



TECH-INFO possible
to remove and use
separately.

**SAFETY
FIRST**



TECH-INFO



singing rock



EN

Safety rules fundament for working in height is based on EU and Czech Republic laws and directives with regard to many years of experience of Singing Rock.

GENERAL PRINCIPLES OF WORK IN HEIGHT

Gravity is strictly real. Workers in the height are in permanent danger of fall. That is why their safety shall be the first raising up on mind when going up to height. There exist plenty of different methods of the safety chain construction. The structure of safety chain should correspond with the type of activity considering maximal efficiency of work and this all along with the maximal possible safety of the worker.

Basic skills and knowledge of workers in height are:

Technique of using PPE to prevent from motion to areas with the risk of fall:

This technique enables workers in height to move freely to areas without the risk of fall. Moving into areas with the risk of fall is restricted by suitable PPE.

Work positioning:

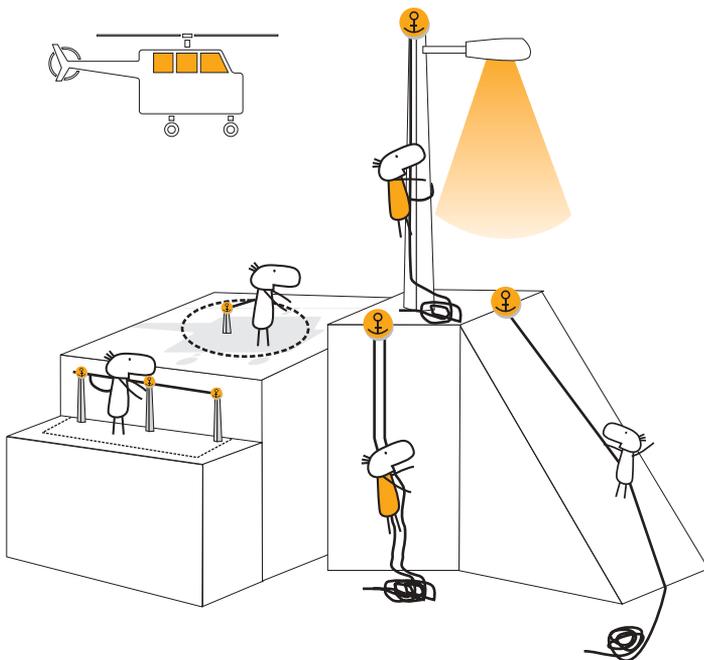
For efficient working in height taking of appropriate working position is essential. Work positioning shall encourage the worker to concentrate on his job and thus it shall be safe, sure-footed and comfortable.

Protection against fall:

In case of the risk of fall, worker shall be equipped with appropriate equipment for safe arrest of his fall by lowering the impact force to maximum 6 kN with the use of suitable fall absorber.

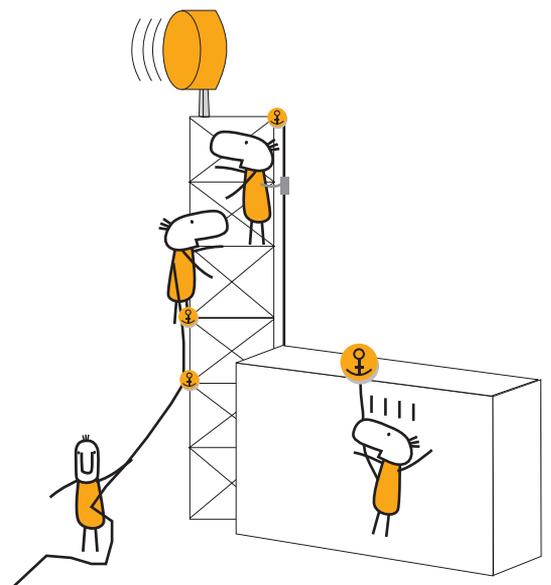
General rule:

To assure user's safety the specific theoretical and practical training in appropriate methods of use of suitable equipment is essential.

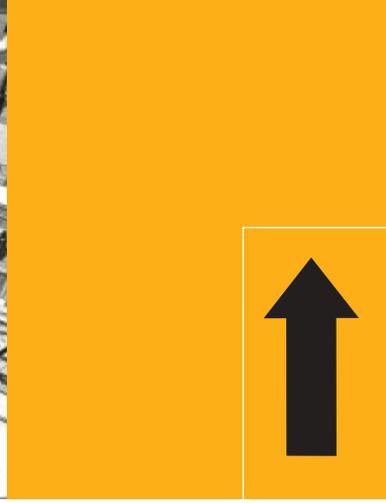


Technique of using PPE to prevent from motion to areas with the risk of fall

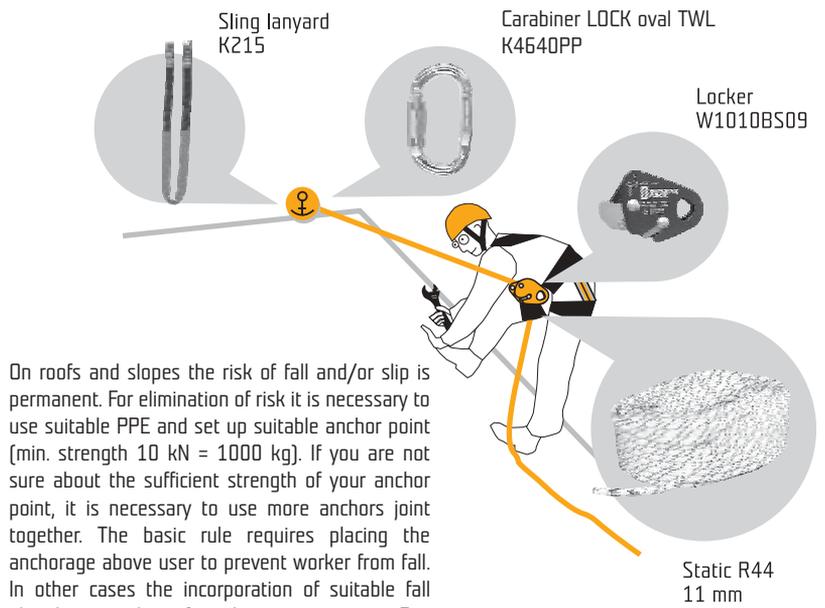
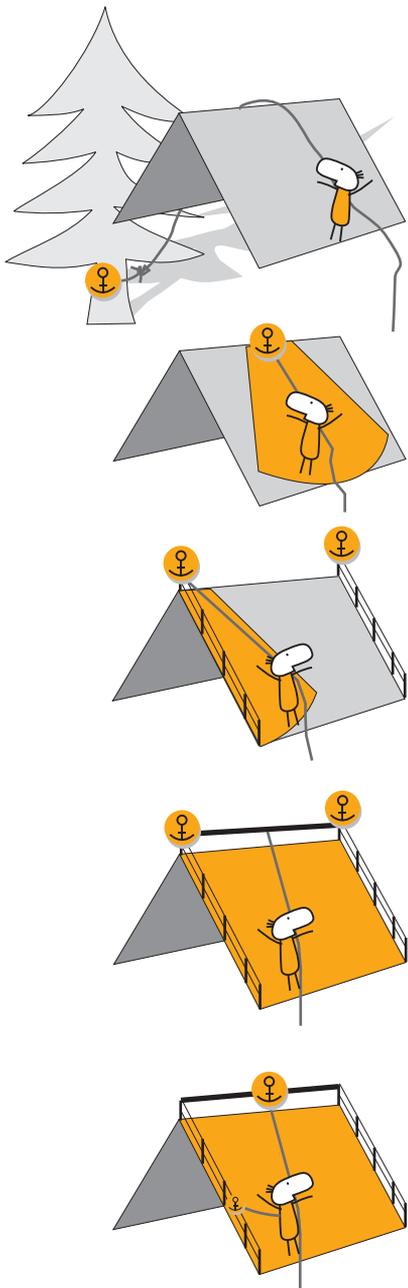
Work positioning



Fall arrest

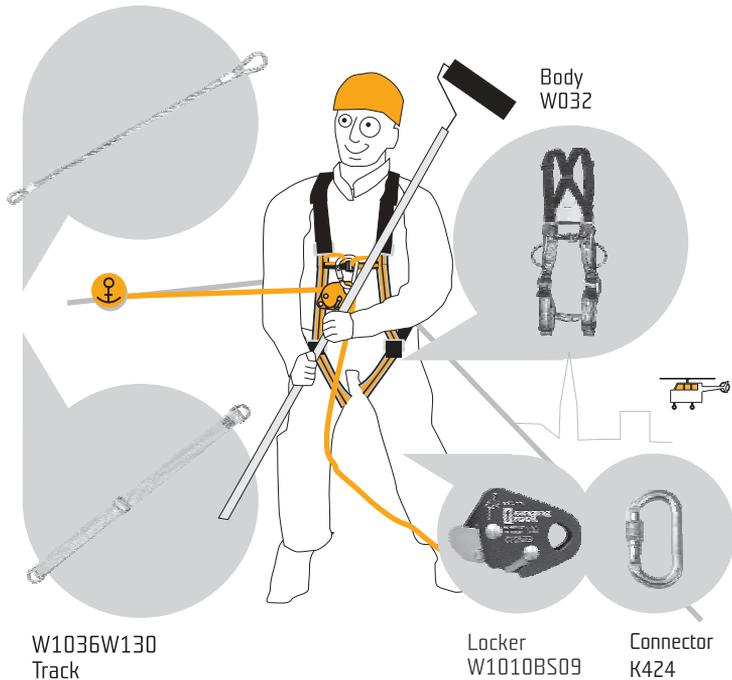


ROOFS AND SLOPES



On roofs and slopes the risk of fall and/or slip is permanent. For elimination of risk it is necessary to use suitable PPE and set up suitable anchor point (min. strength 10 kN = 1000 kg). If you are not sure about the sufficient strength of your anchor point, it is necessary to use more anchors joint together. The basic rule requires placing the anchorage above user to prevent worker from fall. In other cases the incorporation of suitable fall absorber into the safety chain is necessary. Pay attention to the horizontal distance of your work position from vertical of your anchorage - pendulum effect increases the dangerousness of possible fall.

W2281X130
Steel anchor



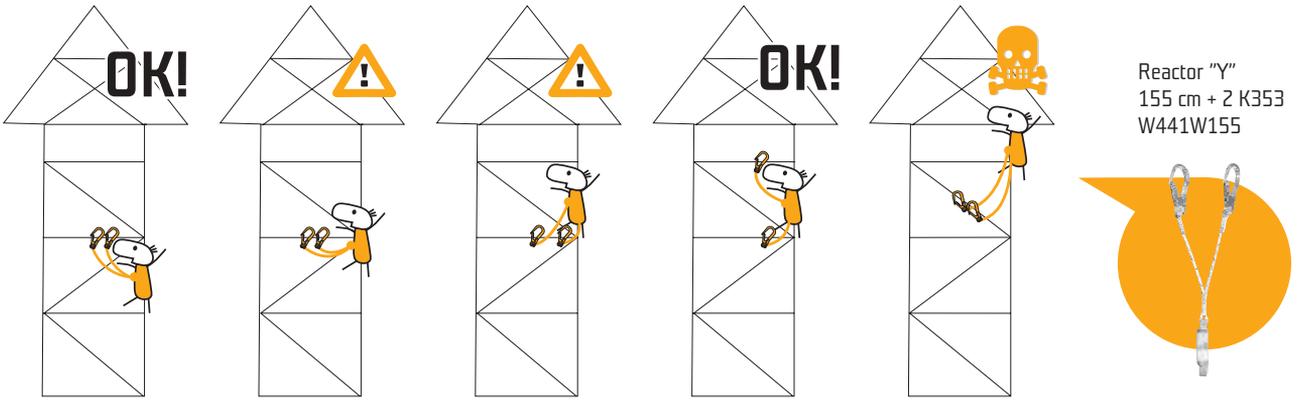
W1036W130
Track

Locker
W1010BS09

Connector
K424

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ROPE ACCESS

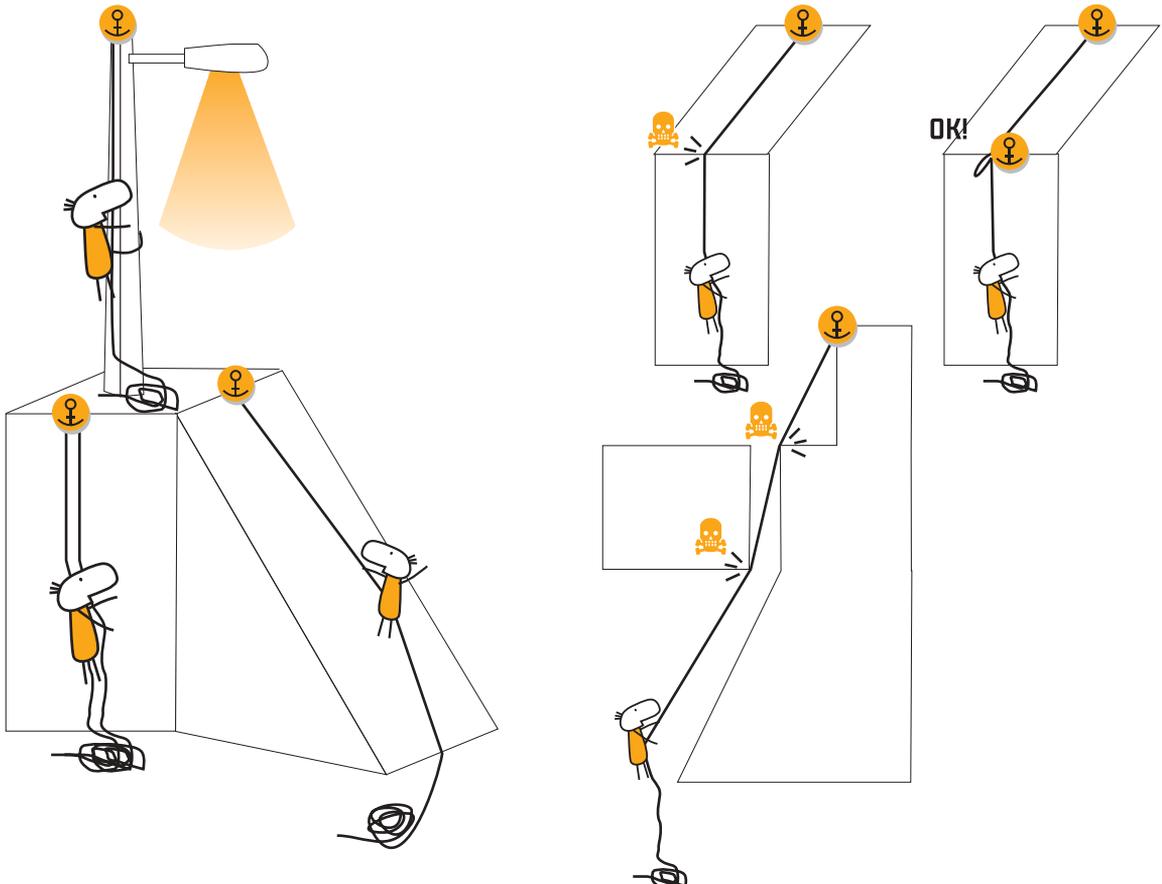


Few basic principles of using ropes and lanyards:

Keep your rope out of any sharp edges, rough surfaces and chemicals. Especially on roofs and slopes anticipate potential direction of fall and

appropriate strain of your rope. When working on constructions pay attention to the direction of leading your rope with regard to its possible strain. When using lanyards either to climb the construction or to work positioning take heed to

lower potential fall to minimum. That is why always place your anchorage above you.



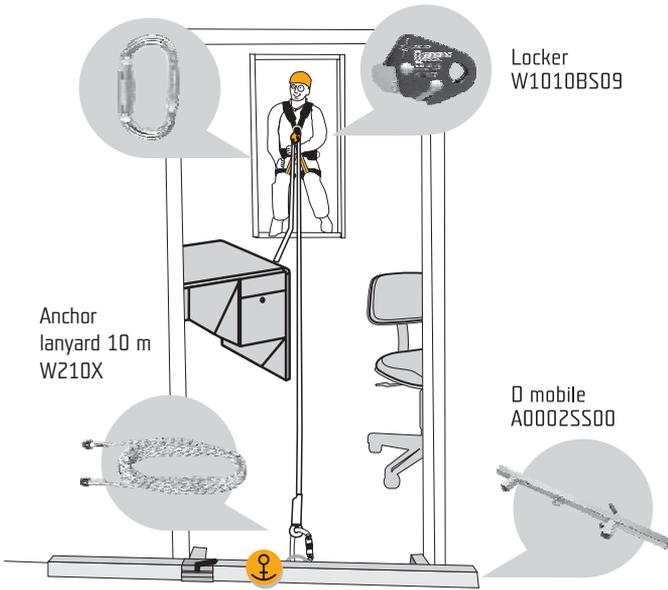


Carabiner LOCK oval TWL
K4640PP

Locker
W1010BS09

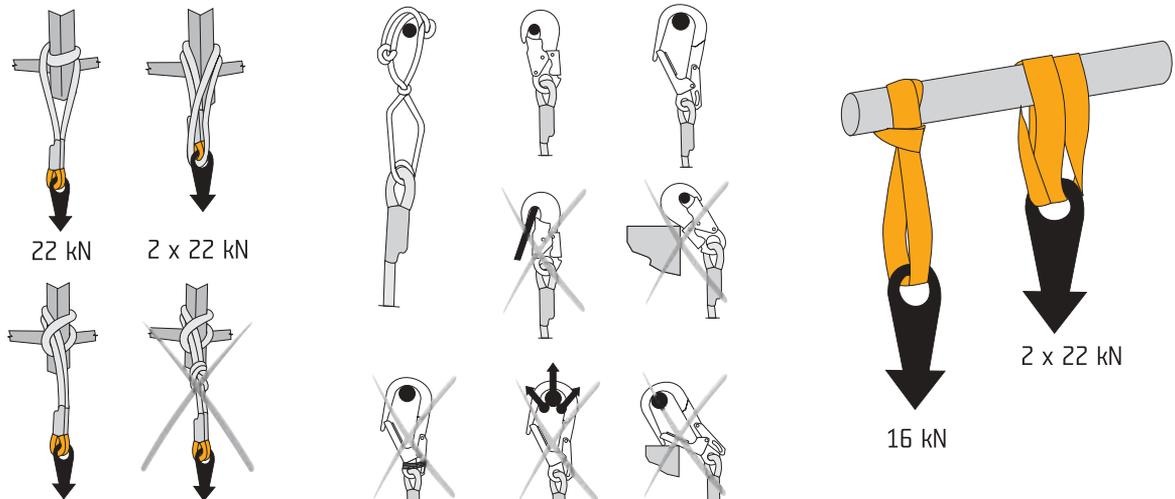
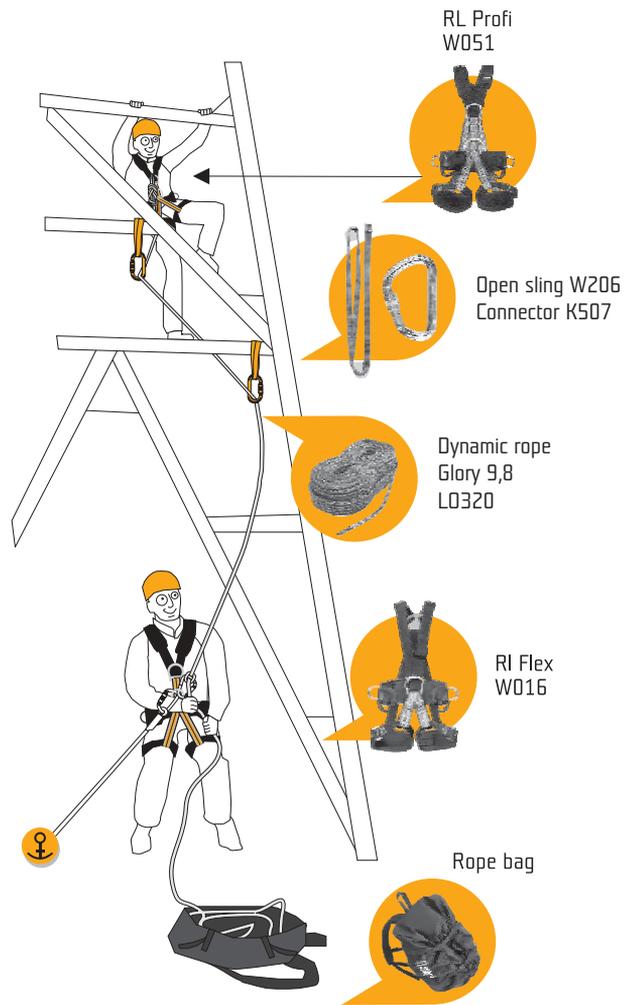
Anchor
lanyard 10 m
W210X

D mobile
A0002SS00

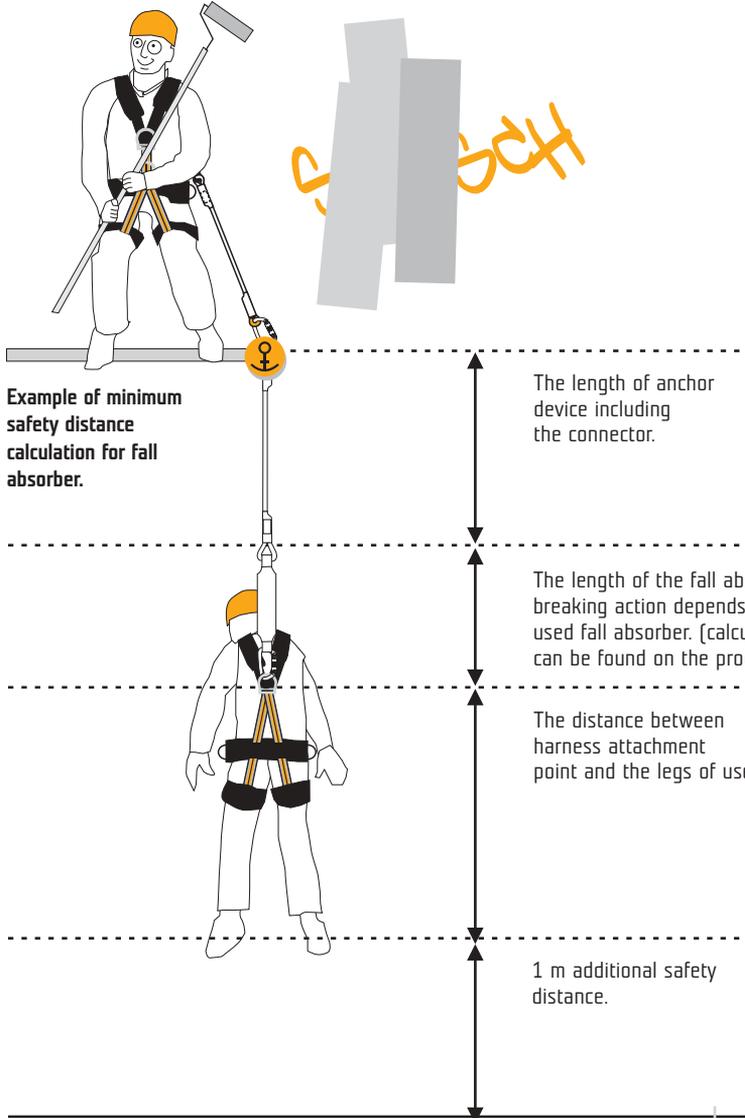


Rope access techniques:

Using rope access techniques minimizes risk of personal fall. On the other side when using climbing techniques to reach the working place it is necessary to make enough anchor points (min 10 kN) in suitable distance to minimize potential fall. Keep in mind, that work in height is a dangerous activity and thus must be practiced only by specifically trained people.



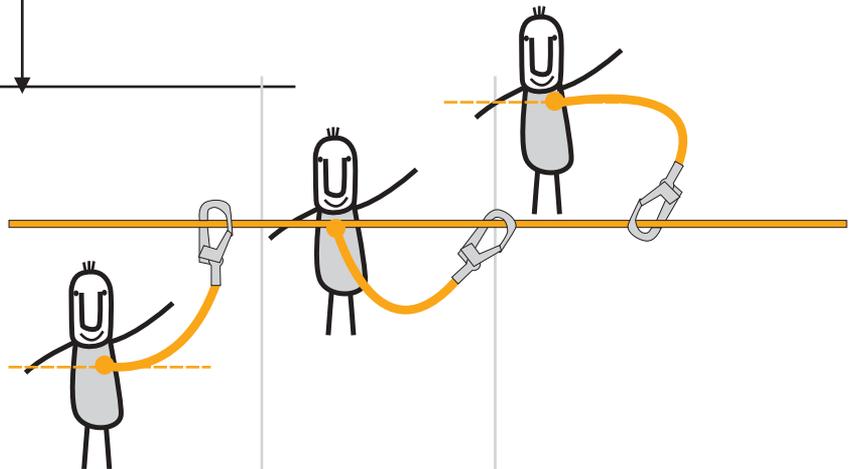
FALL-ARREST SYSTEMS



Fall absorbers:

When using fall absorber the elongation of the fall absorber during breaking action shall be encountered. As there are different types of fall absorbers on the market, safe use of this product requires careful reading and understanding of instructions for use, where the minimum safety distance below the user is specified. For your safety we recommend to add another 0,5 m to the calculated minimal safety distance below user.

Minimal safety distance



Fall factor 0

Fall factor 1

Fall factor 2



Joule

OK!

OK!



Reactor

OK!

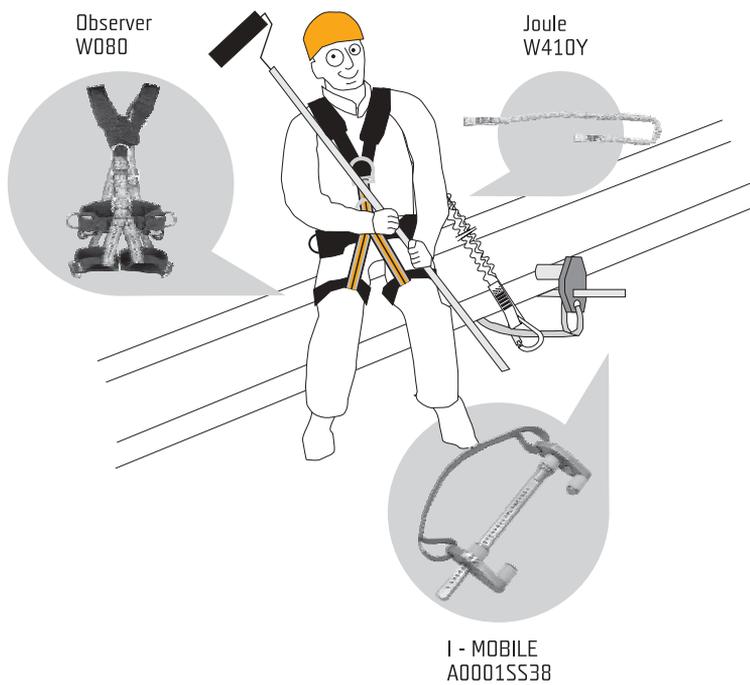
OK!



Lanyard without fall absorber

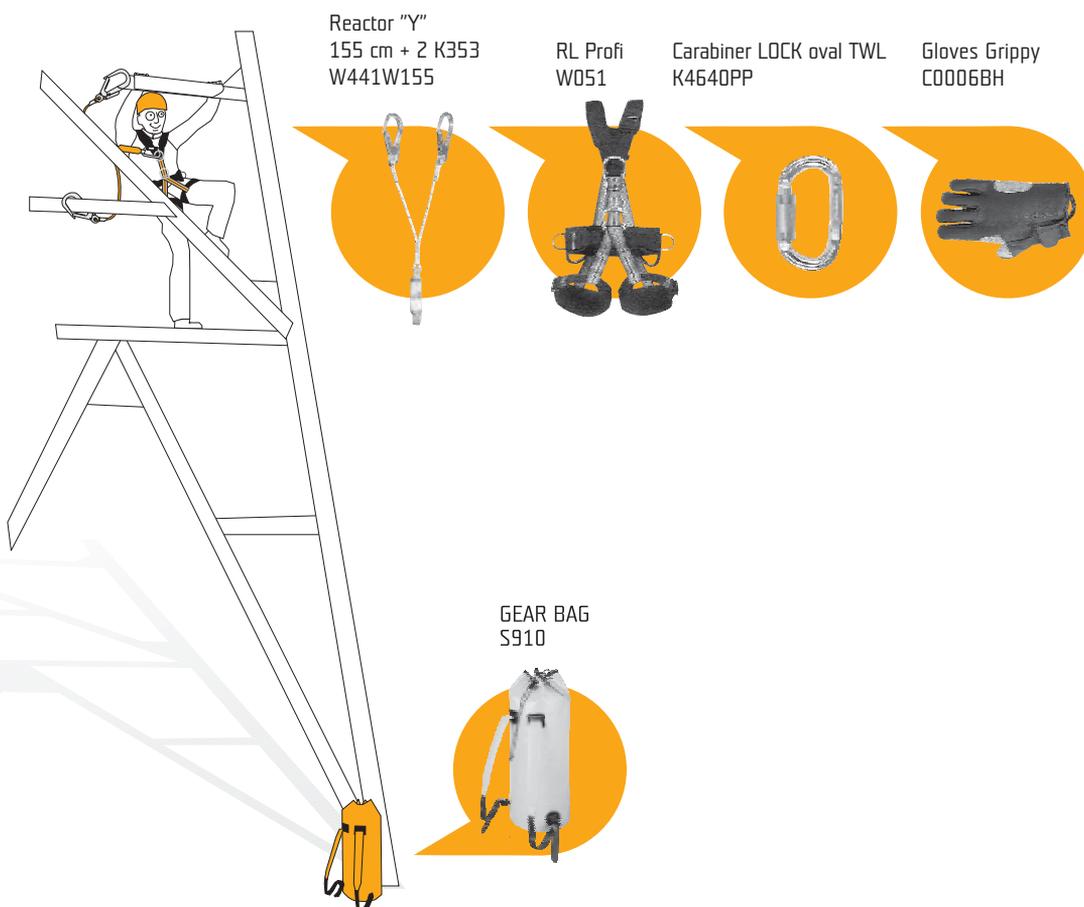
OK!





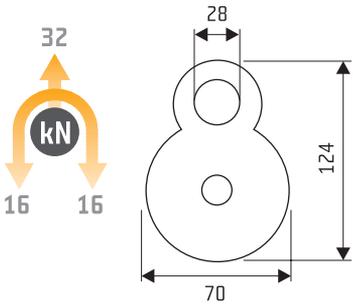
Fall arrest systems form an important element to ensure worker's safety in height. When used in correct way, they minimize the effect of the fall on the human body by reducing the impact force after fall.

When the worker faints during or after fall, it is necessary to aid him immediately and to remove him to the safe place. The long hanging of unconsciousness body can have permanent or even fatal consequences. Thus the fall arrest systems can be used only by informed and appropriately trained workers, capable of aiding each other at rescue and recovery action.



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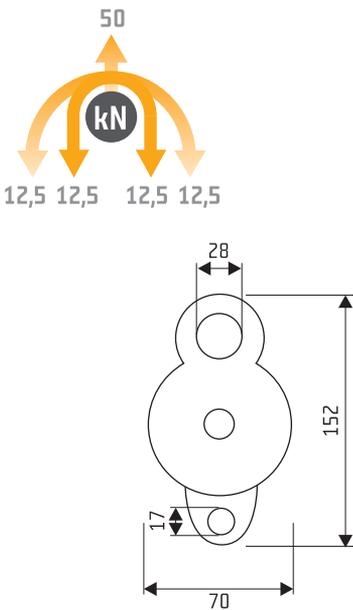
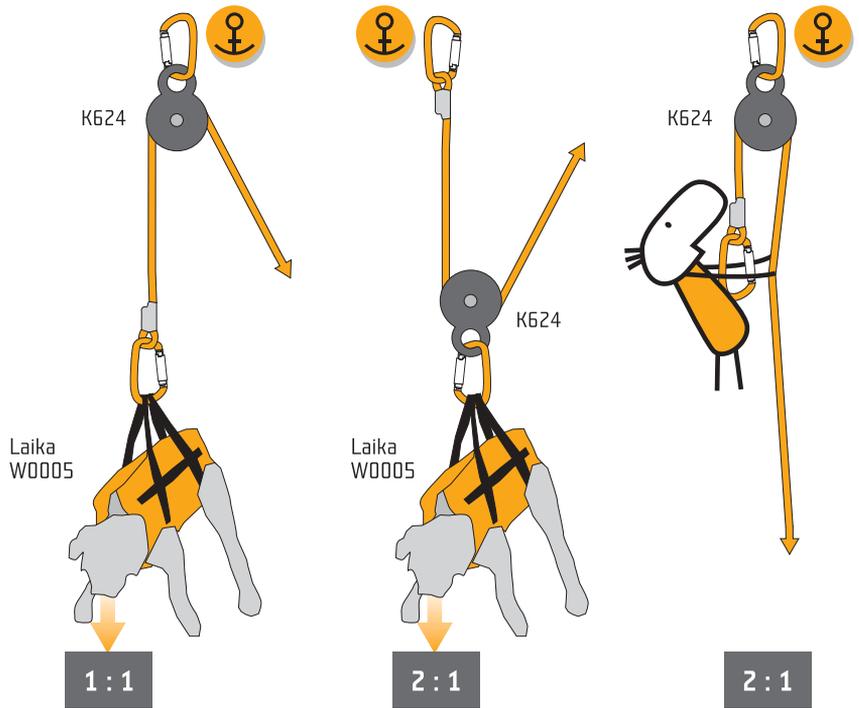
PULLEYS AND TACKLES



pulley extra roll
K624



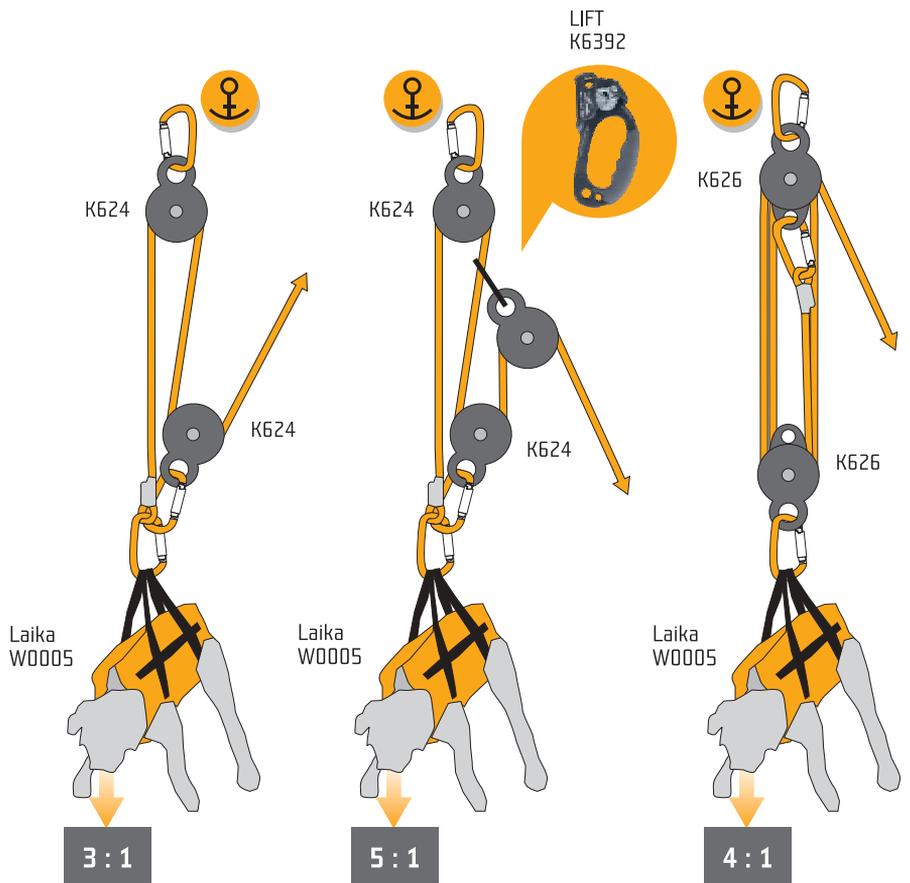
Size: 124 x 70 x 25 mm
Diameter: 39 mm



pulley twin roll
K626



Size: 124 x 70 x 50 mm
Diameter: 39 mm





Every worker sooner or later encounters the need of raising the heavy mass to the height. However it is not always possible, whether from safety, economic or other reasons, to use machinery for such work. Mainly in confined and/or inaccessible space the use of hauling tackle seems to be an ideal solution.

Here are the advantages of hauling tackles:

1. Well control of the force needed to raise the mass.
2. The hauling tackle is not demanding with regard to the material necessary for its construction.
3. Possibility of putting the rope grabs into the hauling tackle.
4. Variability and easy adoption to concrete space.
5. Compared to standard telfers, the hauling tackles are very light and simple.

6. The costs of hauling tackle construction are much more lower than the costs of other hauling systems.

The pulleys used in the hauling tackle can be divided into two basic groups:

- 1) stationary pulleys
- 2) free pulleys

Stationary pulleys: change the direction of force action.

Free pulleys: change the force proportion. Their function lies in reduction of the exerted force and subsequent increase of the distance, on which the force has to act.

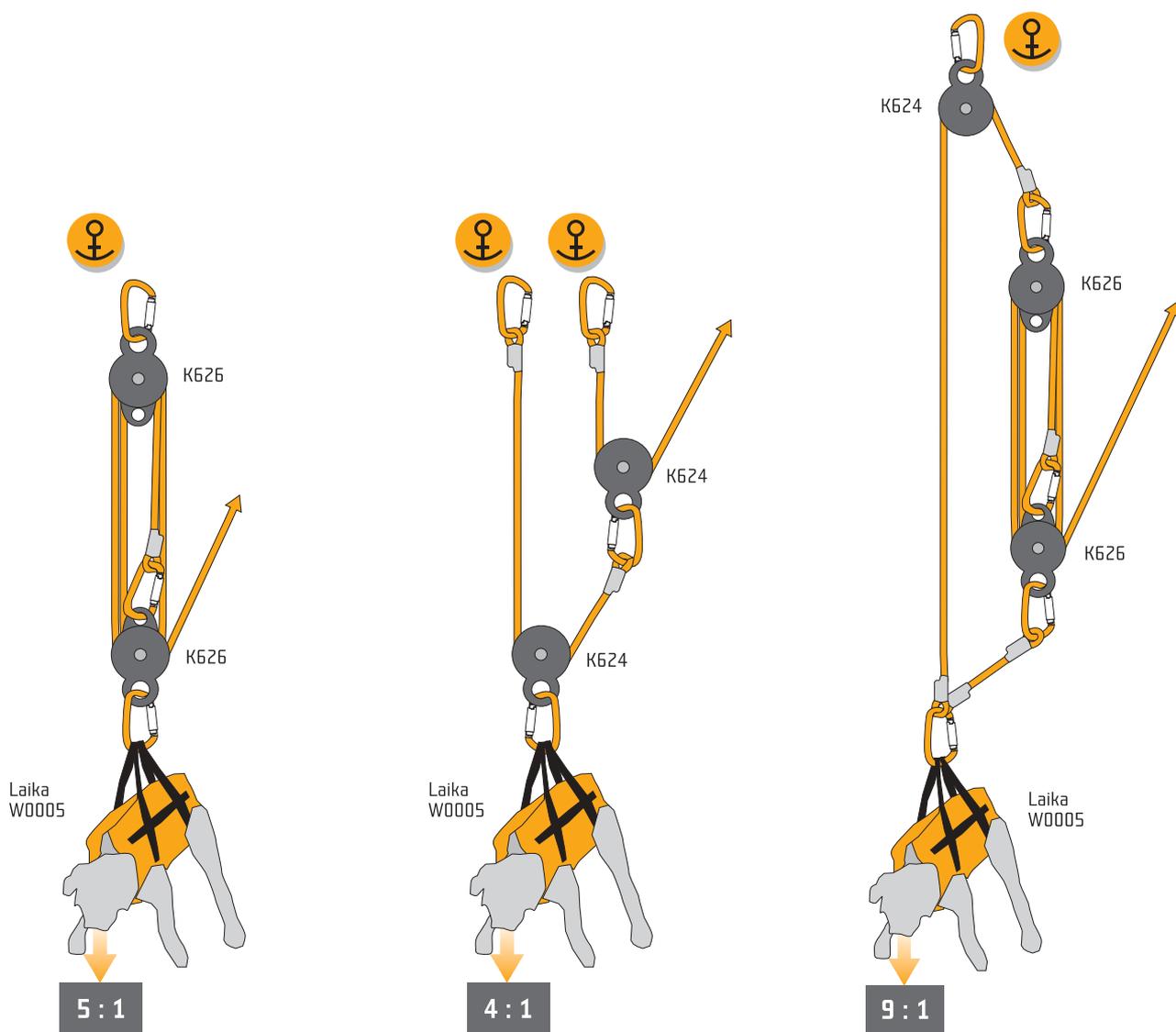
Hauling tackles are suitable for works at height as well as for rescue purposes, when evacuating

persons from danger situations. The type of suitable hauling tackle depends on the weight of the mass. The heavier mass, the higher force reduction ratio the hauling tackle shall have. Otherwise more manpower is needed to raise the mass.

In any case the best way to master the use of hauling tackles is to take special training course of use the hauling tackles in praxis. In case of your interest we are prepared to offer you this training course.

Wide range of pulleys suitable for different activities, e.g. Tyrolean traverse, pick-up and/or pick-off rescue, lifting or lowering weights, material transport, ...

Pulleys form an important element of working in height specialists.



RESCUE

Rescue activities are unique in many ways when speaking about working in height. First of all we speak about the activity, when the person's life is in danger, thus the rescuer shall be capable of quick, accurate and efficient work and of course keeping himself safe during this work. That is why rescue activities are prepared and trained by rescuers into the least details. Below is presented one of the rescue activities - ski lift evacuation, prepared by Singing Rock in cooperation with HS ČR v.p.ss.



Rescue knife ■ A0030YS00



Triangl ■ W820



Axillar ■ W0003BY09



Operator ■ W0522SY



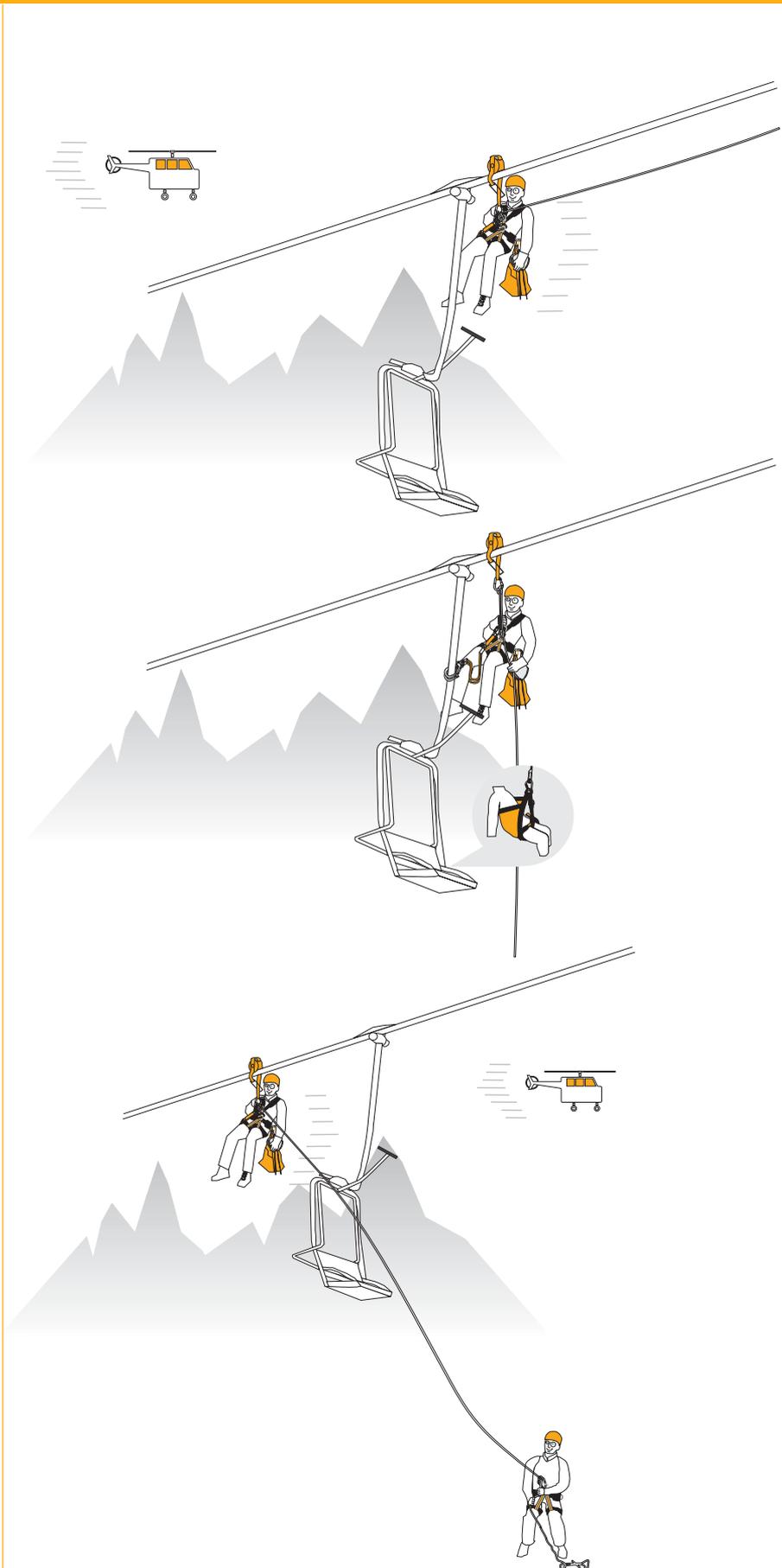
Gloves ■ C0006BH



Reactor Y with K 353 ■ W441W095

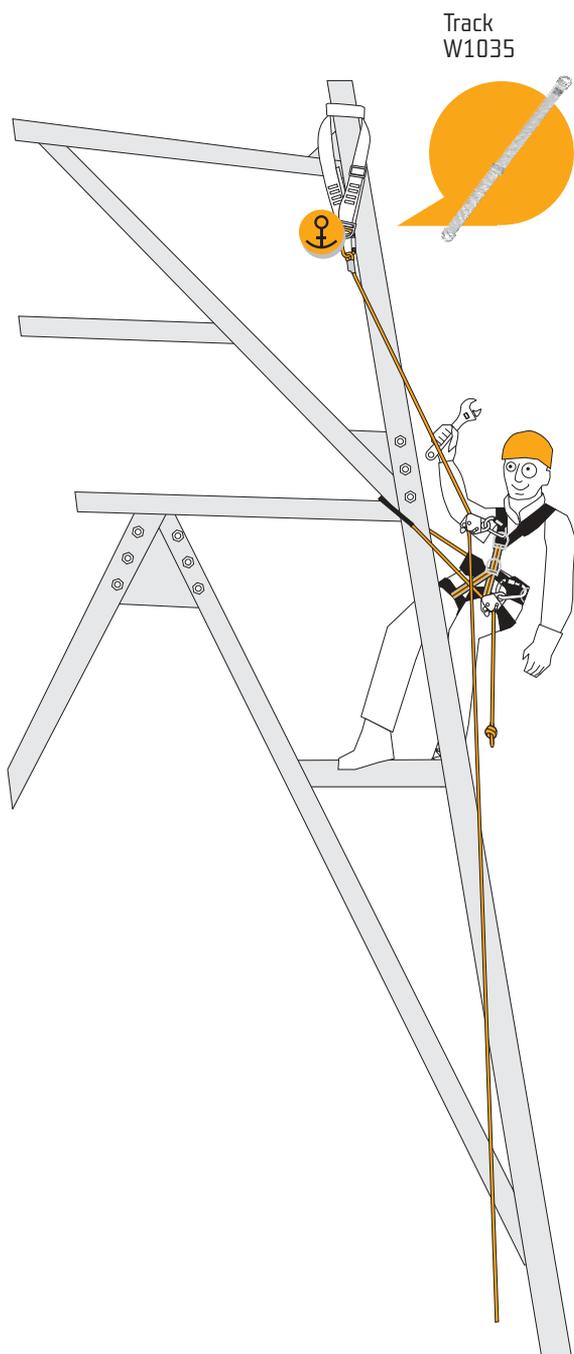


CD ski lift evacuation





POSITIONING



Operator
W0522



Carabiner LOCK oval TWL
K4640PP



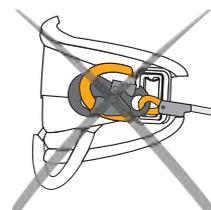
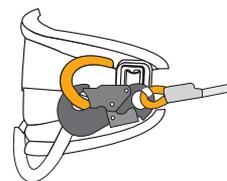
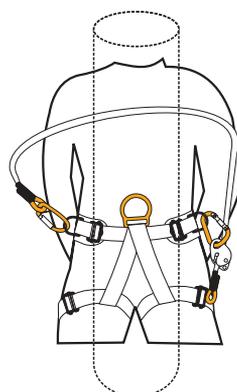
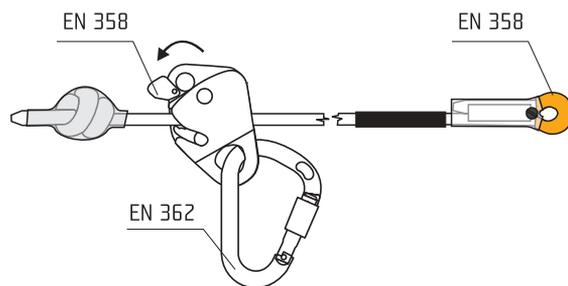
Gloves Grippy
C0006BH



Locker
W1010BS09



Site
W1011WB04



STANDARDS AND HARNESSSES

Min. strength 15 kN - according to EN361 standard, each attachment point on the harness intended for fall arrest is marked with the letter "A"

Improved strength webbing made of PAD6 enable us to prolong the lifetime of the harness up to 10 years from the date of manufacture (if the harness is not recommended to be put out of use at the yearly inspection).

EN 813 - Personal protective equipment against falls from height - Sit harnesses

Four accessory gear loops with the bearing capacity 5 kg are placed along the waist belt. They are ideal to attach a gear bag and/or other accessory equipment.

EN 358 - Personal equipment for work positioning and prevention of falls from a height - Work positioning systems.

Anatomic design of leg loops, waist belt and shoulders padding as well as the choice of steady and resistant foam offers great comfort through the whole lifetime of the harness. The shoulder padding is lined with special lining strap to be pleasant to user's neck.

Elastic straps placed near each buckle intended for folding the free end of the strap.

EN 361 - Personal protective equipment against falls from a height - Full body harnesses



Four gear loops with the bearing capacity of 5 kg provide enough space for you connectors, lanyards and other equipment.

R&L buckle is unique buckle invented and patented by SINGING ROCK. The buckle offers quick, fluent and simple manipulation with the webbing.

