Standard 1.2 Personal protection when working at height

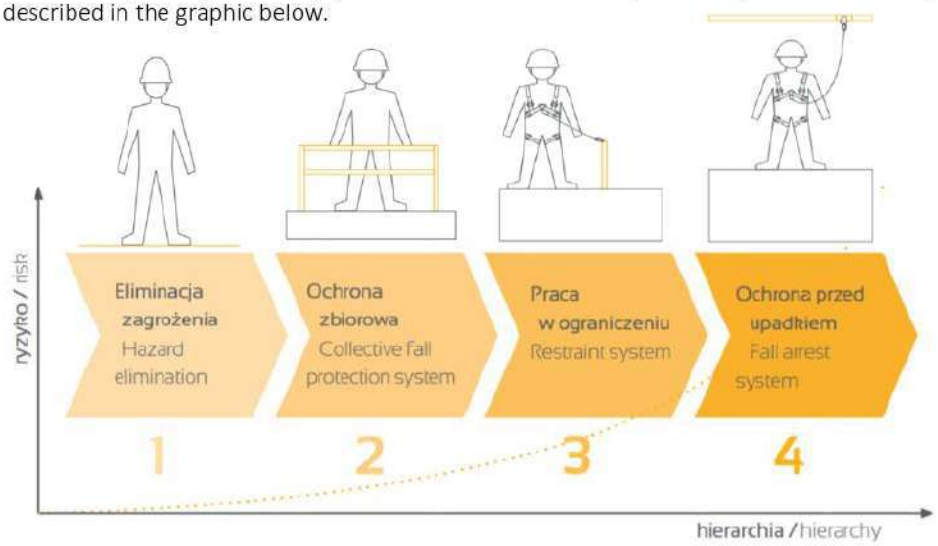
LG Energy Solution Wrocław Sp. z o.o.

1. Introduction

1. **Work at height** - work above 1 m from the floor, floor or ground level in a place not protected by constant fall arrest structures.

2. Work at heights **does not include** work in places at a height of **more than 1 m** from the floor, floor, ground - **covered with constant walls 1.5 m** high and higher or secured with other **constant structures to prevent falls**.

3. **Work at height belongs to the group of particularly dangerous works**, therefore, at the stage of planning the work, efforts should be made to eliminate the risk - choosing a method other than working at height to safely perform the task. If this is not possible - proceed in the sequence described in the graphic below.



- **Collective protection** - concerns the use of constant railings at work. Requirements for the railing: height at least 1.1 m, curb 15 cm, in the middle of the railing there must be a crossbar or filling preventing it from falling out.

- **Restraint work** - it concerns the adjustment of working conditions and the use of equipment and systems for work at height in such a way as to prevent the commencement of falling. In order to qualify the system as restraining, the location of the safety system elements and the length of the rope connecting the worker must be selected so as not to allow the worker to be closer than 0.5 m from the edge of the roof or other place at risk of falling. In this case, no shock absorber is used.

- **Fall protection** - applies to the use of protective measures and equipment to stop and absorb falls from a height and to minimize its effects.

4. Work at height is performed with the use of auxiliary devices intended for this type of work, in the following order of use hierarchy:

   1) **balustrades and constant barriers as elements of collective protection**
   2) **mobile platforms (MEWP's)**
   3) **scaffoldings**
   4) **platform ladders**
   5) **ladders**

5. **The conditions for safe performance of work** with the use of the above-mentioned devices and the work accompanying work at heights are defined by company standards and instructions as well as by regulations and general principles in the field of occupational health and safety, compliance with which is mandatory.

Remember!

When working at height, it is required to use an appropriate set of personal protective equipment:

a) a helmet for working at height with a fastened chin strap,
b) harness for work at height with a safety rope with a shock absorber or with another device e.g. self-locking,
c) footwear and workwear,
d) a warning vest,
e) depending on the type of work - other adequate PPE.

An employee assigned to perform work at height must have a valid medical certificate stating that there are no health contraindications, have appropriate knowledge and skills in the safe performance of such work and in the use of equipment and personal protective equipment in this regard.

Eyesight defects requiring the use of corrective lenses are a contraindication to employing a worker for work at height. If the occupational medicine doctor determines that the employee can use contact lenses despite the defect and allows the employee to perform work at height - the decision issued to the employee must contain such an annotation.

PPE is the last line of defense against the dangers of working at height. Their proper selection and application are of particular importance.

2. Characteristics of protective equipment

Protective equipment for work at height - these are all devices and equipment used for limited work, personal protective equipment and others, intended for effective protection of the employee against falling from a height, including minimizing the effects of a fall from a height.

I. Safety harness

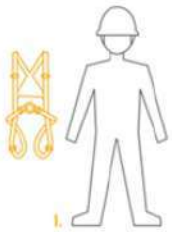
Main structural elements:

Attachment points - harness can be equipped with one or two attachment points: rear (dorsal) or rear and front (thoracic). Attachment points are used to fasten the connecting and shock-absorbing component.

Adjustable straps - shoulder straps connected with hip straps - which can be adjusted to the user, thus ensuring safety during their use.

Buckles - adjusting buckles are used to adjust the harness straps, hardware buckles - make it possible to attach the equipment necessary during the work. With the help of the side clamps it is possible to perform work in the support.

How to correctly put on a safety harness ?



1. The first step is to identify the front and rear attachment point and the possible undoing of the front attachment point. If the thigh straps are joined (fastened with buckles), they should be unfastened in order to fasten them later.

2. The previously unfastened safety harness should be put over the right and left shoulder in such a way that it is possible to fasten the front attachment point (if present) or the strap connecting the chest straps.

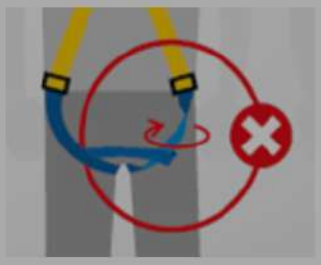
3. The chest straps placed with both hands should be fastened with the front attachment point or with the connecting strap. Make sure that the rear attachment point is in the area between the employee's shoulder blades.

Remember!

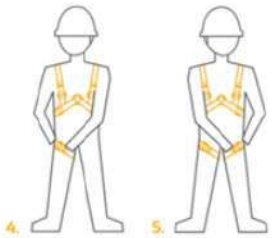
Safety harnesses approved for use on the premises of LG ESWA must meet the requirements of **EN 361.**

Depending on the manufacturer, the safety harness may have additional structural parts, e.g. a hip belt. The method of putting them on is specified in the manufacturer's instructions, which must be read by the user of the harness.

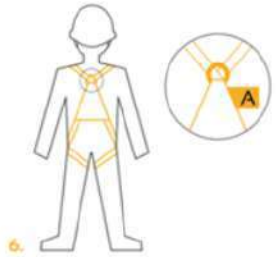
When putting on the harness, pay attention to the correct routing of the straps.



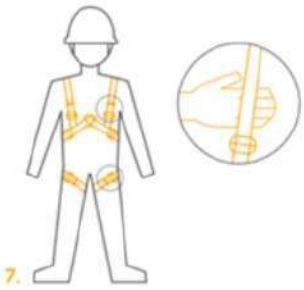
4. After fastening the front attachment point or the strap connecting the chest straps, proceed to fastening the thigh straps. Pay special attention that these tapes are not twisted when fastening them.



5. After all the straps (chest and thigh straps) have been fastened, the second employee should assess the position of the rear attachment point and the position of the straps on the back of the employee wearing a harness.



6. The final step is to adjust the harness. A well-worn harness should not restrict the user's movements. A good way is to check whether the worker is able to put his straightened hand under each of the fastened tapes (between the tape and the clothes). If not - loosen the straps, if the gap is too large - tighten the straps. Free parts of the tapes should be inserted into the designated **belt loops** (if there is such a harness).



In conclusion, the harness is WELL put on if:

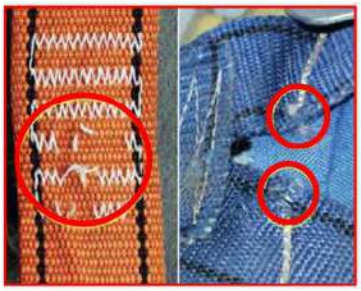
- the harness straps are not twisted,
- you can put your hand between the individual straps of the harness and the clothes,
- the rear attachment point is at the height of the blades,
- the chest strap is located in the middle of the chest,
- the free ends of the straps are secured with belt loops and lie close to the harness.

THE HARNESS CANNOT BE USED IF:

- **participated in stopping the fall (such harness should be destroyed)**
- **5 years have passed from the harness production date (counting from release for use)**
- **mechanical, chemical or thermal damage was found.**

THE HARNESS IS CONTROLLED:

- **daily** - visual assessment of the technical condition by the user
- **periodic** - every 12 months from the date of release for use - control carried out by an authorized person (training of the harness manufacturer, manufacturer, authorized representative of the manufacturer) + entry in the use card



KARTA UŻYTKOWANIA

NAZWA URZĄDZENIA / MODEL	NR KATALOGOWY
NUMER URZĄDZENIA	DATA PRODUKCJI
NAZWA UŻYTKOWNIKA	
DATA ZAKUPU	DATA PRZEKAZANIA DO UŻYTKOWANIA

PRZEGLĄDY TECHNICZNE

	DATA PRZEGLĄDU	RODZAJ PRZEGLĄDU	OPIS STANU TECHNICZNEGO	DATA NASTĘPNEGO PRZEGLĄDU	PODPIS OSOBY PRZEPROWADZAJĄCEJ
1					
2					
3					
4					
5					

Remember!

The rear attachment point on a well-positioned harness should be in line between the user's shoulder blades. Placing it too low or too high in the event of a jerk during a fall from a height can result in serious spine damage and even death.

The front attachment point in the form of a carabiner should always be fastened, the strap connecting the chest straps (chest strap) should also be fastened and well adjusted.

II. Connecting and shock-absorbing component is a safety rope with snap hooks or carabiners used to connect the user's harness with the anchor point.

Due to the structure and purpose, the following are distinguished:

- safety rope with shock absorber - compliance with **EN 354** and **EN 355** standards
- safety rope without shock absorber - compliance with **EN 354** and **EN 358** standards
- fall arrest devices - compliance with the **EN 360** standard

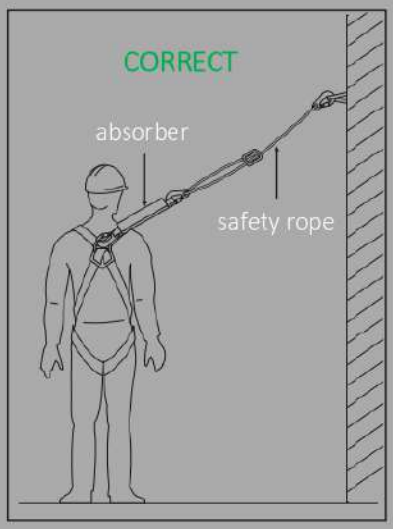
a) **Safety rope with shock absorber**

- shock absorber reduces the pull of the safety rope when it is tightened and prevents damage to the spine / internal organs / death during a fall from a height.
- tears gradually depending on the strength of the pull, the length of the fall and body weight .
- safety rope with a shock absorber cannot be longer than 2 m. Extending it may cause the entire energy of the fall to be absorbed or torn off.
- ripping of the shock absorber may not exceed 1.75 m. It rips gradually depending on the force.
- the variant of the double cord with shock absorber should be used if there is a need to move (e.g. on the structure) and change the anchoring points, then it is required to maintain the continuity of the protection.

b) **Safety rope without shock absorber**

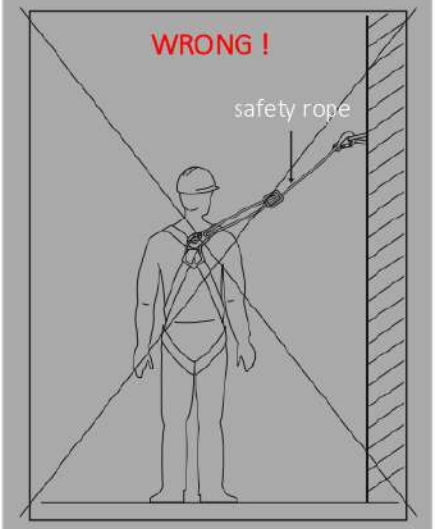
- **can only be used for restraint work!**
- is usually ended with carabiners or snap hooks
- a rope without a shock absorber cannot be used as an anchoring point, lanyard, extension etc.
- **it is FORBIDDEN to use lines with thermal, mechanical or chemical damage!**
- **<u>It is forbidden to use this version of the rope during work in mobile platforms (MEWP's)!</u>**

Remember!



A rope without a shock absorber cannot be used as a fall protection system.

Attach a safety line to the shock absorber itself or use a safety rope with a shock absorber.



The safety rope can be used for 5 years from the date of the first release of the rope for use. After 5 years, the rope should be withdrawn from use and scrapped (physically destroyed). Withdrawal from use with confirmation in the Use Card is made by the person responsible for the protective equipment in the workplace.

c) Self-locking device - it is a self-winding steel cord attached to a safety harness, which allows the worker to move while remaining under slight tension - and in the event of a fall it is immediately blocked by the braking mechanism.

- **it is recommended to use self-locking devices intended for horizontal and vertical (HV) operations**
- these devices have a built-in shock absorber, the use of an additional line with a shock absorber is prohibited!
- the device is subject to technical inspections, which are performed once a year - only by the manufacturer or its authorized representative (it may be an employee trained by the manufacturer)
- **It is forbidden to use self-locking devices that are damaged, which prevented falls from a height, or that do not have a current inspection!**

CARABINERS and SNAP HOOKS - are auxiliary devices used for:

- connecting the harness with the safety line and self-locking device
- connecting the security line, self-locking device with the anchor point,
- tapes connection in harness
- connecting the horizontal safety line with the anchor points.

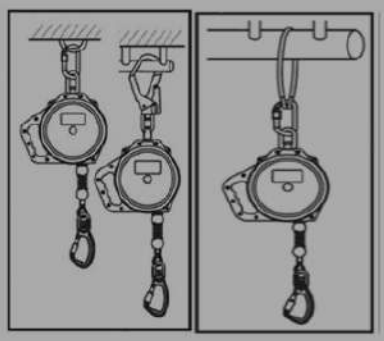
IMPORTANT!

- carabiners and clip hooks that have fallen from heights should be withdrawn immediately out of use. Those where the lock arm does not close, have visible cracks or bends, and are also withdrawn from use..
- as in the case of other equipment for work at height, each time before starting work, the technical condition of carabiners and snap hooks should be checked.

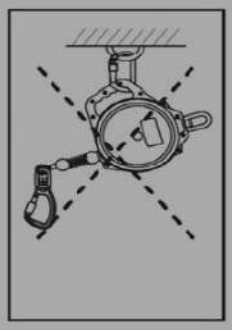
MAKE SURE THE CARABINERS ARE FUNCTIONAL BEFORE PERFORMING WORK AT HEIGHT!

Remember!

Self-locking devices are attached to the anchor points with the use of dedicated rotating grips, including the use of a carabiner or a snap hook.

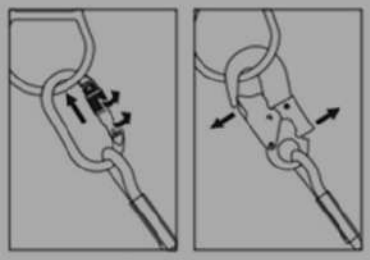


An anchor point intended to be engaged for the self-locking device should be located above the head of the worker.



Zaczepianie urządzenia samohamownego za uchwyt transportowy jest zabronione.

WARNING!



Make sure that the carabiner or snap hook has a secured latch !

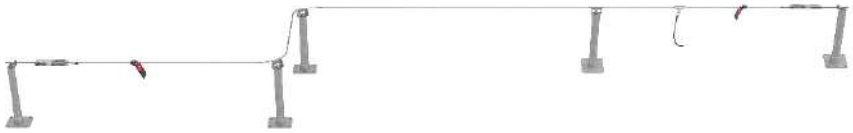
III. Anchoring subassembly (anchor point) - its task is to attach the connecting and shock-absorbing subassembly to the load-bearing structure. Due to the type of structure and the possibility of changing the position, the following anchor points are distinguished:

a) **fixed** (e.g. horizontal systems with a steel rope, anchor posts)
b) **portable** (safety stands, horizontal anchor ropes, rope hooks, strap hooks, drawbeams

Anchor points must meet the requirements of **EN 795**, the following types are distinguished:

A - fixed structural anchor devices
B - mobile temporary anchoring devices
C - anchor devices with a flexible horizontal guide
D - anchor devices with a rigid horizontal guide
E - inertial anchoring masses (inertial masses)

The EN 795 standard requires that the anchor point must provide a minimum strength of 12 kN in the direction in which the force will be exerted in the event of a fall!

Type	Examples		
A			
B			
C			
D			
E			

Remember!

The use of ropes, carabiners, snap hooks and other devices not intended for fall protection or rope techniques during work at height is FORBIDDEN! Approved for use are those that meet the requirements of **EN-362 B**.

For the correct anchoring of the point to the structure (metal structure, concrete, etc.) is the responsibility of the point installer - a worker trained in the installation of anchor points. Installation of such points should be carried out strictly according to the instructions of the point manufacturer.

If temporary points are used, the assembler should be able to assess the strength of the element to which the point is attached. If there is any uncertainty as to the strength or quality of a structural element, agree with the constructor how to install the anchorage points or measure the strength of such a point.

3. Horizontal protection systems

Horizontal protection systems - these are safety systems designed to perform works most often in places where there is a risk of falling from a height, and where frequent and relatively free movement on the roof surface, platform or structure is required, e.g. for service purposes.

Examples of such systems are:

1. **EN 795 type C anchor devices** (the so-called life ropes) - horizontal flexible guides made of a steel rope stretched between the anchor points, which enable the worker to move fully securely on a flat surface, e.g. a roof.

- the distances between the anchor points and the length of the guides are set by the manufacturer. When creating long, complicated permanent protection systems, solutions are also used that allow the guide to turn freely along the designated arc.

2. **EN 795 type D anchor devices** - these are rigid guides - horizontal and those not exceeding 15 degrees of inclination. Usually these are rails to which a device, often called a trolley, is permanently attached.

- in the moment of falling, the device blocking in the rail protects the worker against falling from a height. Such anchor devices are most often used where frequent access is needed and where we cannot allow the worker to move much relative to the anchor rail.

3. **EN 795 type E anchor devices (inertial masses)** are devices whose operation is based on their mass and friction between them and the ground, most often in the form of cuboidal solids into which load blocks are inserted.

- can be used on surfaces with a slope of not more than 5 degrees. Such devices are used where it is impossible or advisable to disturb the roofing structure.
- the anchoring masses lie directly on the roof surface. They can have a single anchor point installed or they can be part of a horizontal track. The manufacturer provides guidelines as to the installation and requirements on how large the mass must be on a given surface.

Remember!

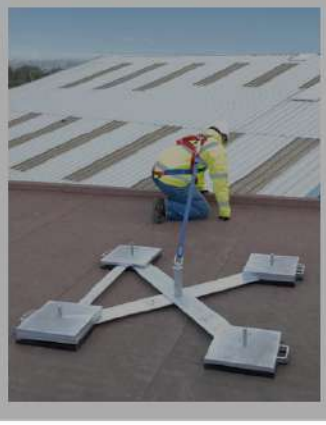
Type C anchor devices can be temporary and permanent, guides can be plastic ropes, steel or polyamide straps.

Temporary fall protection systems are made of ropes or straps that must be sufficiently tightened by a dedicated device or tensioner. Permanent systems are made of steel ropes, also suitably tightened by correct assembly strictly specified by the manufacturer.

In the case of long lifelines, intermediate anchor points are used for the appropriate distribution of forces, the distribution and quantity of which is determined by the manufacturer.

It is forbidden to make lifelines from unidentified ropes or tapes not intended for this purpose. Damaged ropes and straps as well as additional equipment (carabiners, tensioners) should also be withdrawn from use, similarly in the case of equipment that was involved in arresting a fall from a height - it should be withdrawn from use and destroyed.

Employee protection with the use of inertial mass while working on the roof.



4. Vertical protection system

Vertical protection system - protects the user when moving on a ladder, in the access to the chimney, mast, wind turbine as well as in shafts, trenches or water reservoirs, minimizing the risk of falling.

These system include:

a) **ladder and rail systems** ① – the system is attached to the rungs of the ladder or directly to the substrate such as concrete, steel.

The trolley moving in the rail (guide) has an energy absorber, strength **15 kN**, compliance with the **EN 353** standard is required.

b) vertical line systems – systems made of steel ropes (fixed systems) or polyamide ropes (temporary) intended for use when working on ladders and flat and steep roofs, compliance required with **EN 353**.

- **Fixed system** ② – consists of a steel rope, upper and lower anchor point and intermediate elements (tensioners, guides).
- the trolley and the slider ensure free movement and block the fall of the user by self-clamping.

- **temporary line system** ③ - fall protection device - slides along the rope and in the event of a fall it automatically locks, preventing the user from falling.

- safety rope - compliant with **EN 1891A** standard
- shock absorber – compliant with **EN 355** standard

All elements of the system are subject to technical condition inspection **always before use** - performed by the user, and **periodic inspection** - at least once a year.

Additional conditions for the assessment of the technical condition are set out in point 7. of this standard.

Remember!

Periodic inspection of fixed protection systems is carried out by an authorized representative of the manufacturer or an employee trained by him and having appropriate qualifications.

In a situation where the use of fixed protection systems has occurred
to inhibit the fall of an employee - the place where the system is installed should be excluded from use, properly labeled and repaired by an authorized representative or the service of the system manufacturer.

Carrying out repairs and modifications on your own without the written consent of the manufacturer may lead to accidents and is prohibited.

The system that has been repaired or modified by the manufacturer or its authorized representative (service) may be put into use after receiving the manufacturer's written consent issued to the user.

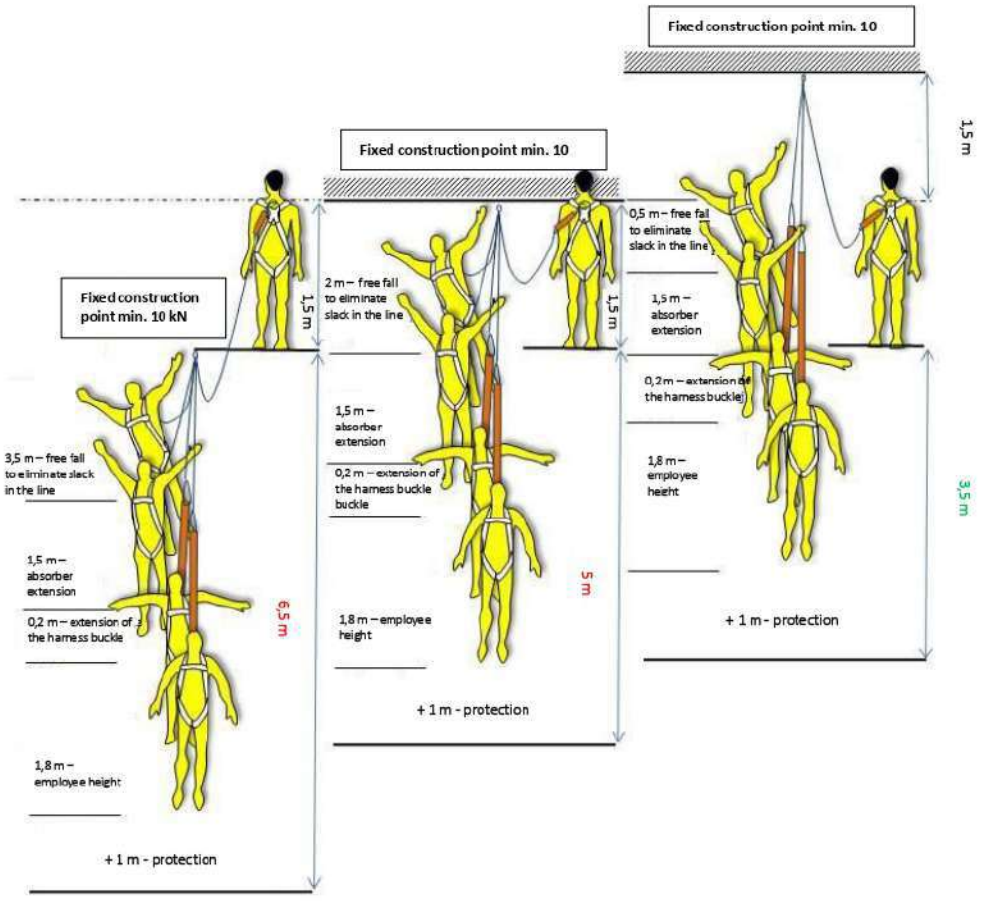
It is forbidden to perform independent repairs within the fall arrest device (welding, bolt replacement, etc.), ropes, carabiners or snap hooks. A device that was damaged in any way was involved the fall arrest or its technical condition is questionable - it should be immediately withdrawn from use and physically destroyed.

5. Rules for the selection of anchor points

1. **If the workplace is not equipped with permanent (system) safety systems**, i.e. it is not possible to secure the employee with the use of fixed anchoring points (systems) - the Contractor organizing work at height must take into account temporary solutions that will effectively protect employees during work .

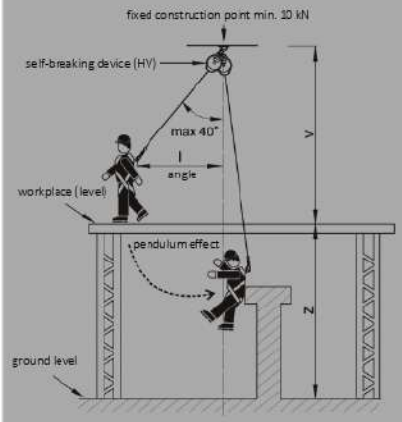
2. **Anchoring points temporarily attached to a permanent structure**, such as strap hooks or steel rope hooks, or portable hooking devices **(EN 795 B)** are key links in the worker fall protection system. Their proper location and installation is crucial as it may be a condition for survival in the event of an employee's fall. The structure to which the anchorage point is mounted must guarantee a tensile strength of **10 kN (preferably 15 kN)** in the direction in which the line of the fall arrest device or other protective device is connected.

3. **When selecting the anchor points, remember that the amount of free space** needed under the worker to arrest the fall depends on the type of harness, but also on the location of this point, therefore, these points should be selected in such a way as to limit the moment of free fall, in connection with what, should be located directly above the user. **Locating the anchor point below significantly increases the fall path, which could lead to the worker hitting the ground. The influence of the anchorage point installation location on the fall path length is shown in the graphic below.**



Remember!

The place of installation of the anchor point must guarantee the employee adequate strength, a safe distance from the lower level so that the protective devices can slow down the fall of the employee and prevent the occurrence of the **pendulum effect** in the event of a fall from height.



The pendulum effect is a hazard which, despite the activation of the employee's safety devices, may lead to serious injuries or death as a result of hitting protruding structural elements or other objects (walls, columns, etc.) appearing in the way of the worker falling. At the stage of work organization, the Contractor must foresee such a threat and select the location of the anchor point appropriately to eliminate it.

The level of the threat of the pendulum effect is determined by assessing the size of the angle between the vertical line and the line connecting the harness attachment point with the anchor point. For an angle of deflection above 30°, the risk of a pendulum occurrence is high and the anchorage point must be changed.

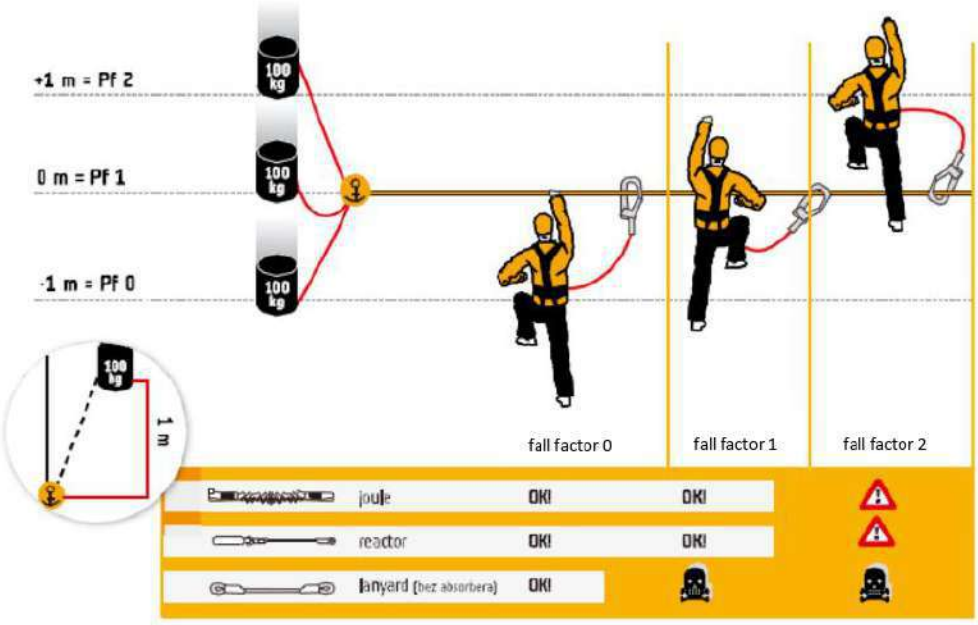
If the assembly of the anchor point above the head of the worker is not possible - other safer methods of protection should be used.

6. Assembly and application of the life ropes

1. **Life ropes** - these are horizontal safety systems, which are used when it is not possible to perform work in protection with the use of permanent or temporary anchor points / systems. Works related to the necessity to use life ropes may concern activities performed on:
   a. **suspended ceilings,**
   b. **horizontal surfaces (platforms without barriers, roofs, ceilings, etc.),**
   c. **surfaces of machines and devices where there are no safety systems.**

2. **Life rope assembly is performed by an employee familiarized with the device manufacturer's instructions.** The life rope is attached to the fixed points of the structure that guarantee adequate strength. Before installing the life rope, **the Contractor must obtain the consent of the Responsible for the area** or the owner (user) of the platform, ceiling, machine, device or other surface on which there is a need to install the life rope and protect workers.

3. **Influence of the anchoring point using the life rope and the safety lines used** (dynamic - joule, static with a shock absorber - reactor, static without a shock absorber - lanyard). The graphic below shows the employee fall factor rate.



4. **Dependence of flight distance on the falling speed and the acting limiting force**

Flight length [m]	Falling time [s]	Falling speed [km/h]	Limit force (impact) for a body weighing 80 kg [kN]
1	0,45	16	0,8
2	0,64	22	1,6
5	1,01	36	4,0
10	1,42	50	8,0
20	2,02	71	16,0
40	2,85	100	32,0

A falling man changes his potential energy into kinetic energy in a fraction of a second, the greater the longer the flight. It also achieves the appropriate flight speed.

Remember!

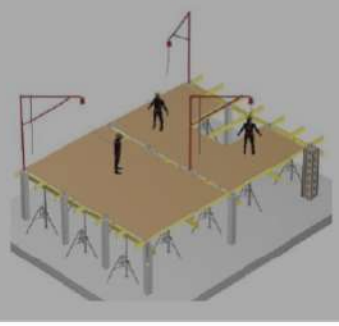
Connecting several lifelines with each other or using solutions not recommended by the manufacturer of the device is prohibited.

When working in life rope protection, the working team complies with the maximum permissible number of workers connected to one rope. This amount is specified by the manufacturer of the device.

The lower the fall factor, the safer the flight. The organization of work should be focused on preventing the risk of the employee falling from a height by eliminating work at height, if this is not possible - performing work in a restraint system. Fall protection is the last link in the hierarchy during the work. If there is a risk of a fall from a height - the use of protective equipment must minimize the length of the employee's flight.

The worker attaches the rear attachment point of the safety harness to the life rope by static rope with a shock absorber or by fall arrest device. The use of dynamic ropes or other solutions is prohibited.

The Alsiperch system is an alternative way of working in protection on platforms or flat surfaces (ceilings, roofs, etc.) when there are no permanent protection systems or the possibility of installing temporary ones (e.g. life ropes).

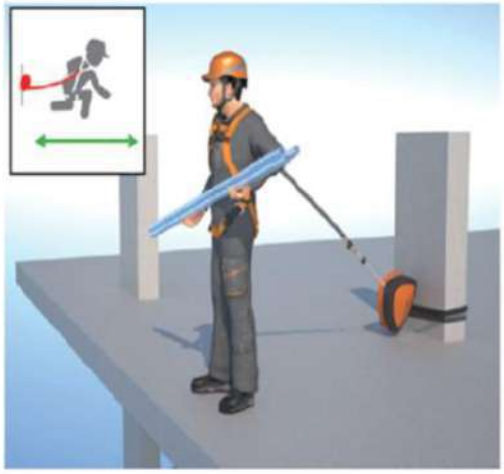


7. Moving around when working at height

1. **Horizontal moving** - in this case, the fall arrest device (e.g. HV self-locking device) is attached to the anchoring point at ground level on which the worker moves. Such a safety system is usually used when working on roofs and ceilings of buildings or in other places where it is not possible to anchor the device above the level of the employee's head.

For work on the roof and at the edge of the ceiling, it is recommended to use devices that enable restraint work.

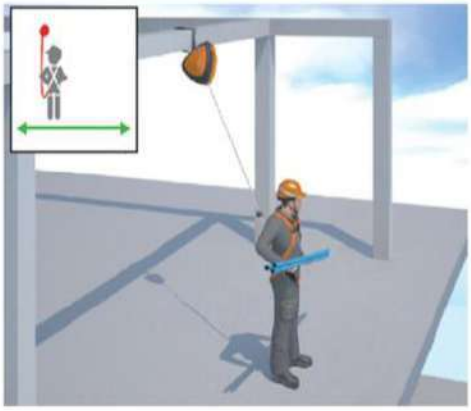
If this is not possible and the employee has to work at the very edge of the building, it is advisable to use special fasteners - e.g. **AZ-800** fastener or other that meets the requirements of **EN 354.** (1)



①

The self-locking devices **intended only for vertical operation** (V-vertical) in combination with the **AZ-800** fastener make a **set that can be used at edges** such as rolled steel profiles, wooden beams or other steel structures. In the case of using the HV type retractable device - the use of the AZ-800 rope is not necessary.

2. **Vertical moving** - in this case, the fall arrest device (e.g. V or HV self-locking device) is attached to an anchor point located above the head of the protected worker. This safety system is recommended in all situations where it can be used (the structure allows the use of an anchor point located above the head of the employee).



Equipment for work at height should be selected in such a way as to provide the employee with the safest and most convenient option for performing work!

Due to the gradual withdrawal of the AZ-800 connector from production, employees should be equipped with HV self-locking devices in the first place.

Remember!

The AZ-800 type fastener is a steel rope with an integrated shock absorber in a special casing which, in the event of a worker falling behind the edge contour, will not be damaged and / or broken as a result of meeting a sharp edge, which is highly probable in the case of using an ordinary knitted rope.

The shock absorber of the AZ-800 fastener should be attached to the rear attachment of the employee's harness - the free (longer) part of the line to the anchor point - **NEVER REVERSE.**

The use of a self-locking device (HV) instead of a standard lifeline is more desirable in many types of work at height. Due to the automatic operation of the device, it is a safer solution for the employee and, if he or she moves around the workplace, it provides greater freedom of movement.

8. Evacuation and rescue kits

Protective equipment for work at height is used in the course of many categories of work - e.g. in confined spaces and in emergency situations - especially during the evacuation of an employee after a fall from a height.

1. **The basic set** for evacuation after a worker falls from a height consists of:
   1) a fall protection device compliant with the standard **EN 341** (1)
   2) core rope with low sheath elongation compliant with the standard **EN 1891A** (2)
   3) type B anchor device - compliant with the standard **EN 795B** (3)
   4) carabiners (snaps) - compliant with the standard **EN 362** (4)
   5) transport bag (5)
   6) knife (6)

The methods of using the evacuation kit and variants of rescue operations with its use are specified in standard **8.3 Evacuation of an employee after a fall from a height**.

2. **The basic evacuation kit for work in confined spaces includes** (only with regard to protective equipment for work at height):
   a) **evacuation tripod** (1) **or a davit system** (2) – meeting stards:
      EN 795-B – for movable anchor points
      EN 363 – for self-locking devices
      EN 1496 – for rescue lifting equipment
      Directive 2006/42/WE § 6 – for lifting (people and materials).
   b) **protective equipment for working at height:**
      1. safety harness (3) – compliance with the standard **EN 361**,
      2. a protective helmet for work at height (4) – compliance with the standard **EN 397**,
      3. safety rope + spare safety ropes (5) – compliance with the standard **EN 1891A,**
      4. carabiners (6) – compliance with the standard **EN 362 B,**
      5. ladder of appropriate length – compliance with the standard **EN 131.**

The methods and conditions of using the evacuation kit during works in confined spaces are specified in the **standard 6.2 Working in confined spaces.**

Remember!

Depending on the manufacturer, the composition of the evacuation kit may have a different configuration. The choice of the set should be dictated by taking into account the difficulties occurring at the site of work - the availability of the structure, lack of anchoring points, etc., and the identified hazards.

The advantage of using davit systems is the ability to protect the employee in every plane - both vertically and horizontally. The evacuation tripod provides the possibility of evacuation only and only in the vertical plane. When deciding to select the appropriate system, you should define the types of zones to confined spaces where the employee will be secured.

The type and type of ladder used during work in a confined space should be adapted to the dimensions of the entrance opening to the confined space and the height relative to the bottom of the space and the exit opening. It should be remembered that the ladder is intended as an auxiliary. An evacuation tripod or a davit system play an essential role in the evacuation and protection of an employee in a confined space.

9. Inspection of the technical condition of protective equipment

Work at height is a category classified as particularly dangerous work - the technical condition of the equipment used to perform such work is a particularly important issue and definitely determines the employee's survival. Maintaining the equipment in a proper technical condition is the responsibility of every employee (user) and employer. **This obligation results from the equipment manufacturer's operating instructions and from general provisions.**

General rules:

1. **Protective equipment for work at height** (safety harness, cord with shock absorber, self-locking device and auxiliary accessories) are **INDIVIDUAL** protection measures - therefore each piece of equipment should be assigned only to **ONE** employee (user).
2. **The method of registering and issuing equipment to employees is the responsibility of the employer.** The equipment use card should be completed at the time of the first release of the equipment for use to an employee. Technical inspections should be performed in accordance with the manufacturer's recommendations: **before each use** (user) and **periodically at least once a year** - this is performed by the equipment manufacturer, his representative or an employee trained by the manufacturer in this field.

KARTA UŻYTKOWANIA

NAZWA URZĄDZENIA / MODEL	NR KATALOGOWY
NUMER URZĄDZENIA	DATA PRODUKCJI
NAZWA UŻYTKOWNIKA	
	DATA PRZEKAZANIA DO UŻYTKOWANIA
DATA ZAKUPU	

PRZEGLĄDY TECHNICZNE

	DATA PRZEGLĄDU	PRZYCZYNY PRZEPROWADZENIA PRZEGLĄDU LUB NAPRAWY	ODNOTOWANE USZKODZENIA, PRZEPROWADZONE NAPRAWY, INNE UWAGI	DATA NASTĘPNEGO PRZEGLĄDU	PODPIS OSOBY ODPOWIEDZIALNEJ
1					
2					
3					
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3. **Safety harness** for work at height with the safety ropes (with or without absorber) can be used for **a period of 5 years from the moment of their release for use.** After this time, they are subject to physical destruction, similarly to the situation when they were involved in stopping the employee's fall, or they are damaged or destroyed.
4. **Self-locking devices** (V or HV type) do not have an indicated permissible period of use - provided that periodic inspections are performed on time. **After every 12 months** of use, the fall arrest device should be withdrawn from use and subjected to a detailed **factory periodic inspection.** The device may only be inspected by the manufacturer or its authorized representative. During the periodic inspection, the service life of the unit will be determined until the next periodic inspection. All information related to the periodic inspection must be recorded in the device usage sheet.

PRZEGLĄDY TECHNICZNE

DATA PRZEGLĄDU	PRZYCZYNY PRZEPROWADZENIA PRZEGLĄDU LUB NAPRAWY	ODNOTOWANE USZKODZENIA, PRZEPROWADZONE NAPRAWY, INNE UWAGI	PODPIS OSOBY ODPOWIEDZIALNEJ	DATA NASTĘPNEGO PRZEGLĄDU

5. **Personal protective equipment** for work at height must be transported in packaging that protects it against damage or getting wet, e.g. in bags made of impregnated fabric or in steel or plastic suitcases or boxes. Additional conditions for maintenance and storage of the equipment are specified in the manufacturer's instructions.

THE USE OF EQUIPMENT THAT HAVE NOT BEEN SUBJECTED TO PERIODIC TESTING IS PROHIBITED!

Remember!

The use of one set of equipment by several employees is prohibited, because in the event of damage by one employee, equipment left in further use may lead to an accident when used by another employee!

An employee who has received protective equipment for work at heights in condition - before starting work with its use, he must know the operating instructions for such equipment, undergo health and safety training during work at height and have a medical certificate stating that there are no health contraindications for such work.

The self-locking device (V or HV type) must be withdrawn immediately from use, if there are any doubts as to its proper condition and operation. The equipment may be put back into service after a detailed inspection is carried out by the manufacturer or his authorized representative and after expressing his consent in writing to reuse the equipment.

The self-locking device (V or HV type) must be withdrawn immediately from use and sent to the manufacturer or his authorized representative for a detailed inspection, if involved in the fall arrest. Any repairs or service activities may be performed only by the manufacturer of the device or its authorized representative.

10. Good and bad practices with the use of protective equipment

The harness for work at height must always be worn over the worker's clothing!

The lifeline must have a shock absorber it must not be replaced with other ropes or tapes not intended for this purpose.

It is **forbidden** to use the front hitch during work on the mobile platform!

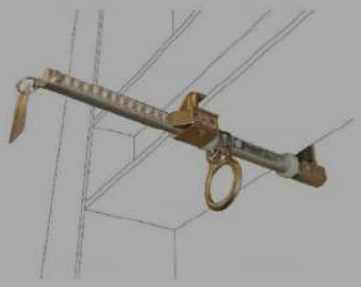
When working at height it is important not only to protect the workers from falling it is also worth **securing the tools and devices** used during work - because they often cause accidents.

Safety harnesses that have any kind of damage (chemical, thermal, mechanical) must not be used when working at height, such equipment should be withdrawn from use and destroyed. The inspection of equipment for work at height is extremely important.

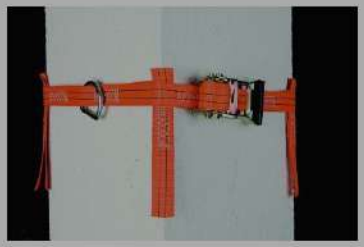
The shock absorber of the HV self-locking device located next to the lifeline snap-hook **must not be damaged**. If the technical condition of the safety equipment intended for work at height raises any doubts - such equipment should be withdrawn from use and appropriately marked. The user (the employee who will use the equipment) is responsible for the daily inspection of the equipment - damaged equipment cannot be allowed to work.

Remember!

At the planning stage of all kinds of works, especially those related to the assembly of various types of installations - check the availability of structural elements and anchor points - if it is necessary to perform work at height later. If the structure of the building does not provide for factory-installed anchoring points - the contractor will be obliged to provide own technical solutions in this regard.



When making horizontal protection systems it is worth using the current elements of the structure - only in agreement with the constructor or the person responsible for the area / building where such solutions are to be applied. Otherwise, such activities are prohibited.



When the harness is not worn correctly in the event of a fall from a height, they may cause additional injuries an employee, including disability or death due to spine fracture or spinal cord tear.

Training the employee is an important issue on the appropriate use of protective equipment for work at height.

Protective equipment for work at height must meet the requirements of **applicable standards.** Obsolete equipment with expired validity must be withdrawn from use and destroy.

Connecting a self-locking device to the anchor point with the damaged carabiners or equipment not designed for this function is **FORBIDDEN!** Carabiners used to connect protection devices must have proper technical condition and meet the **EN 362 B standard.**

An example of a properly protected employee before transport works. The safety harness is put on correctly with the rear attachment point located between the shoulder blades, the harness belts are properly adjusted. Self-locking device line is connected directly to the rear attachment point. A self-locking device attached to an anchor point with a carabiner that meets the **EN 362 B.**

Remember!

The use of damaged anchorage points is prohibited. If the anchorage point is damaged, do not attach any protection devices to it. Such points should be replaced immediately.

Painting the mounted anchor points with is prohibited as it may "mask" the damage. A suitable way to mark an anchor point is to make a circle around it in bright paint.

Do not install the anchors of the new anchorage point where the anchors of the other anchorage point were previously. The strength of the floor may then be questionable and it is necessary to check the anchor point by carrying out a strength test.

IMPORTANT!

Connecting several different connecting and shock-absorbing elements is forbidden, unless the manufacturer of the devices allows it.

Before using protection devices, familiarize employees with the manuals of the devices.