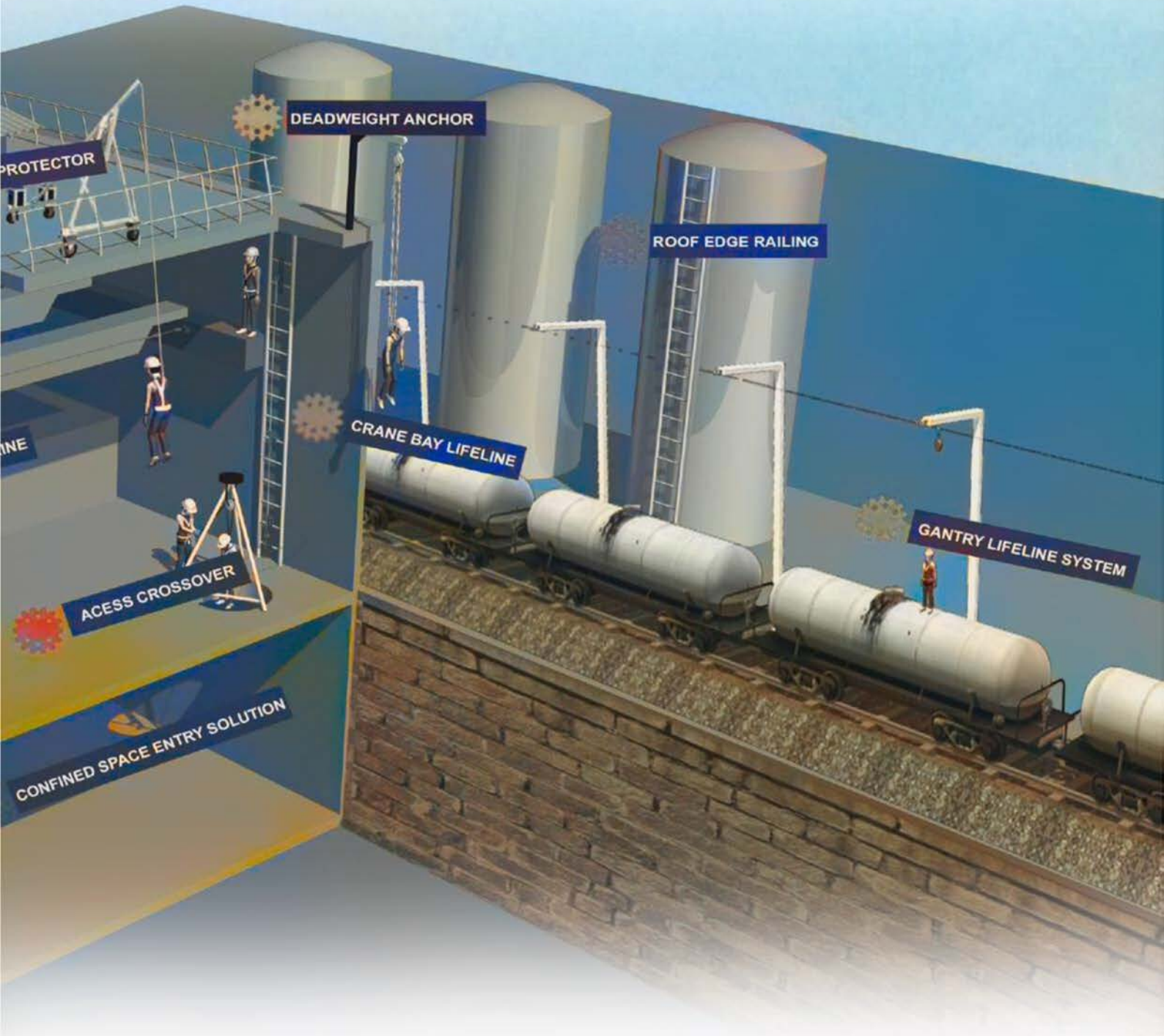
- Computer-aided design and engineering
- Automated precision manufacturing
- 100% component traceability
- Individual product serialization
- Batch testing and certification



## Technical Support

Our engineering team provides:

- Custom system design
- Installation consultation
- Technical documentation
- On-site inspection services
- Certification and maintenance support



# UNDERSTANDING FALL PROTECTION

## What Does Fall Protection Mean?

Fall protection involves controls to safeguard personnel from falls or to minimize injury if a fall occurs. It is essential when working at heights or near edges, pits, or steep surfaces. The system is intended to restrain or arrest falls from heights.

## Fall protection is classified into two types: active and passive.

### Active Fall Protection Systems

Fall protection includes systems like body belts, harnesses, lanyards, and components such as Self-Retracting Lifelines (SRLs). Users must engage with these safety measures, and the selection of systems follows a thorough Risk Assessment before work starts.

**Anchor/ Anchorage Points**

The key focus in fall protection systems is the anchorage point, which securely attaches the fall protection device. Supervisors and users must evaluate hazards near the anchorage to prevent users from striking or swinging into obstacles during a fall.

**Full Body Harness**

The full body harness is essential for an active fall arrest system, as it safely distributes impact forces during a fall and keeps the user suspended upright afterward.

**Lanyards**

A lanyard connects a harness to an anchorage point in fall protection systems. It can be used for fall arrest or restraint, allowing limited lateral movement. The length and anchor placement affect the free fall distance before the protective device activates.

# UNDERSTANDING FALL PROTECTION

**Retracting Lifeline Devices**

These portable devices are anchored above work areas and function as automatic taut lanyards. They connect to a worker's harness, extending and retracting with movement. Upon a fall, a locking mechanism activates to stop the fall, while an inbuilt shock absorber minimizes shock load. They are especially suitable for sloping roofs and angular structures, ensuring the rope remains taut and unobtrusive during work.

**Lifeline**

A horizontal lifeline offers continuous anchorage for users moving on an elevated plane, connecting two fixed points at the same level. It allows attachment of lanyards, lifelines, or fall arrest blocks, reducing swing injuries by providing overhead support. Temporary vertical anchorage systems use specially designed rope grabs that secure onto the anchorage line to immediately arrest falls.

**Fall Arresting Systems (FAS)**

A Fall Arresting System (FAS) aims to stop falls and distribute the energy to prevent injury. It consists of an independent anchorage point, a vertical lifeline, a fall arrester, a harness (or belt), and may include a lanyard and shock absorber, along with necessary hardware like snap-hooks and D-rings.

**Hardware Connectors**

Hardware connectors include hooks, karabiners, anchorage extensions, and metal links, which serve to connect various components of the Fall Arrest System.

**Rescue Systems**

The moments immediately after an accidental fall are crucial for preventing injuries to workers. Companies need to establish, implement, and consistently rehearse rescue procedures. Additionally, specialized rescue equipment should be accessible at all times during work hours.

**Systems Used In Below-ground Level Tanks or Confined Spaces**

Confined spaces are specifically designed areas that have restricted openings for entry and exit. Examples of confined spaces include storage tanks, process vessels, ship compartments, pits, silos, vats, sewers, boilers, tunnels, vaults, and pipelines. To facilitate safe entry and exit from these confined spaces, equipment like davits, tripods, and winches is available.

# UNDERSTANDING FALL PROTECTION

## Passive Fall Protection Systems

Fall protection such as nets, guard rails and Scaffolding generally provide 100% protection for multiple workers.

## Fall Protection Roles

**User / Contractor**
Users / Contractors who are required to perform work at heights shall have a working knowledge of the hazards present in their work area as well as how to use, inspect and care for the personal fall protection systems they are required to use.

**A Competent Person**
is trained to identify hazardous conditions in personal fall arrest systems and understand their components and proper use. This designation applies to roles such as instructors, managers, supervisors, third-party suppliers, and employees.

**Employer**
Any manager, supervisor, or business owner who oversees employees tasked with performing work at elevated heights.

## Fall Protection Responsibilities

### User / Contractor

- Operate within safety limits set by guardrails and protective equipment.
- Use and maintain fall protection gear according to manufacturer guidelines.
- Complete Working at Height training and have a working at heights assessment.
- Establish a Rescue Plan for tasks with fall risks.

### Competent Person

- Ensure employees working at heights meet training requirements and possess necessary skills for safety.
- Develop height and rescue plans for employees as needed.
- Recommend appropriate fall arrest systems for different height work situations.
- Conduct periodic inspections of fall protection equipment per manufacturer or legislative standards.
- Halt any unsafe work immediately.

### Employer

To ensure a safe working environment through collective protection, employers should establish and communicate a clear policy that includes:

- Worker Qualification: Assess if employees are qualified for work at height.
- Training: Ensure workers in elevated positions are trained in the fall protection system.

Competent Personnel: Appoint a qualified individual to oversee safety during work at height.

# UNDERSTANDING FALL PROTECTION

**Choosing the Right Equipment**

Is the equipment being utilized properly to ensure safe job performance? Has the equipment acquired for the task been certified to meet the necessary standards?

**Setup of Equipment**
Equipment Upkeep and Evaluation

Has equipment been installed according to acceptable standards, regulations, and manufacturer's recommendations?
Can the equipment be maintained as recommended, and will
employees inspect their personal system components daily before use.

**Emergency Rescue Protocols**

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?

**Job Safety Assessment (JSA)**

A job procedure for working in elevated situations or near edges, like pits or holes, should be in place. Analyzing elevated work tasks helps ensure the fall protection system matches worker mobility needs.

Key points include:

- Company policy outlines necessary actions.
- Appropriate fall protection equipment must be selected, including:
  - Body Support mechanisms
  - Climbing protection systems
  - Vertical and Horizontal Lifeline Systems
  - Confined Entry and Retrieval Systems
  - Controlled Descent Emergency Escape Systems
- Merely selecting safety equipment doesn't create a fall protection program.

Employers must choose suitable equipment based on manufacturer guidance and should avoid using unapproved equipment.

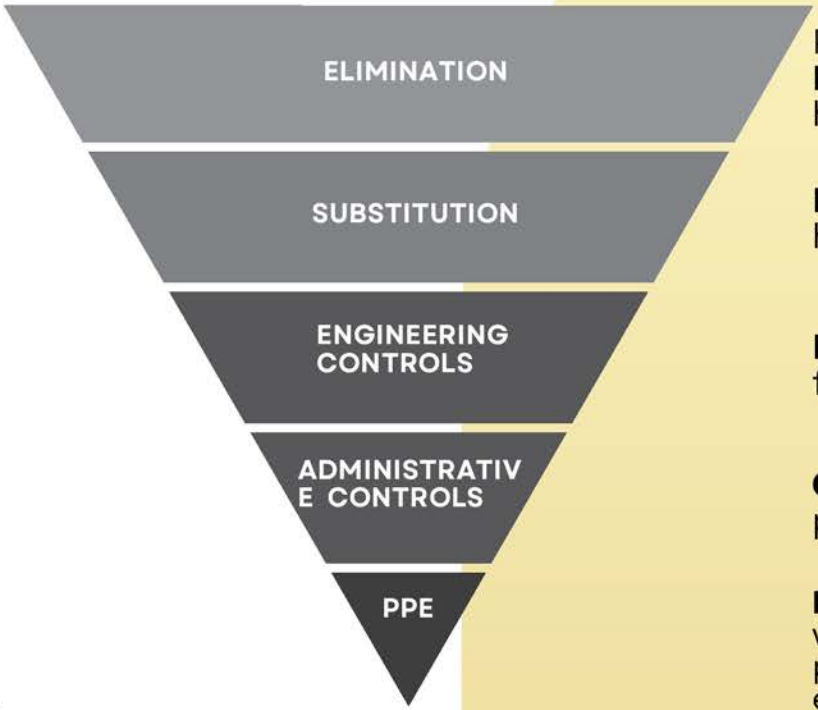
**Provide Training**

Ensure employees working at heights meet training requirements and possess necessary skills. Recognize the scope and hazards of the work, and apply the hierarchy of controls when assessing such tasks.

# UNDERSTANDING FALL PROTECTION

## Hierarchy of Control

Most Effective




Least Effective

Physically **Remove** the hazard

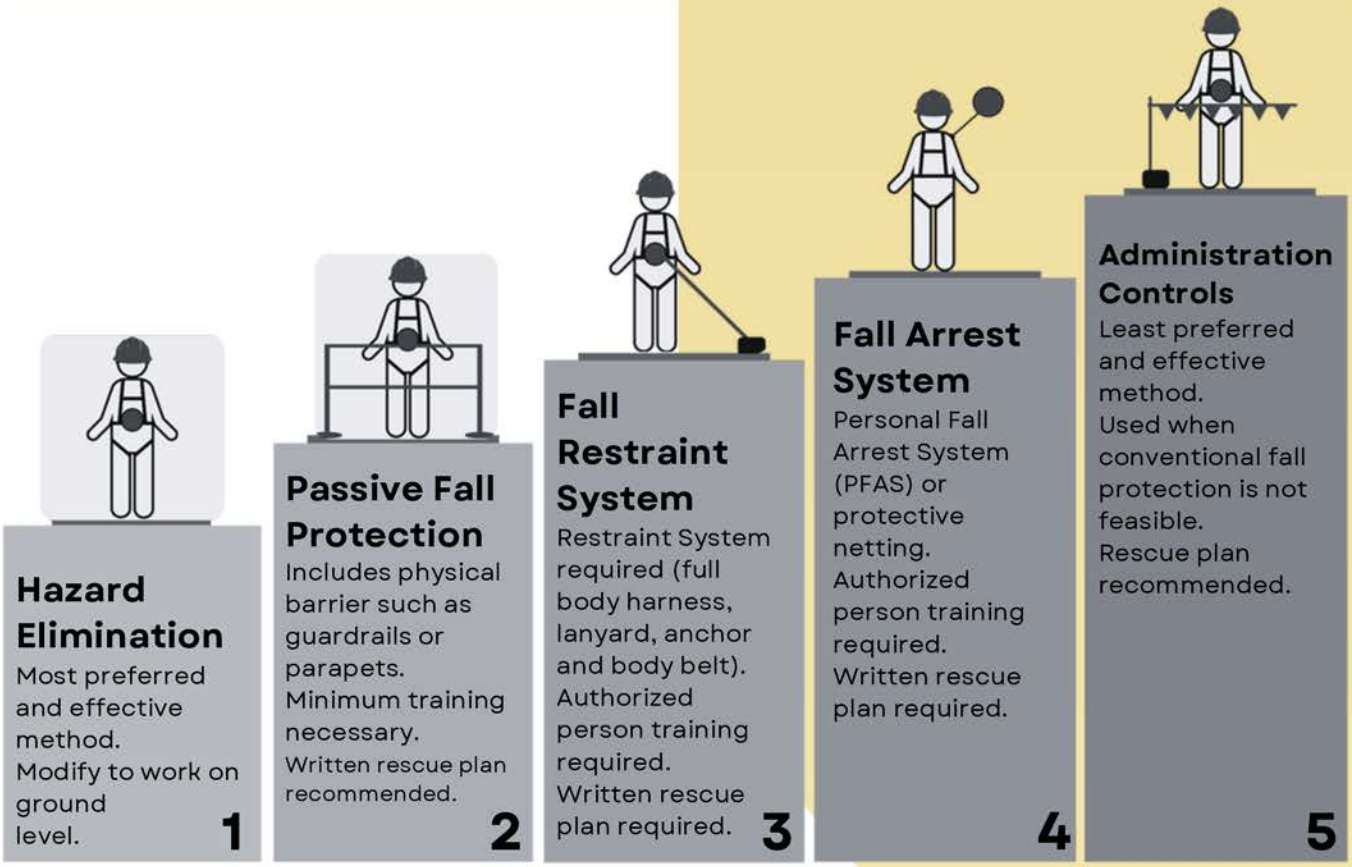
**Replace** the hazard

**Isolate** people from the hazard

**Change** the way people work

**Protect** workers with personal protective equipment

## Hierarchy of Fall protection



**Hazard Elimination**
Most preferred and effective method.
Modify to work on ground level.
1

**Passive Fall Protection**
Includes physical barrier such as guardrails or parapets.
Minimum training necessary.
Written rescue plan recommended.
2

**Fall Restraint System**
Restraint System required (full body harness, lanyard, anchor and body belt).
Authorized person training required.
Written rescue plan required.
3

**Fall Arrest System**
Personal Fall Arrest System (PFAS) or protective netting.
Authorized person training required.
Written rescue plan required.
4

**Administration Controls**
Least preferred and effective method.
Used when conventional fall protection is not feasible.
Rescue plan recommended.
5

# Calculating Fall Clearance

## Shock Absorbing Lanyard

Fall clearance is the distance required to prevent workers from hitting the ground or lower level, in case of a fall.

**Here is how to calculate fall clearance:**

**Required Distance =** Lanyard Length + Deceleration Distance + Height where work is happening + Safety Factor

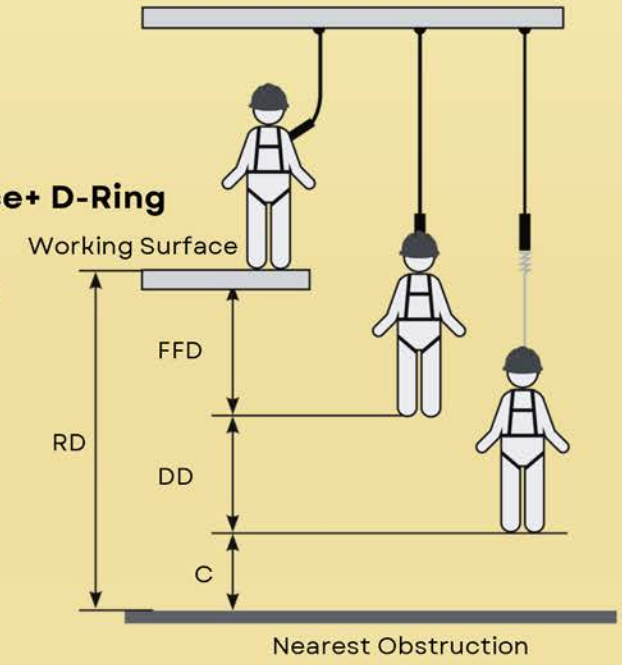
Correct calculation ensures that the operator's fall arrest system will activate so they are not injured by coming into contact with any obstructions below.

**RD = FFD + DD + C**
**RD = Required Distance**
Working surface to Nearest Obstruction

**FFD = Free Fall Distance**
2.0m Maximum allowed

**DD = Energy Absorber Deceleration Distance+ D-Ring Slide and Harness Stretch**

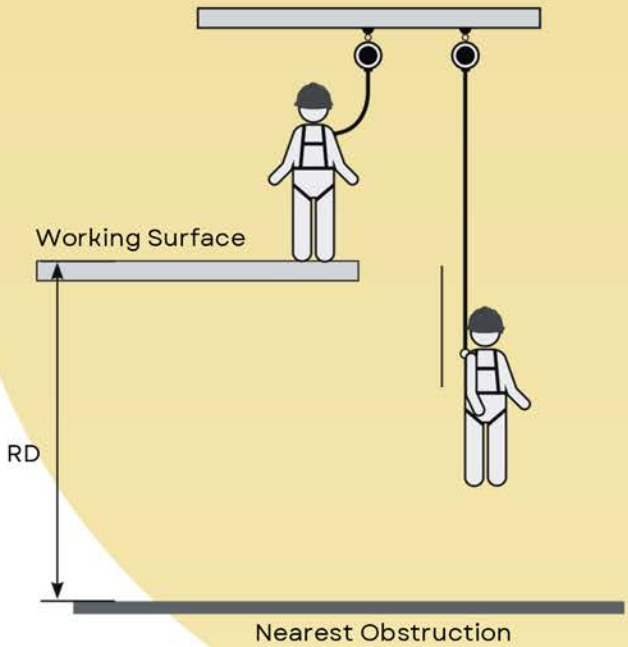
**C = Clearance to Obstruction During Fall Arrest**
(1.0m minimum safety factor required)



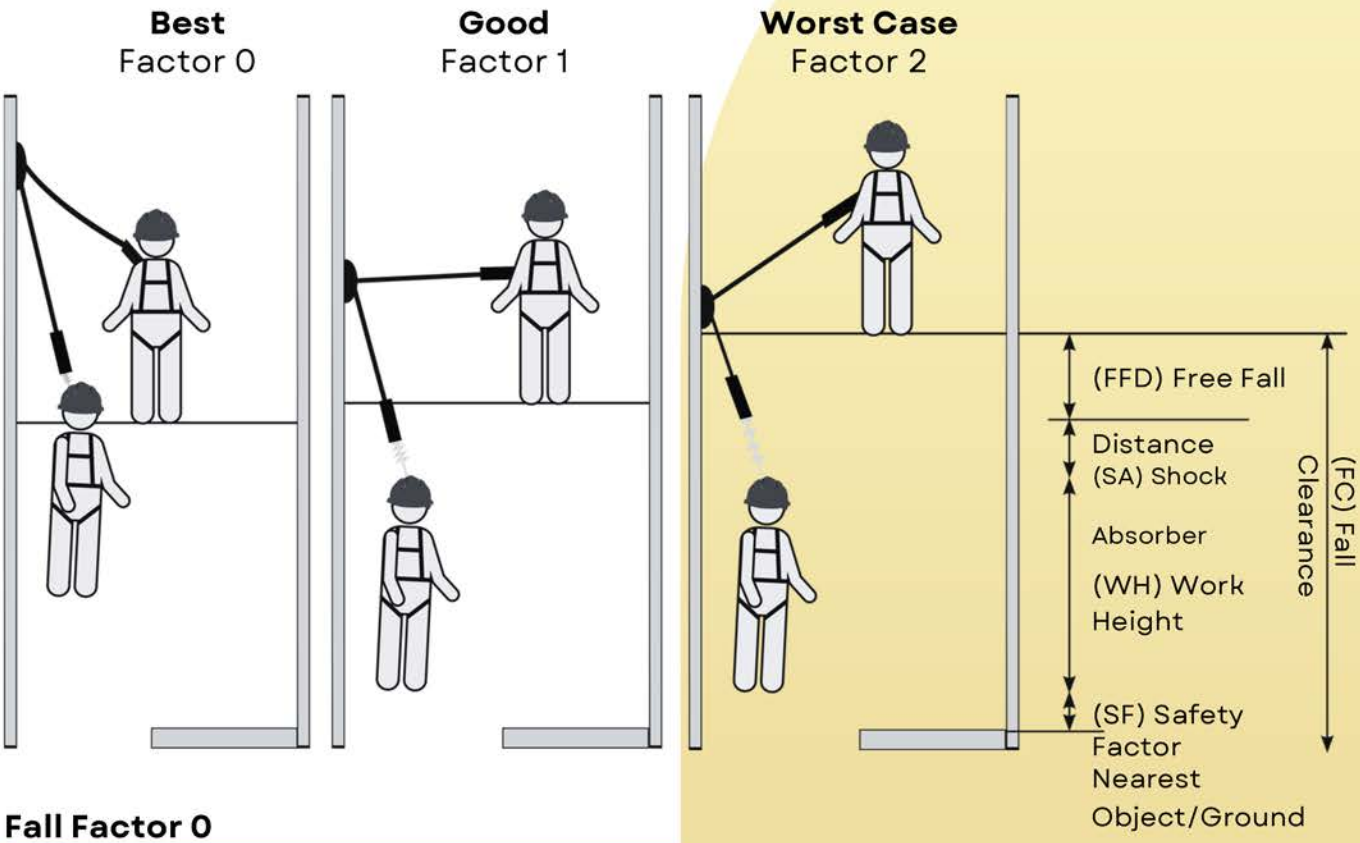

| FFD | Extension |
|---|---|
| 600mm | 300mm |
| 1000mm | 500mm |
| 1500mm | 600mm |
| 2000mm | 900mm |

## Self Retracting Lifeline

**RD = Required Distance is 2.0m**
Required distance below working surface to Nearest Obstruction



# UNDERSTANDING FALL PROTECTION




## Fall Factor 0

Indicates that you have reduced as much free fall distance as possible by attaching your lanyard above you.

## Fall Factor 1

Indicates your anchor point is at the same level as your attachment point on the harness.
This means that you will potentially fall the full length of your lanyard (2m on a 2m lanyard).

## Fall Factor 2

Is the worst case scenario, where you are anchored at your feet. This means you will fall up to twice the length of your lanyard. A total of 6.75m clearance would be required when using a 2m Lanyard.

## Definitions of Fall Protection Systems

A Fall Protection System is designed to control and protect users from falls or to minimize injury if a fall occurs. It consists of components that protect users from falls from heights.

- A body holding device – A full body harness, sitting harness, work positioning belt, rescue harness, rescue loop.
- An anchor device which can be connected to a reliable anchorage point.
- A connecting Element – A lanyard, fall arrestor, Self retracting Life line that connects the harness to the anchor.

# UNDERSTANDING FALL PROTECTION

## Fall Arrest

A Fall Arrest System prevents free falls and limits maximum forces on the user to 6kN or less. Free fall occurs when the fall distance exceeds 600mm before the system engages, either vertically or on a slope requiring assistance to walk.

## Requirements

- Full-body harness lanyard or fall-arrest device which will limit free fall to 2.0m max.
- 12kN ultimate strength anchorage or equivalent horizontal lifeline or rail.

## Typical Application

## Limited Free Fall

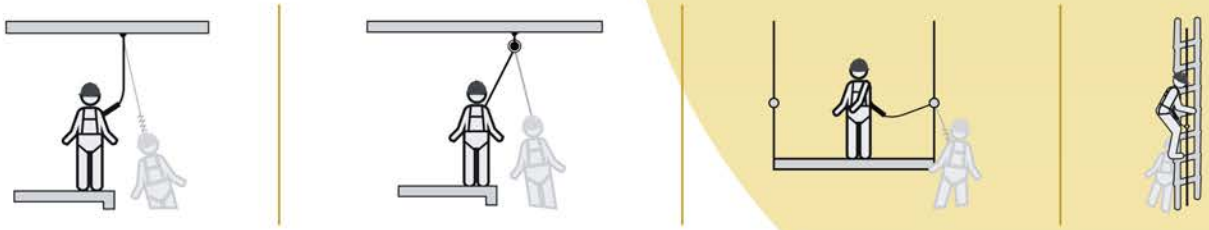
A combination of anchorage placement and Lanyard length which will permit only a limited free fall (<600mm).

## Requirements

- Full-body harness lanyard or fall-arrest device that will limit free-fall 600 mm max.
- 12kN ultimate strength anchorage or equivalent horizontal lifeline or rail.

## Typical Application

Any situation where the use of either a short lanyard or a fall-arrest device (or both where applicable) will limit any free fall to 600 mm.



# UNDERSTANDING FALL PROTECTION

## Restraint Technique

A fall-arrest system combines anchorage placement and adjustable lanyard length to prevent operators from reaching fall risk positions unless incorrectly adjusted. It controls movement by connecting a person to an anchorage with an adjustable lanyard, ensuring they cannot fall freely or partially.

## Requirements

**Where any possible fall will only be a limited free fall (<600 mm):**

- A lower-body harness.
- Anchorage with ultimate strength 12 kN.

**All other cases:**

- A full-body harness.
- Anchorage with ultimate strength 12 kN.

## Typical Application

Any scenario allowing access to work on a stable surface without fall risks, assuming proper equipment adjustment.

## Total Restraint

A system where no fall is possible.

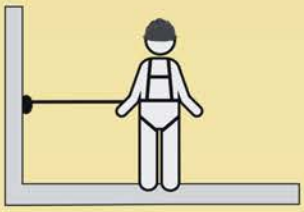
## Requirements

**Full Body Harness**

Adjustable Lanyard to prevent the user from reaching areas or positions where the risk of a fall from a height exists. (Lanyards without shock absorbers are allowed).

## Typical Application

Total Restraint is the method of controlling a person's movement by anchoring them to prevent falls from edges, surfaces, or unstable platforms.



# UNDERSTANDING FALL PROTECTION

## Work Positioning

A Work Positioning System is designed to hold the user at a work location and limit free fall to 600mm, but it should not be used for fall arrest. It assumes users have adequate training to manage additional risks. A Restrained Fall involves using equipment like a harness and adjustable lanyard to maintain a restraint condition as the distance to a potential fall zone changes.

### Requirements

Full-body or lower-body harness and pole strap.

### Typical Application

Working on a pole where no more than 600mm maximum free fall is possible.

## Rope Access / Working in Suspension

A Suspension System is designed to suspend and support the user while being transported (raised up or down) vertically and does not allow free fall. After a fall in a full body harness, the user may be suspended in a position that they can not recover themselves from, like over the edge of a platform. The rescuers will setup the rescue kit, attach the rescue system to the victim and detach them from their fall arrest device, raise or lower them to safety.

### Requirements

Full-body harness featuring two fall arrest attachment points: a primary attachment for suspension and a secondary backup system. For extended suspension work, a podium seat may be necessary. The ventral (waist) attachment points on the harness are ideal for suspension use. Ensure that anchor points are rated to 12kN, or utilize a tripod or davit system. A 12kN anchor point is essential if there is a risk of a fall greater than 600mm.

### Typical Application

Confined space work where you may be required to be lowered or lifted out of a tank. Window Cleaning Painting

# UNDERSTANDING FALL PROTECTION

## Rescue and Evacuation

A Rescue system is designed to raise or lower a user to safety in the event of an emergency. No free fall should be possible.

### Requirements

A full body harness, a suitable anchorage point to ensure the rescuer is safe. A rescue system that can either raise or lower the rescued user to safety. A backup fall arrest system for the rescuer, suitable anchor points rated to 15kN.

### Typical Application

Rescuing a worker who has taken a fall who cannot climb to safety.

## Understand Your Work Application

### Work Application

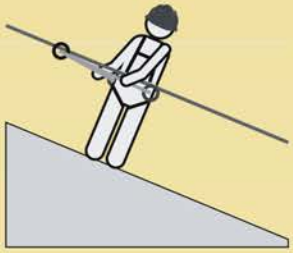
Before working at height a full risk assessment and job safety Analysis shall be completed to understand the proper use and limitations of PPE equipment.

**Equipment Used:** PPE Products, Harness, Connector, Anchor.

## Be Aware of The Following Safety Point

### Roof Work

- Confirm anchor points are installed, fitted, and certified.
- Ensure the rope line is taut between anchor points when using rope and grabs.
- Connect the shock absorber to the harness and rope grab with a karabiner.
- Use rear or frontal fall arrest attachment points on the harness consistently.
- All fall arrest points on a harness are marked with "A."
- Use a suitable anchorage system if anchor points are unavailable, ensuring it can withstand a fall.



**Equipment Used:** Full body harness with rear or frontal Fall arrest attachment
points, Approved rope & rope adjuster with shock absorber pack. Temporary metal roof anchor or Anchorage sling.

# UNDERSTANDING FALL PROTECTION

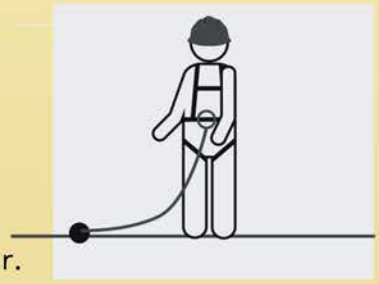
## Ladder Work

- Certify and maintain fixed ladder safety lines before use.
- Secure mobile ladders with certified brackets.
- Use certified anchor systems and ensure safety rope lines are tied off properly, with rope grabs attached to harness connection points using a karabiner.
- Always wear a full body harness and twin lanyard with a shock absorber when working on ladders.

**Equipment Used:**

- Full body harness (rear or frontal fall arrest attachment points)
- Twin lanyard with shock absorber
- Approved rope & rope adjuster
- Anchorage sling
- Certified ladder

## Construction & Maintenance



- Ensure anchor points are properly installed, fitted, and certified.
- Keep the rope line taut between anchor points when using rope and rope grabs.
- Regularly service fall arrest systems to ensure they are functional.
- Use single or twin elasticated lanyards with a shock absorber.
- Utilize rear or frontal fall arrest attachment points on your harness when working at heights.

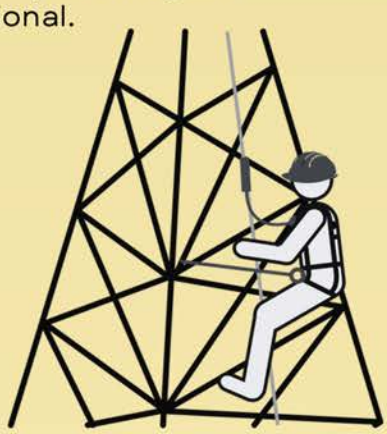
Ensure static lines are certified and in good working condition.

**Equipment Used:**

- Full body harness (rear or frontal fall arrest attachment points)
- Single or twin lanyard with shock absorber Suitable inertia device

## Tower Work

- Confirm proper installation and certification of anchor points.
- Keep the rope taut from anchor points when using rope and grabs.
- Regularly service fall arrest equipment for functionality.
- Use a rear fall arrest harness with twin lanyard and belay loops at heights.
- Ensure permanent ladder systems are certified and functional.

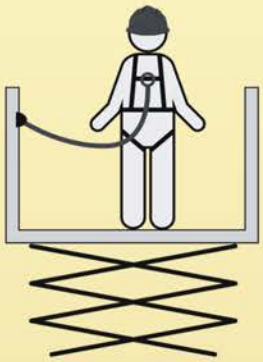


**Equipment Used:**

- Full body tower worker's harness
- Twin tie-back lanyard with shock absorber
- Work positioning lanyard
- Approved rope adjuster
- Adjustable pole straps
- Anchorage sling
- Temporary horizontal lifelines
- Self-retracting lifelines

# UNDERSTANDING FALL PROTECTION

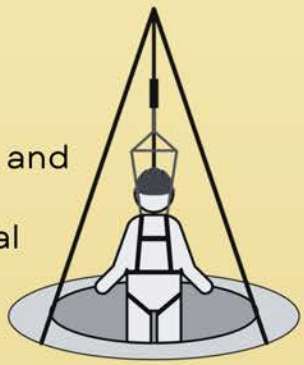
## Elevated Work Platforms



- Confirm anchor points and elevated work platforms are installed, rated, and certified.
- Regularly inspect and maintain fall arrest equipment for proper condition.
- Utilize rear fall arrest attachment points on your harness with a lanyard when working at heights.

**Equipment Used:** Full body harness with rear or frontal Fall arrest attachment points, Single lanyard with shock absorber.

## Confined Space & Rescue



- Regularly inspect and service confined space and rescue equipment.
- Ensure tripod or davit systems are properly installed, fitted, and certified.
- Inspect the Confined Space Harness, Type 3 Rescue retrieval SRL, inertia reel, and rescue winch before use.
- Utilize rescue loops for operations with the confined space harness.
- Use arm straps with the spreader bar during rescues.

**Equipment Used:**

- Full body confined space harness with rear fall arrest attachment points
- Shoulder confined space loops
- Type 3 rescue device
- Winch
- Confined space spreader bar Tripod or davit arm

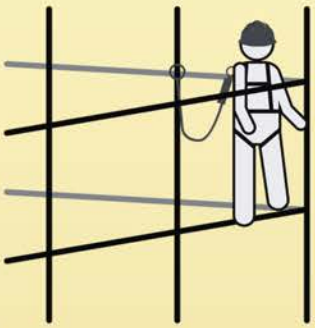
## Rescue & Evacuation

Before working at heights, create a rescue plan and select a suitable rescue kit for the environment. Regularly inspect fall arrest equipment to ensure its condition. Use front or rear harness attachment points for better control and visibility during rescues.

**Equipment Used:** Full body harness with rear or frontal Fall arrest attachment points, Shock absorbing lanyard, rescue kits and a rescue pole, Suitable anchor point.

# UNDERSTANDING FALL PROTECTION

## Scaffolding



- When connecting to scaffolding, ensure the anchor point can support 15 kN.
- Regularly check the maintenance of fall arrest equipment.
- Use the rear fall arrest attachment points of your harness with twin lanyards and scaffold hooks when working at heights.
- For lower scaffolding, twin retractable units attached to the back D-ring of the harness may be preferable due to a reduced fall factor.

**Equipment Used:** Full body harness rear or frontal Fall arrest attachment points, Twin shock absorbing lanyard or twin retractable lanyard with scaffold hooks.

## Warehousing

- Ensure anchor points on the elevation cage are properly installed and certified.
- Regularly inspect and service fall arrest equipment to ensure it's in good condition.
- Use the rear fall arrest attachment point with a retractable webbing lanyard to minimize fall factor while maximizing movement range.

**Equipment Used:** Full body harness with rear or frontal Fall arrest attachment points, Retractable Lanyard, Accessible anchor point or anchor sling.

## Utilities

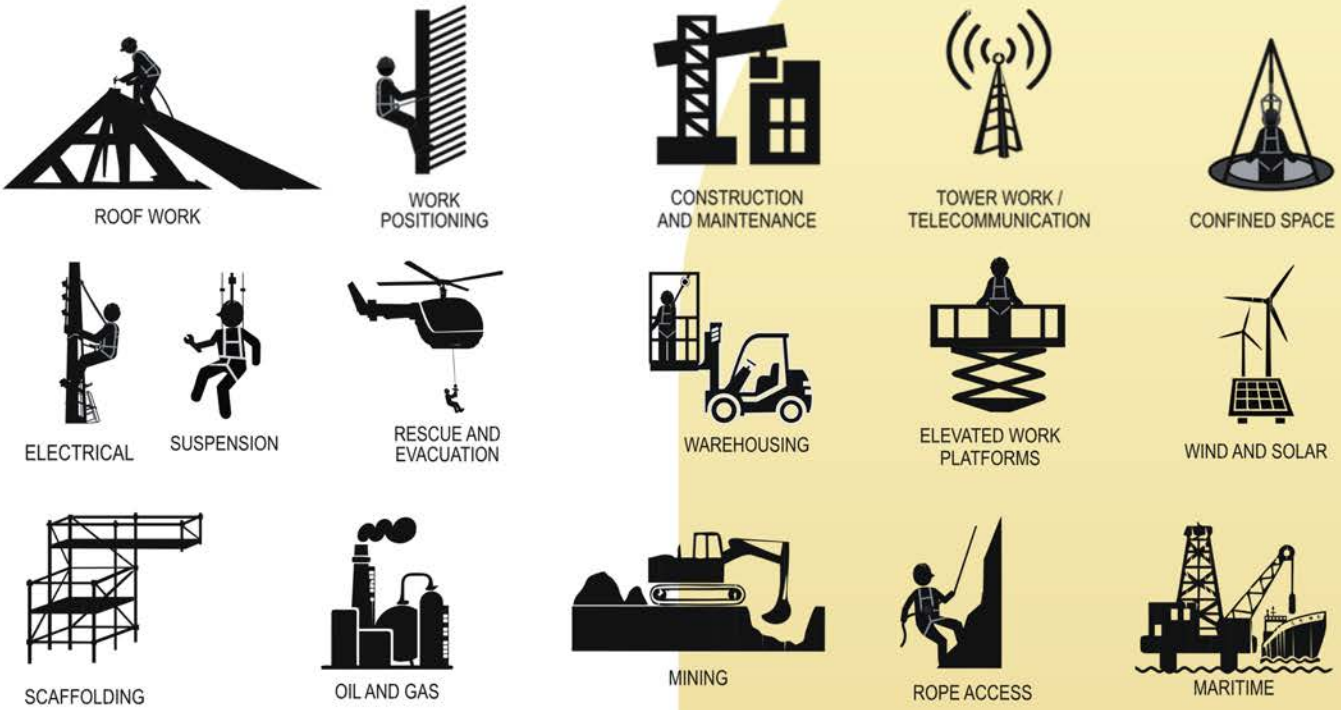
- Ensure when connecting to the cross arm of the pole it is able to sustain the force of a limited fall (12kN).
- Ensure fall arrest equipment has been regularly serviced and in good working condition.
- Make sure you utilize rear or frontal Fall arrest attachment points of your harness with shock absorbing lanyard and pole strap attachments with pole strap on your harness whilst working at heights.
- Always ensure you are connected, the use of two pole straps will allow for the transition from below to above the cross arm beam while maintaining one connection at all times.

**Equipment Used:**

- Full body harness with rear or frontal fall arrest attachment points
- Pole strap attachment points
- Pole strap Secondary fall arrest lanyard.

# UNDERSTANDING FALL PROTECTION

## PPE Applicable in Industries




## Height Safety Training and Consultation Services

PG provides a variety of courses for individuals working at heights or in confined spaces, catering to all skill levels. Their training ranges from basic height safety to advanced confined space training. The professional team offers advice to facility managers, contractors, and maintenance technicians on safe practices and height safety systems. They also conduct site visits to help businesses prepare for height safety activities.

## Guidelines for Periodic Assessments

- Regular periodic examinations of PPE are required per EN 365 of PPE Regulation 2016 to ensure user safety.
- Personal protective equipment must be examined at least once every 12 months by the manufacturer or authorized representative.
- Examination results should be recorded on the equipment's check card, and the next due date for inspection determined.
- Inspections should verify the legibility of markings, check metals for sharp edges, corrosion, and proper functioning of mechanisms.
- Webbings/ropes must be inspected for breakage, fraying, chemical exposure, and other damage affecting performance.
- Equipment must be discarded according to disposal instructions when necessary.
- Annual examinations confirm proper functioning and are mandatory.
- Equipment used to arrest a fall must be withdrawn from use.

# UNDERSTANDING FALL PROTECTION

## Removal of Equipment from service

A 12-month service or inspection is due if:

- There has been a fall.
- Labels are missing or illegible.
- Excessive abrasive wear is present.
- Broken fibers, tears, cuts, or weld burns are visible.
- Deterioration or stretching has occurred.
- There is loss of resilience, discoloration, or visible damage.
- Parts are not moving freely or are corroded.
- There is a reduction in rope or webbing cross-section.
- Excessive contamination remains after cleaning.

## Instructions For Maintenance

### Cleaning:

Personal protective equipment requires careful cleaning to protect its materials. Use a cotton cloth or soft brush for textiles and plastic parts, avoiding abrasive materials. For intensive cleaning, wash harnesses at a maximum of 40°C with neutral detergent and dry in the shade. Wipe metallic parts with a wet cloth, and allow wet equipment to dry naturally, away from direct heat.

### Storage:

Personal protective equipment (PPE) should be stored in a loosely packed manner, in a dry and well-ventilated area. It is essential to keep it protected from direct sunlight, UV degradation, dust, sharp edges, extreme temperatures, and harsh substances. Whenever possible, try to retain PPE in its original packaging.

### Repair:

Repairs should be performed exclusively by the equipment manufacturer or their authorized representative, adhering to the manufacturer's procedures. Please separate the equipment into three distinct crates, designating them for Textile, Metal, and Plastic components respectively.

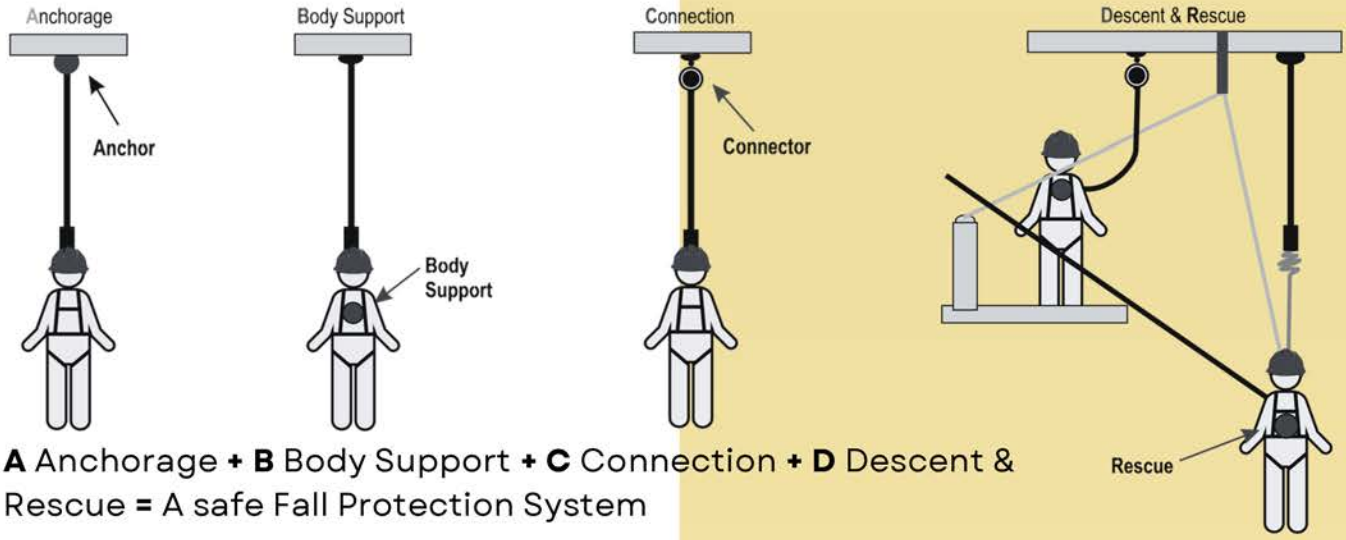
# UNDERSTANDING FALL PROTECTION

## The ABCDs of Fall Protection

To ensure safety when working at heights, familiarize yourself with the ABCD's of fall protection for a secure fall protection system.

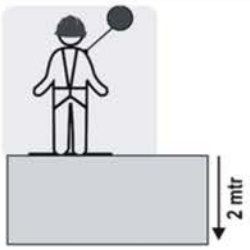
- **Anchorage:** An anchor is a device that completes the fall arrest system by securing the user to a structure, whether fixed or mobile.
  - Types of Anchors: Horizontal lifelines, fixed anchors, beam anchors, and anchor straps.
- **Body Support:** The full body harness serves as the primary connection between the user and the shock-absorbing attachment through its attachment points.
  - Types of Harnesses: Rescue harnesses, construction harnesses, and tower harnesses.
- **Connecting Device:** This device links a full body harness to an anchor and serves as a vital connecting element within the system.
  - Types of Attachments: Shock-absorbing lanyards, restraint lanyards, rope lines, and fall arrest blocks (SRLs).
- **Descent & Rescue:** In case of a fall, a robust rescue plan must be in place to ensure the user can descend, ascend, or be rescued safely without putting themselves or others at risk.

**Types of Rescue Equipment:** Rope rescue kits, tripods, and davit systems.

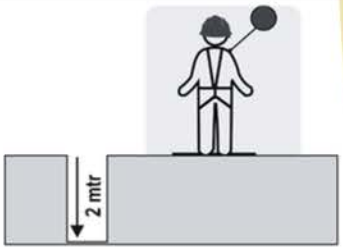



**A** Anchorage **+ B** Body Support **+ C** Connection **+ D** Descent & Rescue **=** A safe Fall Protection System

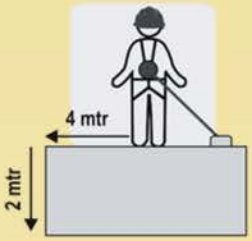
## When to use Fall Protection



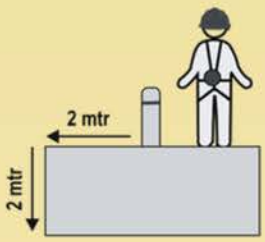

Fall Protection Equipment must be utilized whenever a worker is operating at a height exceeding 2 meters.




Fall protection equipment must be utilized when a worker is operating close to the edge of an open pit or hole.




If a Fall Arrest System cannot be utilized, then a Restraint System should be used as a minimum requirement.




Whenever possible, utilize a physical barrier (passive protection) when working close to an edge.

# UNDERSTANDING FALL PROTECTION

## Standards

**EN 341** PPE against Falls from a Height **Descender Devices**

**EN 353-1,2** PPE against Falls from a Height **Guided Fall Arresters**

**EN 354** PPE against Falls from a Height Equipment **Lanyards**

**EN 355** PPE against Falls from a Height **Energy Absorbers**

**EN 358** PPE for **Work Positioning**

**EN 360** PPE against Falls from a Height **Retractable Fall Arrester Blocks**

**EN 361** PPE against Falls from a Height **Full body Harnesses**

**EN 813** PPE against Falls from a Height **Sit Harness**

**EN 15151** Mountaineering equipment **Breaking Devices**

**EN 1496** Rescue Equipment **Rescue Lift System**

**EN 1497/ EN 1498** Rescue Equipment **Rescue Harnesses**

**EN 1891** PPE against Falls from a Height **Kernmantle Ropes**

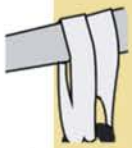
**EN 892** PPE against Falls from a Height **Stretchable Ropes**

**EN 12277 Mountaineering Harness**

**EN 12841 Rope Access System**

**EN 567 Mountaineering Rope Clamps**

**EN 362** PPE against Falls from a Height **Connectors**



**EN 795/ EN 795/A1** PPE against Falls from a Height **Anchor Devices**

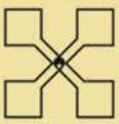
**EN 12278 Pulley**

**EN 12492 Mountaineering Helmet**

**EN 397 Industrial Safety Helemt**

**EN 566 Slings**

**EN 795 Type B** Stationary Anchor Points While In Use, And With The Need **For A Structural Anchor**

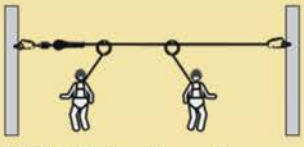


**EN 795 Type E** Performance Relies Solely on Mass and Friction

**EN 795 Type A Stationary Anchor Points** While In Use, And With The Need For A Structural Anchor

**EN 795 Type C Flexible Anchor Line**

**EN 795 Type D Rigid Anchor Line**



**TS 16415 Anchors for more than 1 users**

# HARNESS

## How to wear a Harness?

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

**Step-2**
Slip harness over shoulders and close the buckle on the chest.

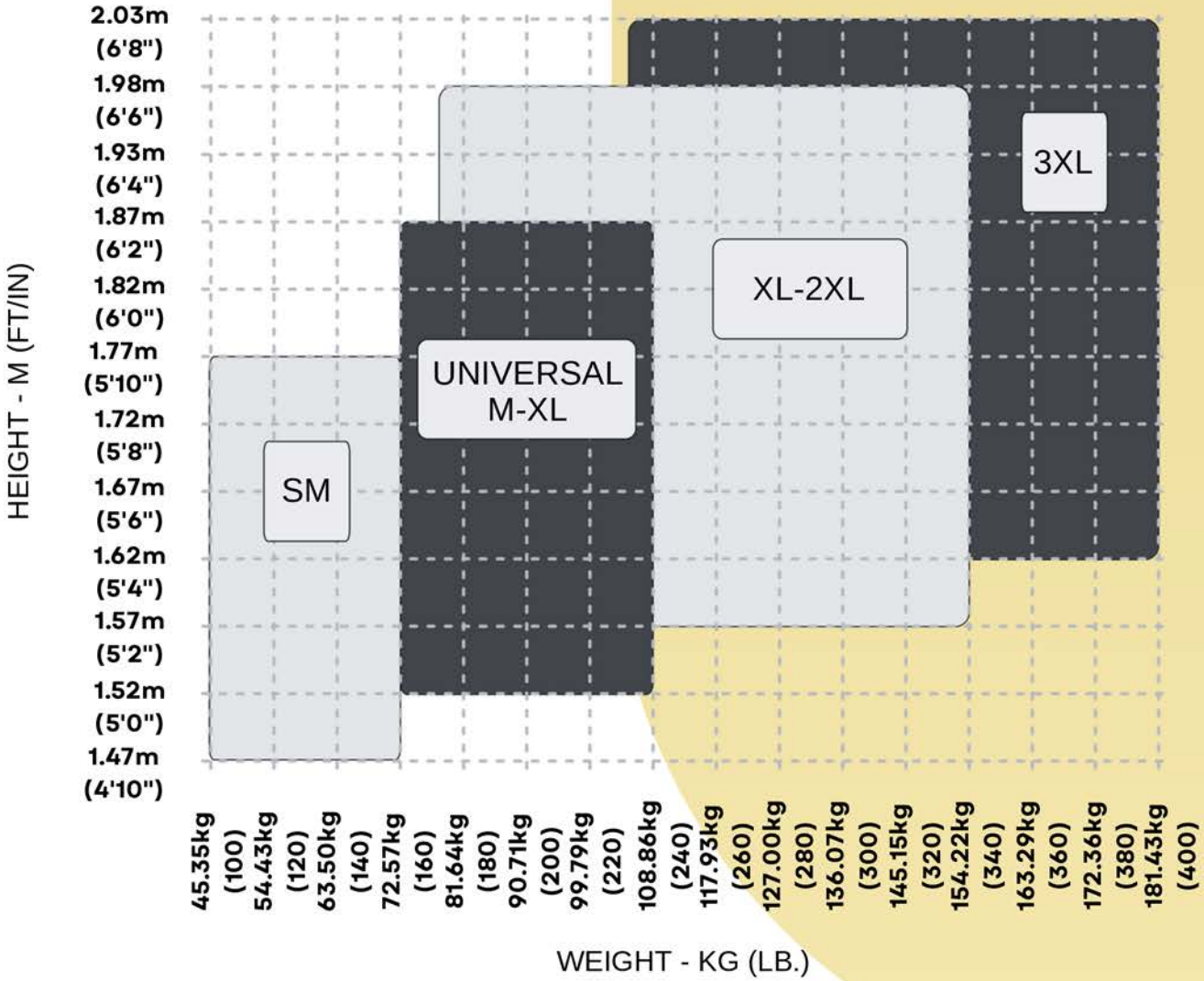
**Step-3**
Close the buckle on waist strap if Harness has waist belt.

**Step-4**
Pull the leg straps one by one round your thighs outwards to your front.

**Step-5**
To check and adjust all the straps of the harness to your body adjustment.

**Step-6**
Now ready to work.

## Harness Sizing Chart



# HARNESS

## Attachment Points of Harness and its Uses

**The dorsal attachment point**
on the harness, located on the ID plate between the shoulder blades, is designed for fall arrest. It evenly distributes fall forces and is suitable for standard site work or platform tasks where climbing or work positioning is not required.


**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**
The lateral D-rings situated on the sides in the lower waist area of the harness are designed for work positioning. They enable a worker to keep both hands free for tasks while staying connected to the work area. It's important to highlight that these attachment points are not intended for fall arrest; rather, this system serves as a means of fall restraint.


**Ventral Attachment Point**
This attachment point is located in the center of the waist level of the Harness. It is used for rope access, rescue and many other applications.


**Extension Strap Attachment Point**
The Extension Band allows the user to easily connect to or disengage the Dorsal attachment D-ring without any external help. 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 and roof work.


**Rescue Attachment Points**
Located on shoulders of harness in the form of webbing loops or steel D-rings. Allowing easy attachment of Spreader bar. Used for confined space entry/exit and rescue and retrieval.


**'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.

# VERTICAL LIFLINE SYSTEMS

### Top Anchor Set

A Top anchor bracket
B System energy absorber

### Intermediate Set

A Hands Free wire guide
B Stainless steel cable ø 8mm

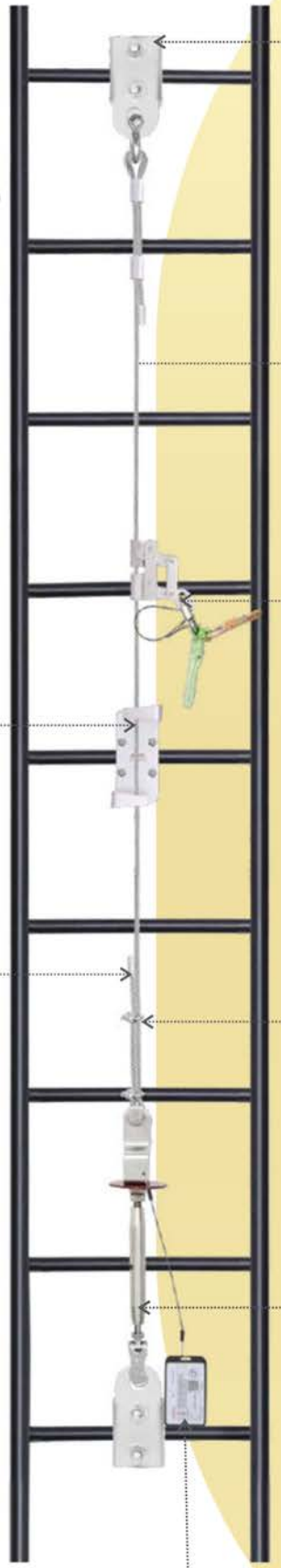
### Bottom Anchor Set

A Bottom anchor bracket
B Cable clamp and tensioning device

# Vertical Anchorage Line System on Rigid Cable Line

## Ref: PGL-700

EN 353-1:2014+A1:2017



Optional

### Mounting Bracket Ref. PGL-MB-700

- Material: Stainless Steel 316
- Breaking Strength > 23 kN
- Compatible with rung diameter: Ø25.0mm -Ø96.0mm
- Complies with EN 795 Type A

### Mounting Bracket Ref. PGL-MB-701

- Material: Stainless Steel.
- Minimum Breaking Strength:23 kN
- Compatible with rung diameter- Ø22.0mm-Ø114.0mm

### Intermediate Ref. PGL-I-200

- Material: Stainless Steel Grade 316 Recommended Installation - Every 10m
- Compatible with rung diameter:
- Ø18.0mm to Ø35.0mm

### Wire Rope Cap Ref. PGL-WRC- 700

- Material : Aluminium Alloy

Optional

### Tensioner Ref. PGL-T- 700 S

Regulates tensioning of the cable Equipped with a Tension Indicator
Material: Stainless Steel Grade 316

Optional

***Extension Arm (Finish-ED Coating Black) - Ref.: PGN 7000(06) Length : 2108.0 mm and Weight: 7.670 kgs***

### Mounting Bracket Ref. PGL-MB-702

- Material: Stainless Steel.
- Breaking Strength > 23 kN
- Compatible with rung diameter: Ø16.0mm to Ø42.0mm

### Wire Rope Ref. PG-WR-08

(where XXX is the length of the wire rope in meters)

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

### Rope Grab Ref. PGL-RG -200

- Material of Rope Grab: Stainless Steel Grade 316
- Finish: Shot blasted and Electro polished Anti inversion mechanism
- Material of Karabiner: Alloy Steel

**Shock Absorber**

### Set of 2 U-Bolts and 1 Thimble Ref. PGN 6000(01)

- U- Bolts : Qty- 2 nos.
- Material : Stainless Steel 316
- Thimble : Qty- 1 nos.
- Material : Stainless Steel 316

### Tensioner Ref. PGL-T- 700

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

**RFID Tag**

# VERTICAL LifLine systems

## Applications

- Telecom Towers
- Industrial Ladders
- Power Transmission
- Tower Chimney Ladders

vertical system

**Top / Bottom Bracket PG-BB 100**
Material : SS 316/ SS 304
Finishing : Powder Coating
Range : B.S > 2 3 k N.
Conformity : EN 795 Class A1.

**Shock Absorber PG-SA-300**
Material : SS 316/ SS 304
Finishing : Plating with shrink sleeve
Range : Limits the impact of force to less than 6kN.

**Wire Rope Endcap PG-WRE-10**
- Material : Aluminium Alloy
- Finishing : Turning Finish Cut.

7x19

**Intermediate Bracket PG-IB- 03**
Material : SS 316/ SS 304
Finishing : Plating

**Wire Rope PG-WR-08**
- Material : SS 316 / 316L / 304
- Diameter : 8 mm
- Construction : 7 X 19
- Range : B.S > 36k N

**Cable Extremities Thimble**
Material : SS 316/ SS 304
Finishing : Plating
Range : for 8mm SS Wire rope
Quantity : 1 Nos.

**Tensioner PG-T-101**
•Material : SS 316/ SS 304
•Finishing : Plating with shrink sleeve
•Range : Limits the impact of force to less than 6kN.

**U Bolt**
Material : SS 316/ SS 304
Finishing : Plating
Range : for 8mm SS Wire rope
Quantity : 3 Nos

**Cable Extremity- PG-CE-106**

**Swage Terminal**
Material : SS 316/ SS 304
Finishing : Plating
Range : for 8mm SS Wire rope

**Swage less Terminal**
Material : SS 316/ SS 304
Finishing : Plating
Range : for 8mm SS Wire rope

**Representation of Assembled Kit**

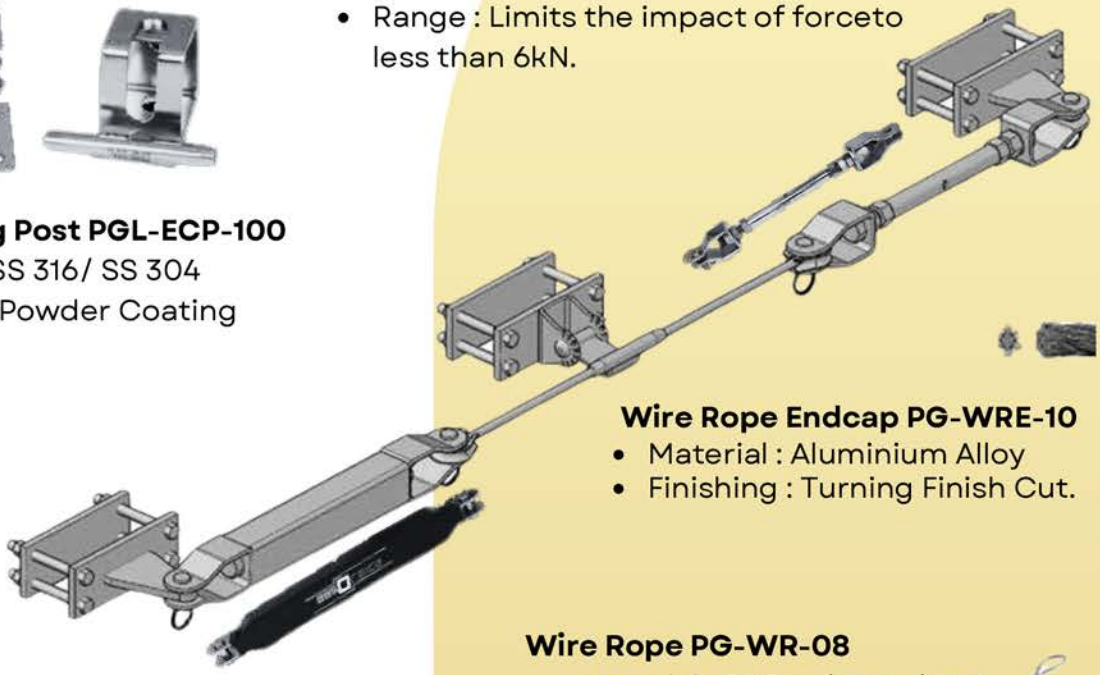
# VERTICAL LifLine systems

**Tensioner PGL-T-400**

- Material : SS 316/ SS 304
- Finishing : Plating with shrink sleeve
- Range : Limits the impact of forceto less than 6kN.

**End Clamping Post PGL-ECP-100**

- Material : SS 316/ SS 304
- Finishing : Powder Coating



**Wire Rope Endcap PG-WRE-10**

- Material : Aluminium Alloy
- Finishing : Turning Finish Cut.

**Wire Rope PG-WR-08**

- Material : SS 316 / 316L / 304
- Diameter : 8 mm
- Construction : 7 X 19
- Range : B.S > 36 kN

**Shock Absorber PGL-SA-300**

- Material : SS 316/ SS 304
- Finishing : Plating with shrink sleeve
- Range : Limits the impact of force to less than 6kN.

**Runner PGL-DPR-600**
**(Double pulley runner)**

- Material : SS 316/ SS 304
- Finishing : Plating.
- Recommended : for intermediate.

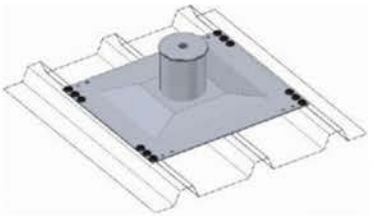
**PGL-TPR-600**
**(Tandem pulley runner)**

- Material : SS 316/ SS 304
- Finishing : Powder coating
- Recommended : For lifeline without intermediate

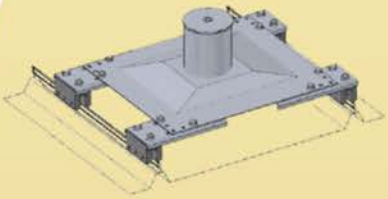
# HORIZONTAL LIFLINE SYSTEMS

## TYPES OF ROOF LIFELINE CONNECTION

**Post to sheet connection**

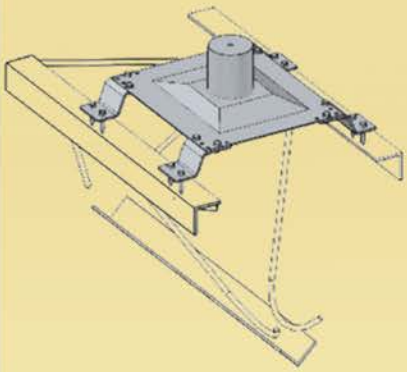


*Penetrating*

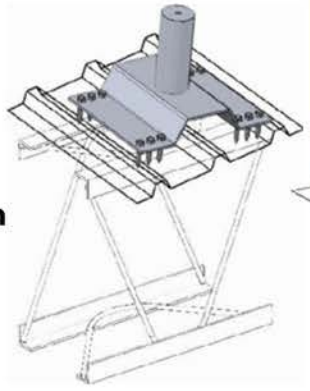


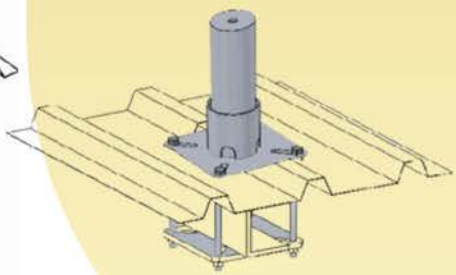
*Non Penetrating*

**Post to purlin connection**



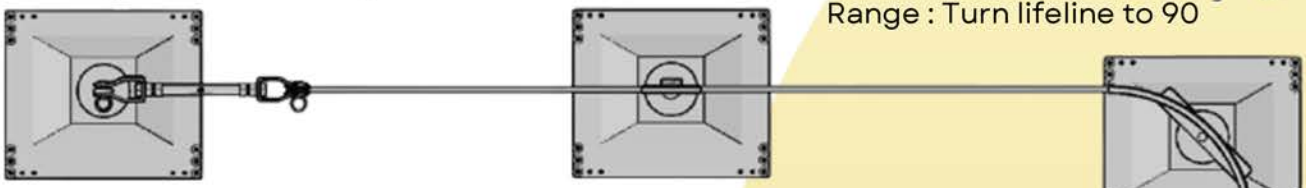
**Post to sheet to purlin connection**





**End Bracket PGL-EB-200**
Material : SS 316/ SS 304
Finishing : Powder Coating

**Turn Bracket PGL-TB-204**
Material : SS 316/ SS 304
Finishing : Plating
Range : Turn lifeline to 90



**Tensioner PGL-T-400**

- Material : SS 316/ SS 304
- Finishing : Plating with shrink sleeve
- Range : Limits the impact of force to less than 6kN.

**Wire Rope Endcap PG-WRE-10**

- Material : Aluminium Alloy
- Finishing : Turning Finish Cut.

**Fragile roofs**

**Wire Rope PG-WR-08**

- Material : SS 316 / 316L / 304
- Diameter : 8 mm
- Construction : 7 X 19
- Range : B.S > 36 kN

**Standing seam**

**Intermediate Bracket PG-IB- 03**

- Material : SS 316/ SS 304
- Finishing : Plating.
- Recommended : for Roof top lifeline only

**Trapezoidal roofs**

**Shock Absorber PGL-SA-300**

- Material : SS 316/ SS 304
- Finishing : Plating with shrink sleeve
- Range : Limits the impact of force to less than 6kN.

**Runner PGL-R-600**

- Material : SS 316/ SS 304
- Finishing : Plating
- Range : for 8mm SS Wire rope

**Cable Extremity- PG-CE- 500**

**Swage Terminal**

- Material : SS 316/ SS 304
- Finishing : Plating
- Range : for 8mm SS Wire rope

**Swage less Terminal**

- Material : SS 316/ SS 304
- Finishing : Plating
- Range : for 8mm SS Wire rope

**Thimble**

- Material : SS 316/ SS 304
- Finishing : Plating
- Range : for 8mm SS Wire rope

# ANCHOR FOR HORIZONTAL LIFELINE

**PGL-Lock-SS-101**

- Material : SS 316/ SS 304
- Finishing : Plating

**PGL-Lock-SS-201**

- Material : SS 316/ SS 304
- Finishing : Plating

**PGL-Lock-SS-301**

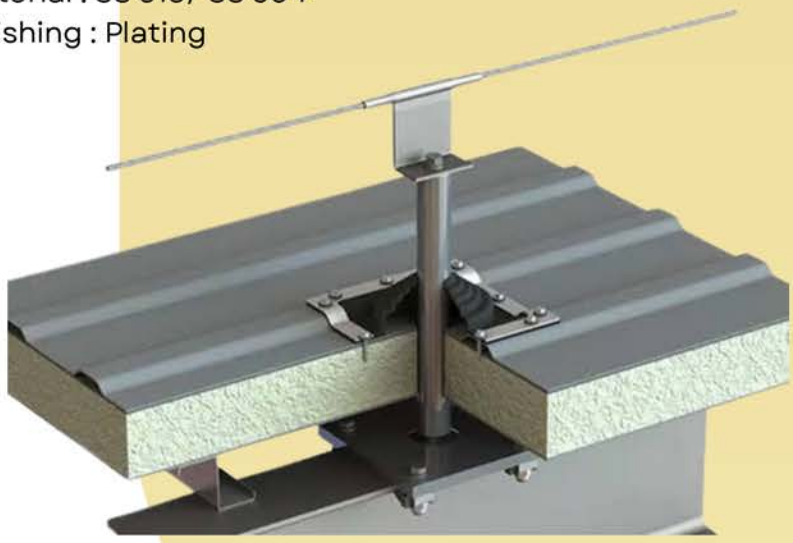
- Material : SS 316/ SS 304
- Finishing : Plating

**PGL-AP-SS-201**

- Material : SS 316/ SS 304
- Finishing : Plating

**PGL-BeamClamp-101**

- Material : SS 316/ SS 304
- Finishing : Plating



**PGL-Lock-SS-701**

- Material : SS 316/ SS 304
- Finishing : Plating

# FIXED ANCHORAGES

**Anchor Post**
**Ref. PGL-AP-100**

- The anchor is designed for fixing on metal I BEAMs to install a horizontal lifeline.
- It features an adjustable base for various beam sections and is easy to install using M12 nut and bolt.
- The post includes an M12 tapped bush for fixing connectors like swivel D-ring or eye bolt as anchorage points.
- It is compatible with a flange width of 150.0mm.

**Anchor Post**
**Ref. PGL-AP-201**

- The anchor is designed for fixing on metal I-beams to install a horizontal lifeline.
- It features an adjustable base for various beam sections and is easy to install with M12 nut and bolt.
- The post includes an M16 tapped bush for attaching connectors like swivel D-rings or eye bolts.
- It is compatible with flange widths from 150 mm to 220 mm.

**Anchor Post**
**Ref. PGL-AP-301**

- The anchor is designed for installation on metal I-beams for horizontal lifelines.
- It features an adjustable base for different beam sections and can be easily installed using M12 nut and bolt.
- The post includes a pre-installed eye bolt for connections and is compatible with flange widths between 150mm and 220mm.

**Anchor Post**
**Ref. PGL-AP-401**

- The anchor is designed for fixing on metal I-beams to install a horizontal lifeline.
- It features an adjustable base for different beam sections and is easy to install using M12 nuts and bolts.
- The post includes an M12 tapped bush for attaching connectors like swivel D-rings or eye bolts as anchorage points, compatible with a flange width of 150.0mm.

| Ref. No | Material | Finish | Weight | Min. Breaking Strength | Conforms to |
|---|---|---|---|---|---|
| PGL-AP-100 | Stainless Steel | Electropolished / E Coated | 6.51 kgs± 0.20 kgs | 15 kN. | EN 795: 2012 Type A |
| PGL-AP-101 | | | 7.18 kgs ± 0.20 kgs | | |
| PGL-AP-201 | Alloy Steel | Powder Coated Black | 15.87 kgs± 0.20 kgs | | |
| PGL-AP-202 | | | 17.85 kgs ± 0.20 kgs | | |
| PGL-AP-203 | | | 16.15 kgs ± 0.20 kgs | 23 kN. | |
| PGL-AP-301 | Stainless Steel | Electropolished/E Coated | 7.36 kgs ± 0.20 kgs | | |
| PGL-AP-401 | Alloy Steel | Powder Coated Black | 18.15 kgs ± 0.20 kgs | | |

# FIXED ANCHORAGES

**Anchor Post**
**Ref. PGL-APS-101**

- Anchor for fixing on metal I BEAM for horizontal lifeline installation.
- Adjustable base to fit different Beam sections.
- Quick installation using M12 nut & bolt.
- Comes with a pre-installed Swivel D-ring for connections.
- Compatible with flange widths of 150.0mm to 220.0mm.

**Anchor Post**
**Ref. PGL-APS-201**

- Anchor for fixing on metal I BEAM to install a horizontal lifeline.
- Base features an adjustable opening for different beam sections.
- Quick installation using M12 nut and bolt.
- Post includes M16 tapped bush for attaching connectors (D-ring, Eye bolt) as anchorage points.
- Compatible with flange widths from 150.0mm to 220.0mm.

**Anchor Post**
**Ref. PGL-APS-301**

- Anchor designed for fixing on metal I BEAM for horizontal lifeline installation.
- Features an adjustable base for different beam sections.
- Quick installation using M12 nut and bolt.
- Comes with a pre-installed eye bolt for connections.
- Compatible with flange widths between 150.0mm and 220.0mm.

**Anchor Post**
**Ref. PGL-APS-401**

- Anchor designed for fixing to metal I BEAM for horizontal lifeline installation.
- Features an adjustable base for different beam sections.
- Easy installation using nut & bolt (M12).
- Comes with a pre-installed D-ring for connections.
- Compatible with flange widths of 150.0mm to 220.0mm.

| Ref. No | Material | Finish | Weight | Min. Breaking Strength | Conforms to |
|---|---|---|---|---|---|
| PGL-APS-101 | Alloy Steel | Powder Coated Black | 16.25 kgs ± 0.20 kgs | 23 kN. | EN 795: 2012 Type A |
| PGL-APS-102 | | | 18.20 kgs ± 0.20 kgs | | |
| PGL-APS-201 | | | 7.87 kgs ± 0.20 kgs | | ANSI Z359.18:2017 Type A |
| PGL-APS-202 | | | 9.17 kgs ± 0.20 kgs | | |
| PGL-APS-301 | | | 8.16 kgs ± 0.10 kgs. | | |
| PGL-APS-302 | | | 9.45 kgs ± 0.10 kgs. | | |
| PGL-APS-401 | | | 8.21 kgs ± 0.10 kgs. | | |
| PGL-APS-402 | | | 9.55 kgs ± 0.1 O kgs. | | |

# FIXED ANCHORAGES

**Anchor Post**
**Ref. PGL-APSS-101**

- Anchor for horizontal lifeline installation on concrete, wood, or steel.
- Quick installation using M12 mechanical/chemical nuts and bolts.
- Features tapped bush for connectors like swivel D-ring or eye bolt.
- Compatible with flange width of 150.0 mm.
- Available length: 515 mm.

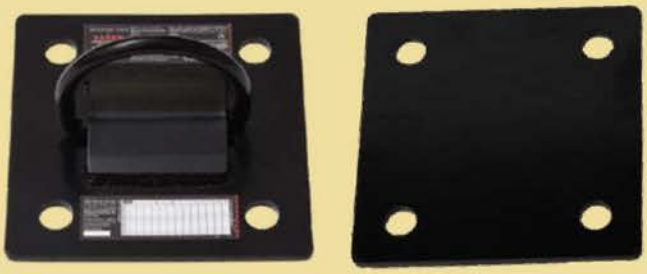
**Anchor**
**Ref. PGL-APSS-102**

- The Anchor serves as a mounting bracket for anchors or anchorage lines.
- It features an adjustable opening to fit steel angle structures from 75mm x 75mm to 200mm x 200mm.
- Suitable for fixing on corners of steel angle legs of lattice towers or similar structures.

**Concrete Anchor Plate with D-Ring**
**Ref. PGL-APSS-103**

- Concrete forged D-Ring serves as an anchor point.
- Can be mounted horizontally or vertically using chemical fasteners and bolts.
- Installs quickly with 4 bolts.
- Features a lightweight design.

**Concrete Anchor with Fisher Plate**
**Ref. PGL-APSS-104**



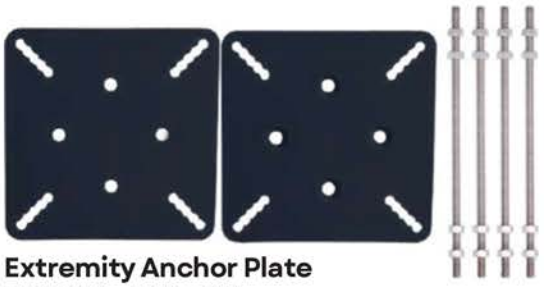
- Concrete forged D-Ring serves as an anchor point for horizontal and vertical mounting using chemical fasteners and bolts, with a fisher plate for I-Beam installation.
- Features a lightweight design.

| Ref. No | Material | Finish | Weight | Min. Breaking Strength | Conforms to |
|---|---|---|---|---|---|
| PGL-APSS-101 | Alloy Steel | Powder Coated Black | 3.96 kgs ± 0.20 kgs | 23 kN | EN 795: 2012 Type A |
| PGL-APSS-102 | Alloy Steel | Powder Coated Black | 2.46 kgs ± 0.20 kgs | 12 kN | EN 795: 2012 Type A |
| PGL-APSS-103 | Alloy Steel | Powder Coated Black | 1.46 kgs ± 0.10 kgs. | 23 kN | ANSI Z359.18:2017 Type A |
| PGL-APSS-104 | Alloy Steel | Powder Coated Black | 2.53 kgs ± 0.10 kgs. | 23 kN | ANSI Z359.18:2017 Type A |

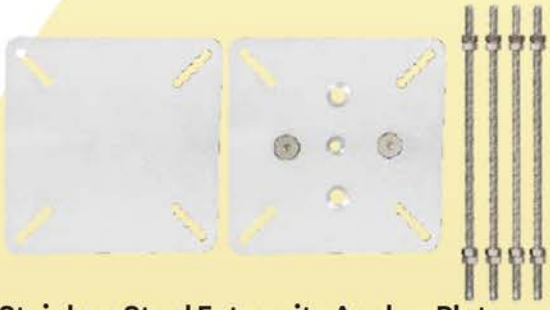
# FIXED ANCHORAGES

## For Extremity

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



**Extremity Anchor Plate**
**Ref. PGL-APSF-101**



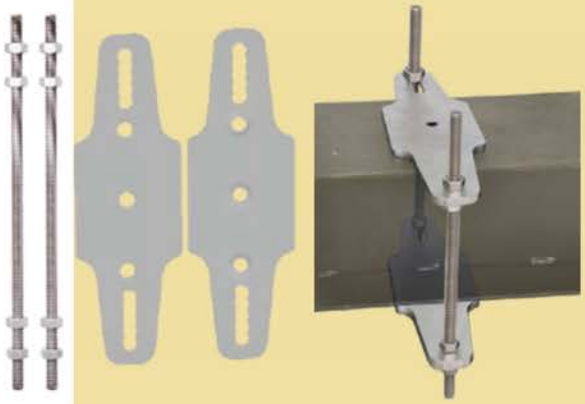
**Stainless Steel Extremity Anchor Plate**
**Ref. PGL-APSF-102**

| Ref. No | Material | Finish | Weight | Min. Breaking Strength | Conforms to |
|---|---|---|---|---|---|
| PGL-APSF-101 | Alloy Steel | Powder Coated Black | 12.45kgs | 15kN | EN795:2012 Type A, TS16415:2013 Type A |
| PGL-APSF-102 | SS Grade 316 | Electropolished / E Coated | 10.18kgs | | |

## For Intermediate

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

**Intermediate Anchor Plate**
**Ref. PGL-APSF-201**



**Stainless SteelIntermediate Anchor Plate**
**Ref. PGL-APSF-301**

| Ref. No | Material | Finish | Weight | Min. Breaking Strength | Conforms to |
|---|---|---|---|---|---|
| PGL-APSF-201 | Alloy Steel | Powder Coated Black | 3.87kgs | NA | NA |
| PGL-APSF-301 | SS Grade 316 | Electropolished / E Coated | 3.19kgs | | |

**Anchor Load Indicator**
**Ref. PGL-APL-101**

The anchor load indicator is designed to check on-site anchors and uniquely shows when a load of 15kN is achieved.

| Ref. No | Material | Finish | Weight |
|---|---|---|---|
| PGL-APL-101 | Stainless Steel | Electropolished / E Coated | 74.0 gms ± 5.0 gms |

# FIXED ANCHORAGES

Fitted on the flange of an I-Beam

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

**Anchor Plate For I-Beam**
**Ref. PGL-APIB-101**

**Stainless SteelAnchor Plate For I-Beam**
**Ref. PGL-APIB-102**

| Ref. No | Material | Finish | Weight | Min. Breaking Strength | Conforms to |
|---|---|---|---|---|---|
| PGL-APIB-101 | Alloy Steel | Powder Coated Black | 10.52kgs | 15kN | EN795:2012 Type A, TS16415:2013 |
| PGL-APIB-102 | SS Grade 316 | Electropolished / E Coated | 8.60kgs | | |

**Anchor designed for fixing a Horizontal Lifeline, featuring slots for various structure sizes. Compatible with Universal Extremity Plate**

Available Lengths: 300mm, 500mm and 750mm Compatible with minimum flange width: 150mm Compatible with maximum flange width: 220mm

**Extremity Anchor Post**
**Ref. PGL-APEX-101**

**Stainless Steel Extremity Anchor Post**
**Ref. PGL-APEX-201**

| Ref. No | Material | Finish | Weight | Min. Breaking Strength | Conforms to |
|---|---|---|---|---|---|
| PGL-APEX-101 | Alloy Steel | Powder Coated Black | 18.30kgs | 15kN | EN795:2012 Type A, TS16415:2013 |
| PGL-APEX-102 | | | 20.07kgs | | |
| PGL-APEX-103 | | | 22.15kgs | | |
| PGL-APEX-201 | SS Grade 316 | Electropolished / E Coated | 17.80kgs | | |
| PGL-APEX-202 | | | 19.20kgs | | |
| PGL-APEX-203 | | | 21.03kgs | | |

# FIXED ANCHORAGES

**Steel Anchor**
**Ref. PGL-SA-101**

- Anchor designed for fixing on metal I Beam for Horizontal Lifeline installation.
- Adjustable opening fits various I-Section flange sizes.
- Minimum flange width: 150.0mm; maximum flange width: 220.0mm.
- Available lengths: 300mm, 500mm, and 750mm.

**Steel Anchor**
**Ref. PGL-SA-201**

- Anchor for fixing on metal I Beam for Horizontal Lifeline installation.
- Features an adjustable opening for various sizes.
- Minimum flange width: 150.0mm; maximum flange width: 220.0mm.
- Available lengths: 300mm, 500mm, and 750mm.

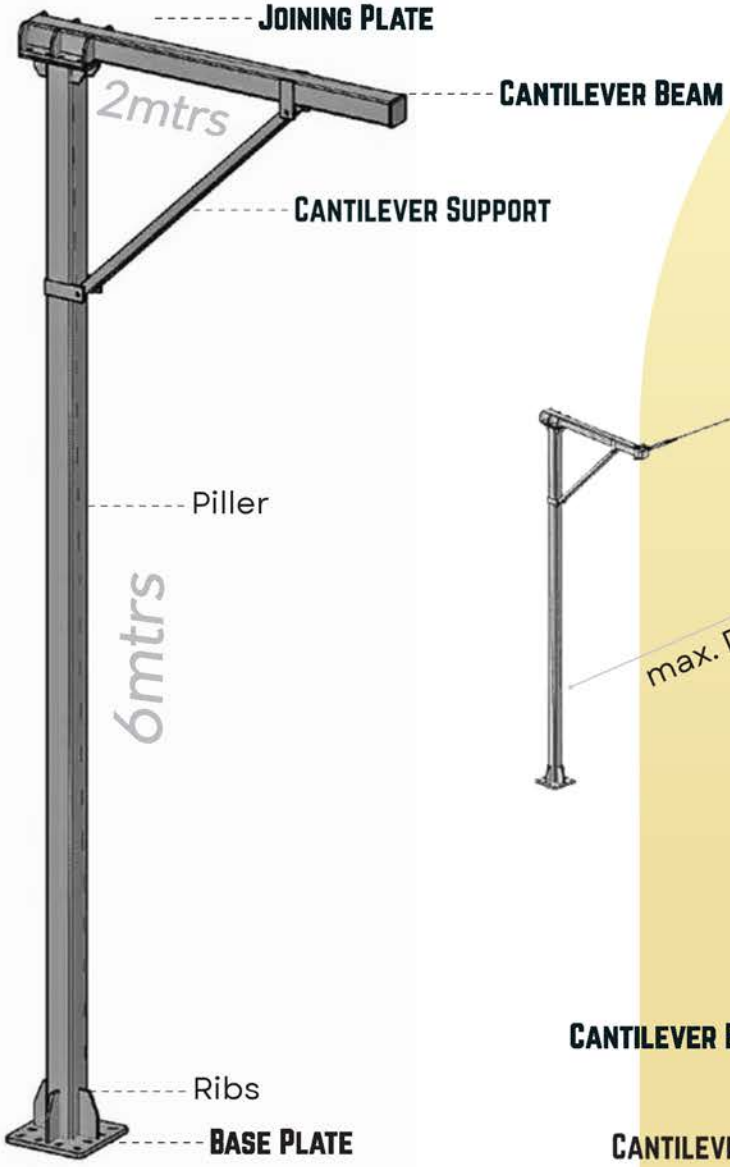
| Ref. No | Material | Finish | Weight | Min. Breaking Strength | Conforms to |
|---|---|---|---|---|---|
| PGL-SA-101 | Alloy Steel | Powder Coated Black | 12.15kgs | 15kN | EN795:2012 Type A, TS16415:2013 |
| PGL-SA-102 | | | 12.97kgs | | |
| PGL-SA-103 | | | 14.15kgs | | |
| PGL-SA-201 | SS Grade 316 | Electropolished / E Coated | 12.15kgs | | |
| PGL-SA-202 | | | 12.97kgs | | |
| PGL-SA-203 | | | 15.15kgs | | |

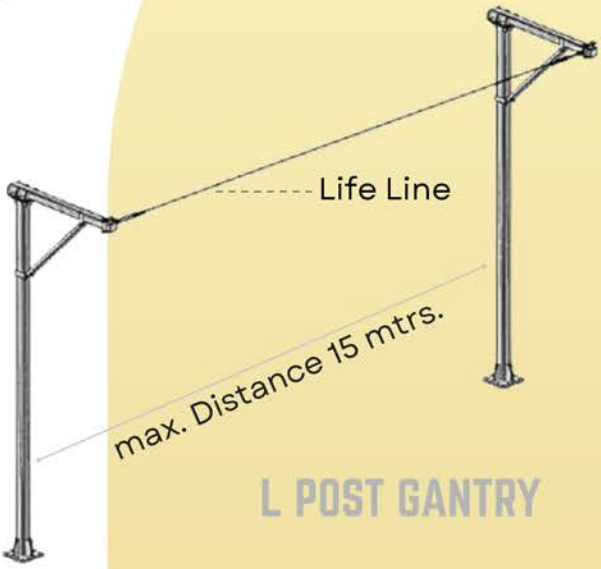
**Anchor**
**Ref. PGL-SA-301**

- Anchors for fixing on concrete structures using chemical fasteners for Horizontal Lifelines.
- Base features an adjustable opening for various I-section sizes.
- Available in lengths of 300mm and 500mm.

| Ref. No | Material | Finish | Weight | Min. Breaking Strength | Conforms to |
|---|---|---|---|---|---|
| PGL-SA-301 | Alloy Steel | Powder Coated Black | 10.38kgs | 15kN | EN795:2012 Type A, TS16415:2013 |
| PGL-SA-302 | | | 12.80kgs | | |

# TYPES OF OVER HEAD LIFELINE SYTEM

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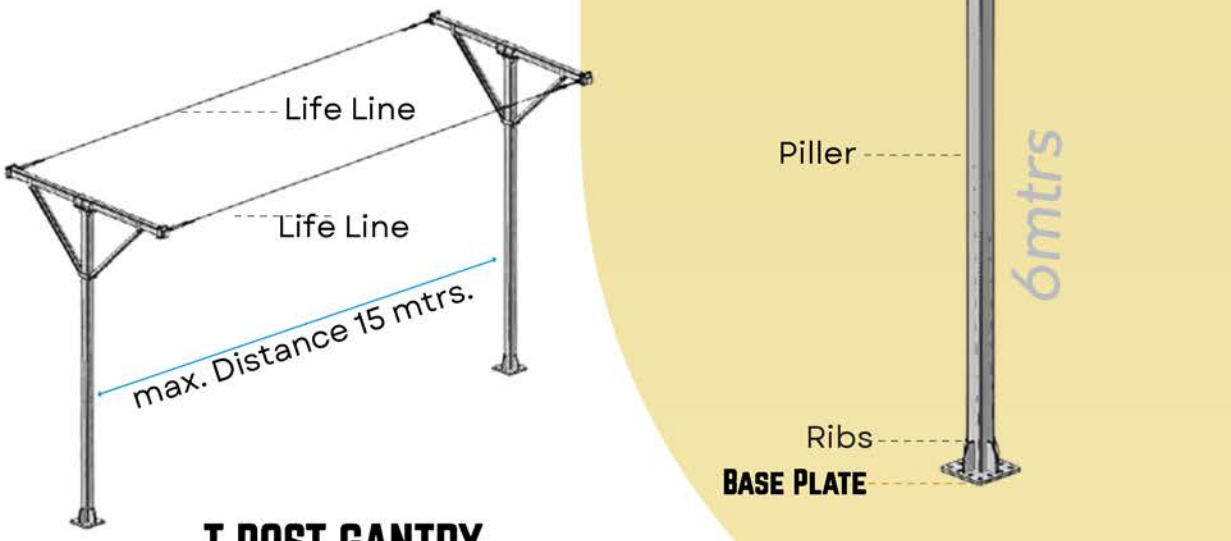
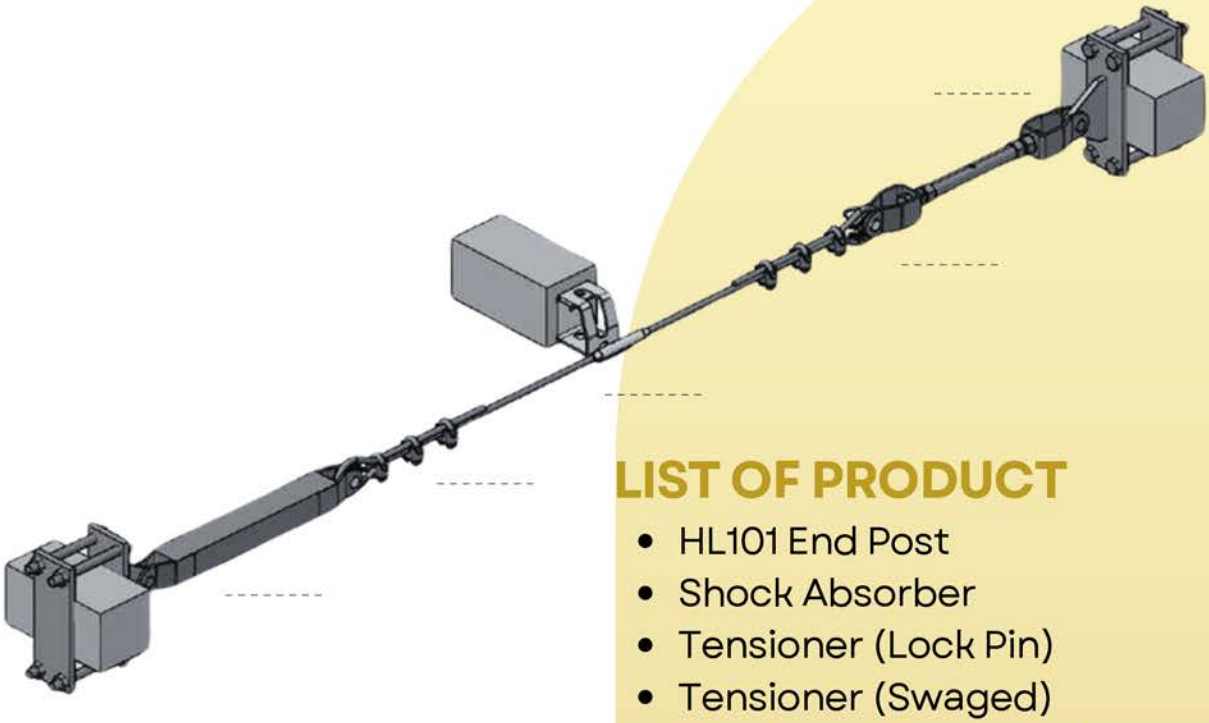






T POST GANTRY



## LIST OF PRODUCT

- HL101 End Post
- Shock Absorber
- Tensioner (Lock Pin)
- Tensioner (Swaged)
- Tensioner (Swageless)
- Wire Rope
- Wire Rope Cap
- Intermediate (Fixed)
- Intermediate (Swivel)
- Cable Extremity (U Bolt/Thimble)
- Cable Extremity (Swaged)
- Cable Extremity (Swageless)
- CORNER BRACKET
- INSPECTION TAG
- Roller RUNNER
- Tandem Pulley Runner
- KARABINER
- Retractable 6/20 mtrs
- L type Gantry
- T type gantry
- Bolts and Fasteners

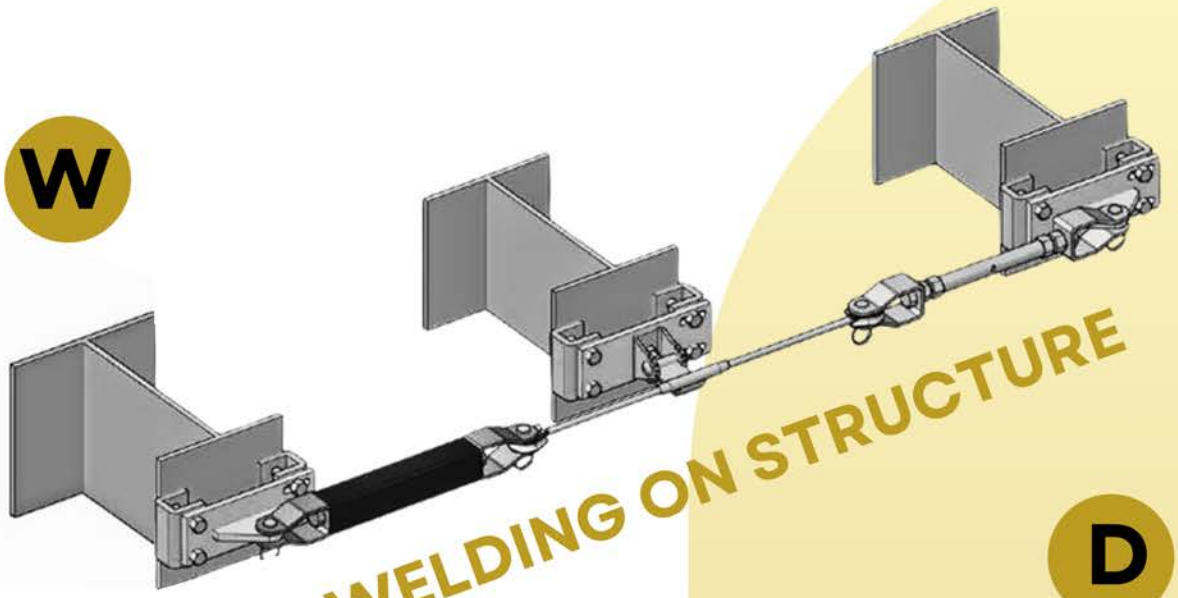
Roller Runner LGR HL610

Tandem Runner LGR HL605

## Types of Crane Bay Lifeline

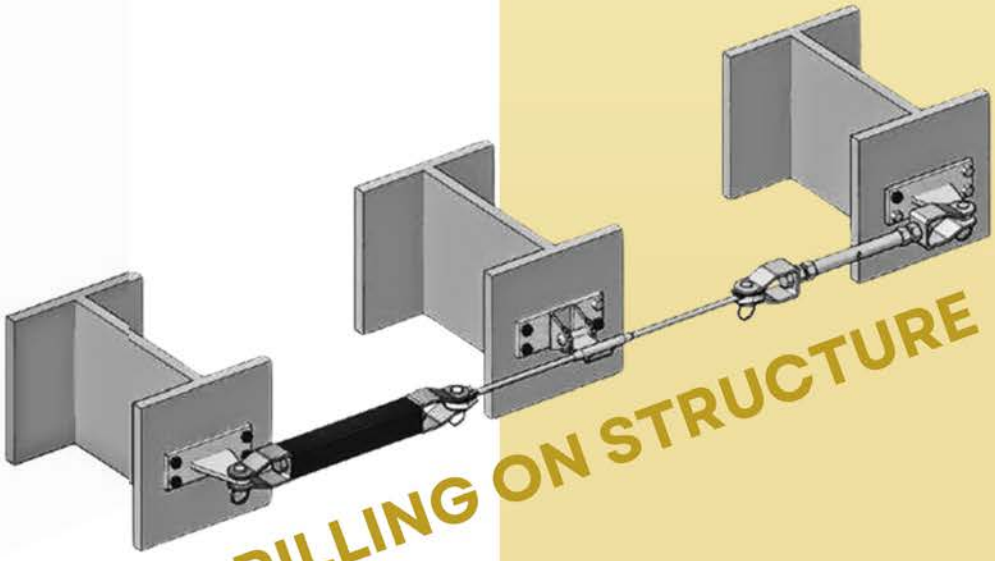
- Industrial overhead cranes are a substantial investment that necessitates regular maintenance and inspections. If you've ever walked along a crane rail, you're likely aware of the significant fall hazards involved. Crane bay rails provide a narrow, dust-covered walking surface, increasing the risk of slips, trips, and falls from heights.
- A popular fall protection solution for crane rail applications is the horizontal lifeline system. This system enables safe access along the entire rail length while ensuring 100% tie-off. While crane lengths can vary, we can design and install lifelines that range from 20 meters to 300 meters in a continuous run.
- Lifegear provides lifelines specifically for overhead cranes and crane bays. Our crane bay lifelines are constructed from stainless steel and are permanently attached to the structures using one of three methods: welding, drilling, or clamping. They are certified to meet EN 795:2012 Type C and CEN/TS 16415:2013 standards.

W



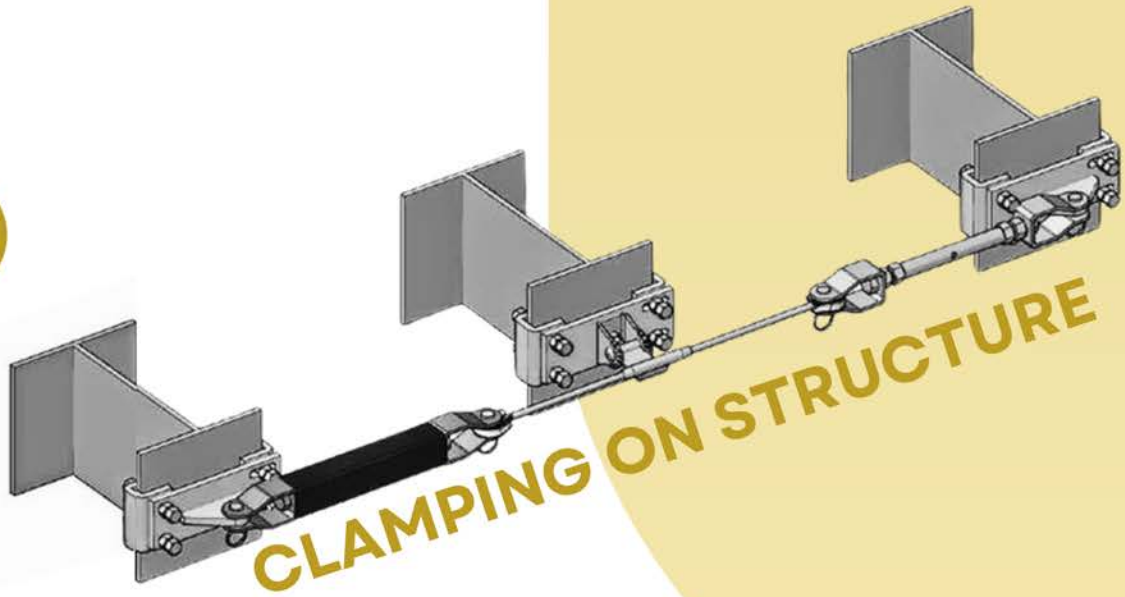
## WELDING ON STRUCTURE

D

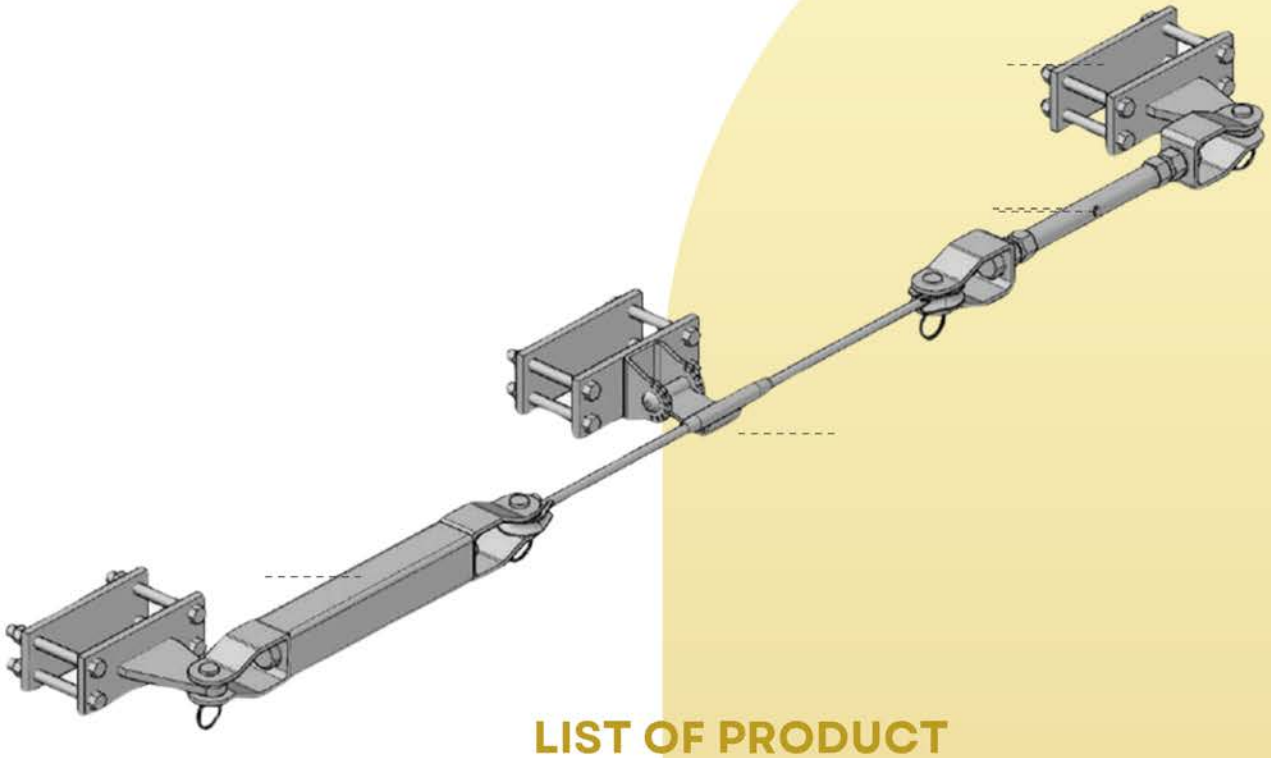


## DRILLING ON STRUCTURE

C



## CLAMPING ON STRUCTURE



**Glider Runner LGR HL603**

## LIST OF PRODUCT

- HL101 End Post
- HL101(2) Clamping beam Post
- Shock Absorber
- Tensioner (Lock Pin)
- Tensioner (Swaged)
- Tensioner (Swageless)
- Wire Rope
- Wire Rope Cap
- Intermediate (Fixed)
- Intermediate (Swivel)
- Cable Extremity (U Bolt/Thimble)
- Cable Extremity (Swaged)
- Cable Extremity (Swageless)
- CORNER BRACKET
- INSPECTION TAG
- Roller RUNNER
- Glider Runner
- KARABINER
- Retractable 2.25 mtrs
- R21 rope Lanyard
- Bolts and Fasteners


30000 k

## CHANNEL CLAMPING SYSTEM

- Pipe rack systems feature kilometers of elevated, tiered, and uneven walking surfaces that are ideally safeguarded with horizontal lifeline systems. By securing to these lifeline systems, workers can safely navigate across various levels of an elevated pipe rack. We provide a variety of clamping fixtures designed to fit different industrial structures. The height of the anchor can be adjusted according to specific needs. Our systems are certified to EN 795:2012 Type C and CEN/TS standards.

### TYPES OF CLAMPING

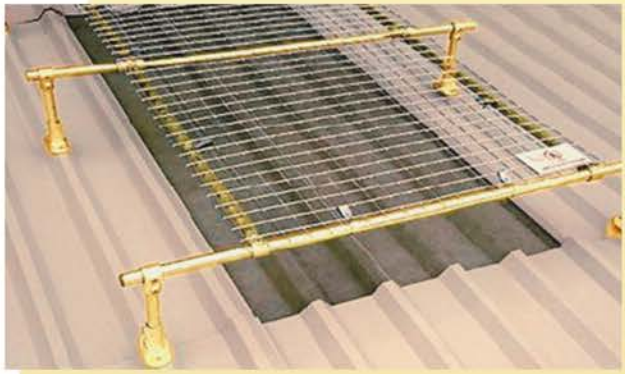
BEAM CLAMPING SYSTEM

## The PG Skylight Protector

is specifically engineered to prevent falls through rooflights.
This uniquely designed, innovative product offers protection for personnel who need to access fragile rooflights while performing maintenance or inspections on industrial roofs.

### VERSATILE

- PG uses standard clamp fittings and standard lengths of tube to form a rigid frame.
- A mesh panel is mounted on the frame to prevent falls through the rooflight. Also available in different sizes, as per requirement.



### PORTABILITY

PG uses range has been designed in component form to ensure that it can be easily transported both to site and up to roof level.

### DURABILTY

The skylight protectors are supplied with a galvanised finish, Hot Dip Galvanised Coatings

OSHA Standard 29 CFR 1910 ACR (M) 001:2014

## BENEFITS:

- A highly portable, component-based system that can be easily transported to the rooftop. All components and mesh panels are hot-dip galvanized for increased durability.
- The mesh panels allow light to pass through, ensuring the building remains well-lit.
- Extension panels provide the flexibility to cover wider and longer areas, guaranteeing the roof surface remains safe.
- Simple installation helps minimize costs. The metal frame and panels are designed to resist brittleness, ensuring a long-lasting setup.

Adjustable height features make it suitable for various shaped roof lights.

ROOF ACCESS LADDER

No annual inspections, maintenance, training, additional equipment is required our products has been independently tested and meets or exceeds the following International Requirements:

**Fall Protection Experts**

petrogold-eg.com

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