

# Fall protection

Harnesses, lanyards and mobile anchor points

# XSPHILOSOPHY: WHY WE ARE DRIVEN TO INNOVATION

Our core values:

SAFETY ABOVE ALL

FOCUS ON THE CUSTOMER

SIMPLICITY DEFINES QUALITY

THE BEST ISN'T GOOD ENOUGH

THERE'S NO SUCH THING AS A PROBLEM

At XSPlatforms we believe that working at heights should be safe and simple. Whether you are doing maintenance work on a roof or washing the windows of the world's tallest skyscraper. Everybody everywhere should be absolutely safe while working at heights.

For over 15 years we have been working towards fulfilling that ambition. Getting closer with each new solution. And with each new step forward, we are even more driven to take the next step. More driven to find the next innovation in working at heights and surprising the world with innovations nobody thought were possible.

As we continue on our quest to change the way the world works at heights, our five core values guide our actions.

To read the complete XSPhilosophy visit [xsplatforms.com](https://xsplatforms.com)

# XSPLATFORMS MOBILE SAFETY

Buildings and objects are not always fitted out with permanent fall protection, such as guardrails or horizontal lifelines. In order to enable safe and reliable work despite this lack of permanent protection, XSPlatforms offers a complete line of mobile fall protection equipment.

Our harnesses, lanyards and mobile anchor points meet our most stringent requirements in the areas of safety, reliability and user-friendliness. The mobile fall protection solution by XSPlatforms lets you create safe working conditions at heights on any worksite.

## Our product line includes:

- Harnesses
- Lanyards
- Positioning lines
- Fall arrest devices and self-retractable lanyards
- Safety hooks
- Mobile anchor points
- Rescue equipment
- Pulleys

This brochure only features a selection of the full product line. For our complete product catalog, please contact your XSPlatforms supplier.



# FALL PROTECTION COMPONENTS



## 1. ATTACHMENT POINT

The attachment point is the point to which the user is secured. The attachment point can be mobile (a tripod or a sling) or permanent (horizontal fall protection lifelines or anchor points). It is vital here that the roof, wall or ceiling on which the attachment point is mounted be strong enough to withstand the forces of a potential fall.

## 2. ATTACHMENT SYSTEM

The attachment system itself can be used for various functions. It allows the user to secure him or herself to the attachment point. It must catch the user in the event of a fall and reduce the forces at play in order to minimize bodily harm. Various systems are available, such as lanyards with integrated fall arrestors, self-retractable lanyards, etc. The selection of the system depends on the situation where it will be used and the function it will serve.

## 3. HARNESS

A proper harness should be suitable for the user's work and should offer comfort, functionality and safety. In order to connect the harness to the attachment system, it must be fitted with at least one attachment point. This guarantees the user's safety.

# FOR EVERY SITUATION, A SUITABLE SOLUTION




Work is performed at heights every day. This work varies in nature, environment, location, duration, etc. These are distinct situations that require specific and safe solutions.

In determining the right solution, it is vital to take into account the fall factor, the fall distance and the risk of a swing fall.

## THE FALL FACTOR

This is the ratio between the height of the fall and the length of the line that is available to absorb the shock of the fall.

**There are 3 fall factors**

Location:	Overhead	
Attachment point:	Lanyard pulled tight above the body	
Location:	On the back	
Attachment point:	Lanyard on the back of the body or somewhat higher	
Location:	Below the back	
Attachment point:	Lanyard below the back of the body or at the feet	

## THE FALL DISTANCE

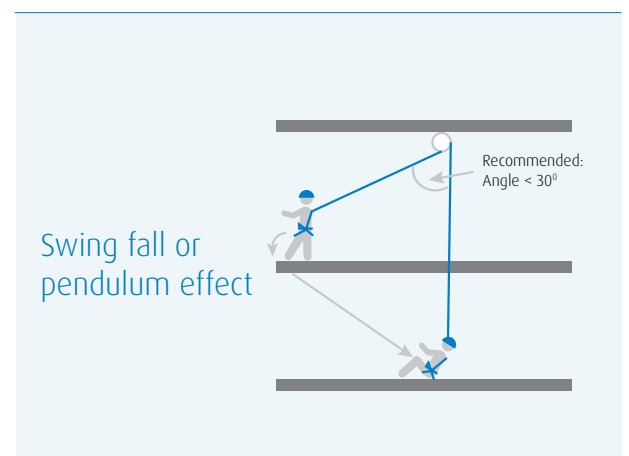
This indicates the (required) distance between the attachment point and the ground (or the first obstacle) in a fall. This fall factor and the fall distance ultimately determine the choice of working methodology and the materials needed. The greater the fall factor, the greater the forces at play and the greater the need to absorb them. The fall distance is variable and always depends on the fall factor, the practical situation and the type of fall arrest device used.

## SWING FALL OR PENDULUM EFFECT.

In addition to the fall factor and fall distance, it is necessary in some situations to take into account the swing fall or pendulum effect. Even when using a self-retractable lanyard with a fall factor of 0 (see example), the fall distance will still be considerable if the user is not positioned properly with respect to the attachment point.

Positioning at a maximum angle of 30° is recommended. Straying further from the attachment point would result in a wider angle with a greater fall distance.

The fall distance calculation must take into account not only the fall factor but also the user's possible distance and freedom of movement with respect to the attachment point.



YOUR XSPLATFORMS SUPPLIER CAN PROVIDE YOU WITH ADVICE ON THE RIGHT SOLUTION FOR ANY SITUATION.

# POSITIONING OR FALL PROTECTION

When selecting the right protection materials to enable safe working at heights, the first step is to determine what the materials will be used for:

- Positioning: protect users so they cannot fall.
- Fall protection: control potential falls and their impact.



## POSITIONING

We use the term 'work positioning' when the risk of falling is excluded by the position of the work location (the specialist term for this is a 'fall restraint system' or retention). This makes working easier, safer and more efficient. The components of this system basically consist of an attachment point, a harness and a lanyard for attachment. The effect of the length of the lanyard is critical here.

## FALL PROTECTION

The primary function of fall protection is to restrict the impact of a fall on the human body to less than 6 kN (612 kg). The components of this system are an attachment point, a harness and a fall arrest device. Fall arrest devices come in various designs and models, such as lanyards with integrated fall arrestors, self-retractable lanyards, etc.

The fall protection system can be combined with a positioning system. This combination is often recommended and used when working at heights if hands must remain free to perform work. In these situations, the user must be equipped with an adjustable positioning line.



# CHOICE OF HARNESS

A proper harness is suitable for the user's work and offers comfort, functionality and safety. It is especially important for functionality and safety that the harness feature the right number of attachment points.



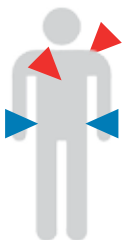
## SINGLE ATTACHMENT POINT

Attachment point on the back. This gives the user the option to use a positioning line or fall protection line that can be attached to the back. The harness is suitable for use of a standard or self-retractable lanyard.



## TWO ATTACHMENT POINTS

Attachment point on the back and on the chest (in the form of a metal D-ring or by means of harness loops). This harness can be used with almost any fall protection system.



## FOUR ATTACHMENT POINTS

Attachment points on the back, chest and hip. The two hip attachment points were developed for positioning of the user. In combination with the lap belt, the user can perform work comfortably at heights with 'hands free'.



## FIVE ATTACHMENT POINTS

Attachment points on the back, chest, hip and stomach. Developed for rappelling (rescue) work. This harness features an extra suspension point on the front for a rappelling device and extra safety belts for the legs for positioning work. The extra attachment point on the stomach was specially designed for connection to a rappelling device.

## ATTACHMENT POINTS

A harness is fitted with one or more attachment points. Be sure to choose a harness that is suitable for your work activities.

The **blue arrows** indicate the attachment points on the harness that are suitable for attachment to the positioning system. The **red arrows** indicate the attachment points on the harness that are suitable for attachment to a fall protection system. The **green arrow** indicates the attachment point that is suitable for attachment to a rappelling system.

# HARNESSES

- For fall protection and positioning
- Quick and easy to put on
- Comfortable fit
- Durable materials



Some examples of XSPlatforms harnesses:

## STATIC ONE

The harness has an attachment point on the back. Specially designed for use in the industrial and construction sectors. Easy to connect to a standard or self-retractable lanyard.

## STATIC TWO

A harness with two attachment points: one on the back and one on the chest. Easy to connect to a standard or self-retractable lanyard. An (XSPlatforms) Rope Grab can be attached thanks to the two loops on the front of the Static Two.

## STATIC THREE

This harness has three attachment points: one on the back and two positioning rings (D-rings). Includes an adjustable chest belt. Easy to connect to a standard lanyard, self-retractable lanyard or Rope Grab. The attachment points on the chest improve lateral freedom of movement.

## STATIC FOUR

A comfortable harness fitted with four attachment points. One attachment point on the back, one attachment point on the side and two D-rings for positioning at the hips. The extra-wide back belt provides comfort by taking a great deal of the strain off the back and knees during positioning work. The tool rings offer the option to attach a tool bag or tool chord to the harness.

## STATIC FIVE

Multifunctional harness fitted with five different attachment points: one on the back, one on the chest, one on the stomach (special point for rappelling work) and two hip attachment points (D-rings) for positioning. Excellently suited for rescue work. Just like the Static Four, this harness offers comfortable back support. Ergonomic leg belts provide additional comfort in the seated position. This harness is also fitted with tool rings.



[xsplatforms.com/575285](https://xsplatforms.com/575285)

## QUICK RESPONSE (QR) CODES

XSPlatforms is the first manufacturer on the market to use Quick Response (QR) codes in its product communication. QR codes are two-dimensional barcodes that can be scanned with a smartphone. The phone's QR reader converts the code into the Internet address for an instructional video on safe and proper use of the specific fall protection product. All mobile fall protection products by XSPlatforms come with a QR code.





# LANYARDS AND FALL ARREST DEVICES

Some examples of XSPlatforms attachment systems:

## LANYARDS

XSPlatforms offer a wide selection of lanyards:

- Lanyards without energy absorber
- Lanyards with energy absorber
- Flexible lanyards with fall indicator
- Adjustable positioning lines

A lanyard without energy absorber is used for positioning work.

If there is in fact a risk of falling, then it will be necessary to use a lanyard with energy absorber.



A lanyard with shock absorber reduces the impact of a fall on the body. This is essential. For instance, with a 2 meter fall and a fall factor of 2 an energy absorbing lanyard decreases the forces to below 6 kN (612 kgf).

## FALL ARREST DEVICES

XStop, the self-retractable lanyard by XSPlatforms, is available in various lengths, ranging from 1.5 meters to 25 meters. Self-retractable lanyards offer maximum freedom of movement, both vertically and horizontally. The automatic braking system ensures that the connection remains taut at all times and locks immediately in the event of a fall.



### Fall indicator

In order to guarantee optimal safety, the safety hook on the bottom of the XStop comes equipped with a fall indicator. In the event of a fall, a red core will be exposed on the hook. If the fall indicator has been activated, then the XStop must be inspected.



# MOBILE ANCHOR POINTS

- Cost-effective solution
- Prevents unauthorized use
- Minimal impact on the structure
- Ideal for short-term use

Some examples of XSPlatforms mobile anchor points:

The name says it all: mobile anchor points are installed immediately before use and removed and again after use and taken along by the user. The benefit of mobile anchor points is that unauthorized use is not possible.

## TEMPORARY LIFELINE

In situations where a horizontal lifeline is desired but is not possible, a mobile lifeline is the answer. By attaching the lifeline between two anchor points, the user can work attached over a distance of 5 to 20 meters. The lifeline is suitable for simultaneous use by two users.

## (ADJUSTABLE) SLING

The sling lets users secure themselves to a variety of structures, such as roof domes, steel girders, chimneys, trees, etc. The sling can be used in combination with any lanyard, fall arrest device or mobile lifeline. It is available in various lengths: from 0.6 to 6.0 meters.



## ROCKSOLID



The RockSolid is a deadweight anchor point that is easily placed on top of the roof surface without penetrating (or opening) the roofing and roof structure. The RockSolid, combined with the XSGlobe or XSImpact 360° Pro, is used as a standalone anchor.

## JAMB ANCHOR

Mobile anchor point, for attachment in a door or window opening. Suitable for a single user. Ideal for temporary work, both indoors and outdoors



[xsplatforms.com/878731](https://xsplatforms.com/878731)



## About XSPlatforms

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XSPlatforms develops revolutionary solutions for working at height safely and efficiently. From design and production, to installation, inspection and maintenance of systems for facade access. From its branches in Western Europe, Asia, the Middle East and North America, XSPlatforms also provides training for users, risk inventories and worldwide constancy services.



What sets XSPlatforms' solutions apart is their attractive, durable design, their high level of reliability, their unprecedented ease of use and their practical innovations. Our portfolio includes:

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### FALL PROTECTION

Maximum permanent protection is offered by our guardrails and lifeline systems. With minimum damage to roofs and rapid assembly our products for portable fall protection are amongst the finest systems in the world. All fall protection solutions are designed with the user in mind: practical, safe and intuitive.

### FACADE ACCESS EQUIPMENT

Safety regulations get more strict everywhere. To ensure a minimum impact on the architectural value of a building, our durable building maintenance units are tailor made, adapted to a building's specific characteristics. With state-of-the-art technologic features, our gondolas and roofcars offer optimum protection to the user.

### SUSPENDED PLATFORM SYSTEMS

The best yesterday, isn't good enough today. With that in mind our team of designers have come up with a new, patented design for scaffolding systems. Safer upon erection, during use and when dismantling. This revolutionary system offers users more freedom of movement, safer use and easier transport.

### SCAFFOLDING SYSTEMS

Scaffolding systems that are easier and safer to erect than anyone thought possible. Systems that combine the advantages of scaffold towers and walk-through scaffolding, while providing users with optimum flexibility and safety.



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*Netherlands (Headquarters) - Europe, Asia, the Middle East and North America*

***info@xsplatforms.com*** | ***1.4***

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