



# ASAP EXPERIENCE



- This «Product Experience» document is a supplement to the Instructions For Use, which provides feedback from field experience and tips for using your product.
- It is inseparable from the Instructions for use.



## IMPORTANT / REMEMBER



FAILURE TO  
HEED ANY OF  
THESE WARNINGS  
MAY RESULT IN SEVERE  
INJURY OR DEATH.

- Read the instructions for use carefully before looking at the following techniques.
- You must have already read and understood the information in the Instructions For Use to be able to understand this supplementary information.
- Mastering these techniques requires specific training.
- Work with a professional to confirm your ability to perform these techniques safely and independently before attempting them unsupervised.

Each piece of information is listed according to the technical level required for its application. Respect your own level when choosing your techniques.



### Beginner technique

Technique usable by a trained practitioner of the activity.



### Technique for a certified practitioner

Technique for a person trained and certified in the activity.



### Expert technique

Technique only for experts in the activity.

## Table of contents

- Working principle
- Backup device in a rope access system  
(EN 12841 A: rope adjustment device for the safety rope)
- Primary belay device in a fall arrest system  
(EN 353-2: Mobile fall arrester including a flexible safety line)
- ASAP usage with an energy absorber
- ASAP usage when approaching an obstacle or the ground  
*Do not neglect rope stretch*  
*Deliberately locking the ASAP in a high position*
- ASAP usage in high winds
- ASAP usage on static rope  
*Usage tests on static ropes*  
*Exceptional situations on static ropes*
- Rope rescue: accompanied descent  
*Weight limit*  
*Clearance*  
*Rescue training: beware of practicing too close to the ground*  
*Tests*





## Working principle

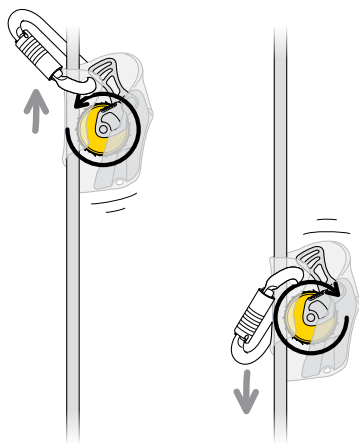
The ASAP is a mobile fall arrester on rope, it moves along the rope without manual operation. At moderate speeds, the locking wheel turns freely in both directions.

A rapid downward movement accelerates the rotation of the locking wheel clockwise. The centrifugal force activates the weights inside the device, blocking rotation of the locking wheel. The arm then pivots on its axle and the rope is jammed by pinching between the locking wheel and the body of the device.

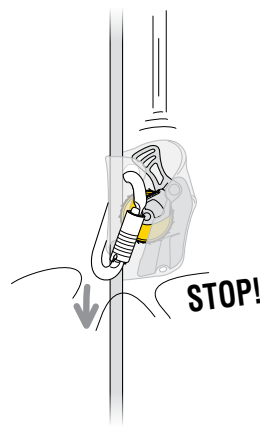
To unlock the device, it must be pushed upward. During this movement, keep the locking wheel pressed against the rope, so that it turns counter-clockwise and unlocks the weights. The ASAP returns to its primary working mode, with the locking wheel turning freely in both directions.

**Warning, the ASAP is a directional device and locks in only one direction.**

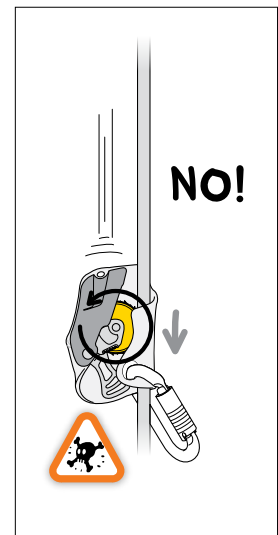
Danger of death if the ASAP is positioned upside down on the rope: verify the proper locking direction at each installation.



MODERATE SPEED



GREAT SPEED



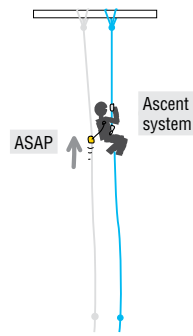
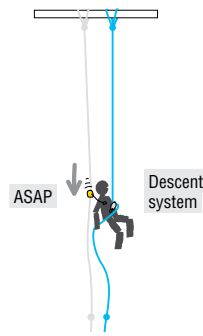
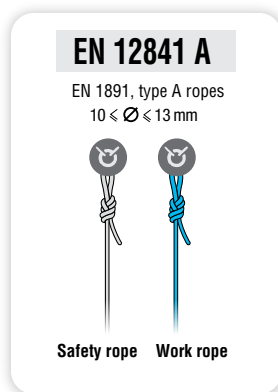


## Backup device in a rope access system (EN 12841 A: rope adjustment device for the safety rope)

In a rope access system, the worker moves along a work rope.

The ASAP is installed on a safety rope and connected to the "A" (fall arrest) attachment point of the harness. Its role is to arrest the fall in case the primary belay or positioning system fails.

In accordance with the EN 12841 standard, the ASAP was certified using only 10 to 13 mm EN 1891 type A semi-static (core + sheath) ropes. The use of other ropes has not been tested, and thus falls under the responsibility of the user.



## Primary belay device in a fall arrest system (EN 353-2: Mobile fall arrester including a flexible safety line)

In a fall arrest system, the worker moves about on the structure.

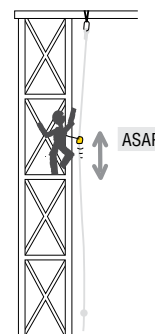
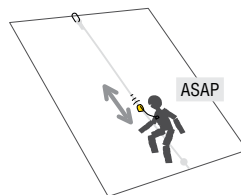
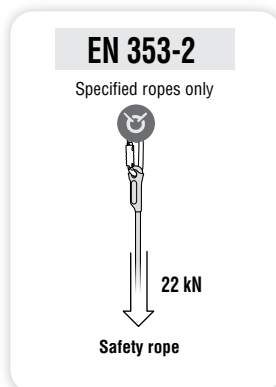
The ASAP is installed on a safety rope and connected to the "A" (fall arrest) attachment point of the harness. Its role is to arrest the fall, it should not be used for work positioning.

According to the EN 353-2 standard, the fall arrest system consists of an ASAP and a specific rope.

The strength of the safety rope must be 22 kN. This value cannot be guaranteed if knots are made in the rope, so the certification is done with ropes having sewn terminations.

The ropes tested during the CE EN 353-2: 2002 certification of the ASAP are:

- Parallel PETZL 10.5 mm with a sewn termination (nylon).
- Axis PETZL 11 mm with a sewn termination (nylon).
- BEAL Antipodes 10.5 mm with a sewn termination (nylon).
- BEAL Antipodes/Industrie 11 mm with a sewn termination (nylon).
- EDELWEISS Rescue 13 mm with a sewn termination (nylon).





### ASAP usage with an energy absorber

An energy absorber can limit the impact force in case of a fall.

A lower impact force provides better comfort for the user and reduces the risk of damaging the rope during locking.

Using an energy absorber also allows distancing the device from the work station, but the potential fall height is then increased: the user must make the appropriate choice for the situation.

The absorbers compatible with the ASAP are:

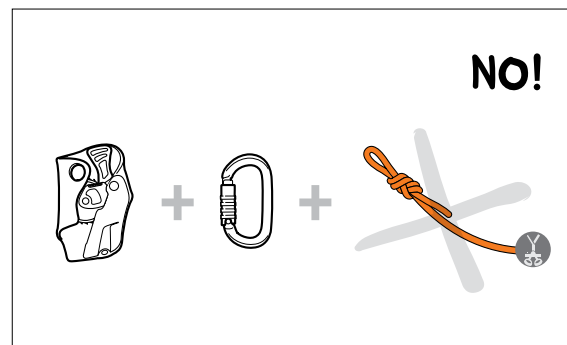
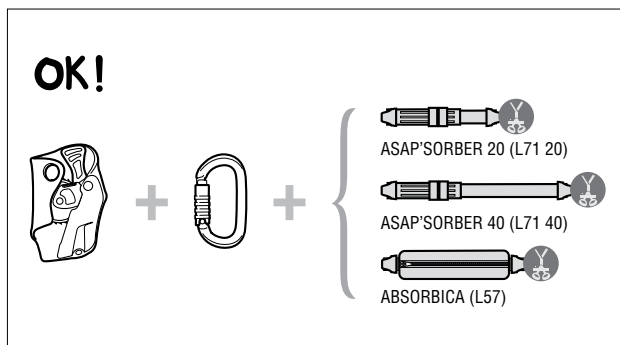
ASAP'SORBER 20 (L71 20)

ASAP'SORBER 40 (L71 40)

ABSORBICA (L57)

Only energy absorbers compatible with the ASAP are authorized for extending the connection to the ASAP.

The energy absorber used must not be extended, to avoid increasing the potential fall height.





## ASAP usage when approaching an obstacle or the ground

The clearance is the minimum amount of clear space under the ASAP that is required to prevent the user from hitting the ground in case of a fall.

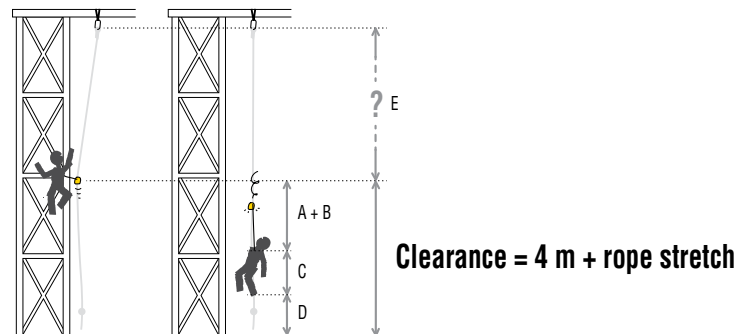
The clearance is measured from the initial position of the ASAP at the time of the fall.

It takes into account:

- A. The stopping distance of the ASAP (the maximum value of which is specified by the EN 353-2 standard)
- B. The energy absorber's elongation due to tearing
- C. The average height of the user
- D. A safety margin
- E. Rope stretch (varies with the situation)

Testing has shown that the absorber used and the ASAP's position have a minimal effect on the clearance. For ease of use in the field, Petzl recommends remembering just one number:

**Clearance = 4 m + rope stretch**



### Do not neglect rope stretch

Rope stretch adds a variable to the clearance, which depends on the distance from the anchor.

The elongation under static load value is covered by the EN 1891 standard: it must be less than 5 %

Even so, the elongation during a fall is not precise, and varies between rope models.

For example, if we propose a dynamic elongation value of 10 %:

- At 10 m from the anchor, 1 m must be added.
- At 50 m from the anchor, 5 m must be added, the effective clearance is then 9 m. In this case, it is recommended to plan for an intermediate anchor in the rope above, when possible, to limit the elongation.

### Deliberately locking the ASAP in a high position

At the work station, the ASAP will naturally slide down the rope to a point below the fall arrest attachment point.

It is possible to deliberately lock the ASAP by a sharp downward pull, so that it stays in a higher position.

This technique is suitable when the worker is moving close to the ground, or to an obstacle, as it allows clearance to be optimized.

In other situations, deliberate locking is not recommended as it creates the following disadvantages:

- Repeated deliberate locking can accelerate wear on the ASAP.
- Involuntary contact with the ASAP can suffice to unlock it in certain cases.
- If the worker moves upward without unlocking the ASAP, a loop of slack is created, increasing the potential fall height.



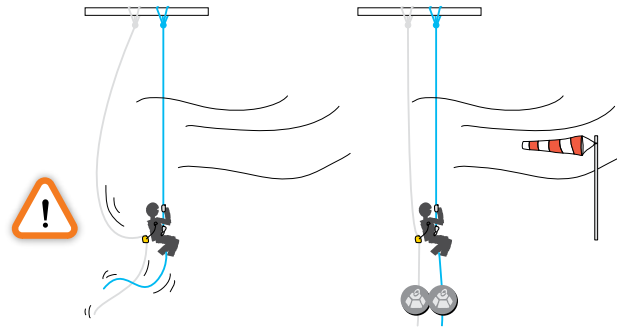


### ASAP usage in high winds

In normal work configuration, the rope slides through the ASAP when it is not locked. If the rope is pulled upward, for example by the wind, a loop of slack can be created, increasing the worker's potential fall height.

In case of high winds, a co-worker can hold the rope, otherwise a suitable ballast in the end of the rope can be a solution (the weight must not take out all of the rope stretch).

Anchoring the bottom end of the rope may also be considered, with the likely consequence of complicating a possible rescue. A specific risk analysis of the situation must be done.





## ASAP usage on static rope (non CE)

Using the ASAP on static rope is outside the scope of the EN 12841 and EN 353-2 certifications.

For your information, Petzl did a series of tests on static ropes with harness + dummy. These tests give a realistic overview of falls in normal ASAP usage.

The results are satisfactory: the impact force is limited, the rope is not damaged and the stopping distance is acceptable.

**Consequently, Petzl authorizes ASAP usage with 10 - 13 mm static ropes.**

### Usage tests on static ropes

The following tests were done in labs, on new ropes and devices, but it is impossible to recreate every scenario. Warning: we did not test every rope on the market; the results of these tests could be different with other types of rope.

**The test values are given for information, to give an idea of the loads involved in such situations.**

Warning: older ropes are generally weaker. The rope condition at the time of the fall can also be unfavorable: wet, icy, dirty, etc.

|  | Absorber  | Impact force | Condition of the rope |
|--|---|--------------|-----------------------|
| <b>Fall "factor 2"*</b><br>(ASAP at the lowest possible point, fall height = twice the length of the absorber) | ASAP attached directly to the harness (point «A») | 5.4 kN       | Intact                |
|  | ASAP'SORBER 20                                    | 5.2 kN       | Intact                |
|  | ASAP'SORBER 40                                    | 5.5 kN       | Intact                |
|  | ABSORBICA L57                                     | 4.4 kN       | Intact                |

\*. Test on 11 mm static rope, done at 1 m from the anchor with 100 kg dummy + harness.

### Exceptional situations on static ropes

#### Users weighing 100 - 140 kg

On static rope, users of 100 - 140 kg may use the ASAP only with an ABSORBICA L57 absorber.

#### Rescue scenario - accompanied descent:

**On static rope, using an ASAP on an ABSORBICA L57 absorber, for the rescuer and victim, is acceptable up to 200 kg.**

When possible, it is preferable to use both ASAPs (rescuer's + victim's) for the descent.

The other precautions found in the «Rope rescue - accompanied descent» chapter must be followed.



## Rope rescue: accompanied descent

In case of an accident, the suspension of a person who is unconscious, or inert, in a harness is a dangerous situation that must be addressed urgently. The victim's first physiological problems can appear after only a few minutes. To act rapidly, workers at height must rescue their co-worker on their own, with their standard equipment. This rescue situation is an exceptional case, where it is acceptable to use PPE for belaying or backing up more than one person.

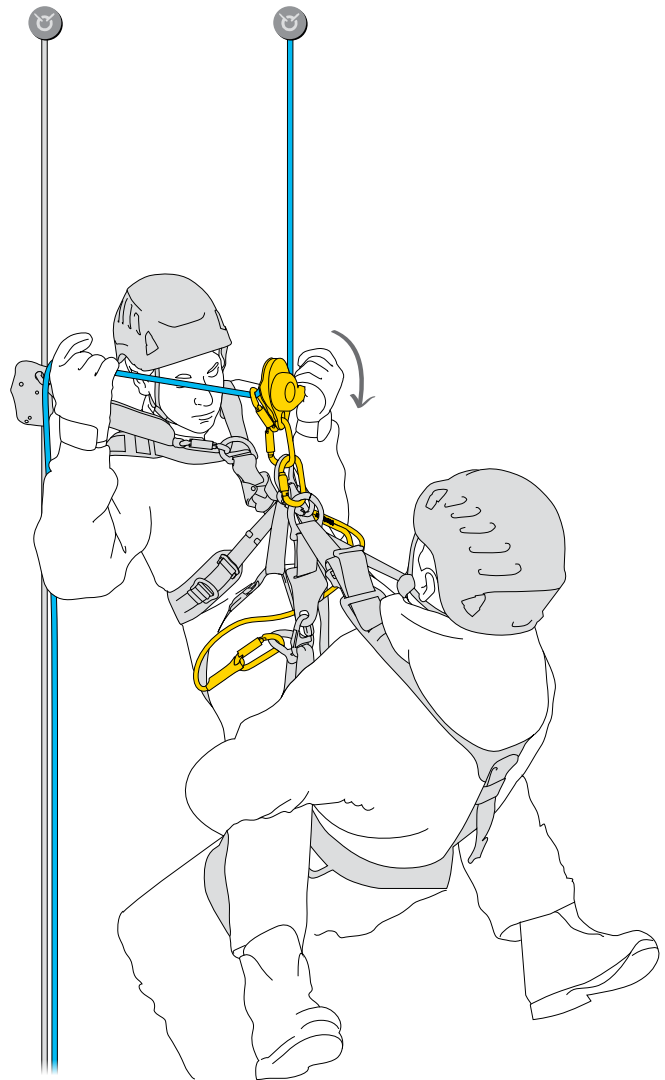
Downward evacuation is generally the most efficient solution. The rescuer connects himself to the victim, disconnects him from his rope and does an accompanied descent.

When possible, it is preferable to use both ASAPs (rescuer's + victim's) for the descent.

Otherwise, it is acceptable to use a single ASAP, if the following conditions are met:

- Only in rope rescue - accompanied descent, required by the urgency of an inert suspended victim, done by a trained person who has practiced this type of rescue.
- Only if all risks of a fall and impact load are minimized (anchor failure, pendulum, poorly braked descent, sudden loading).
- Only when the ASAP is connected to a non-extended ABSORBICA L57 energy absorber.

**Warning:** the descent speed must be moderate. If the ASAP locks and two people become suspended from a single locked device, the difficulties of the rescue will be considerably increased.



### Weight limit

On EN 1891 rope, backing up two people with an ASAP + ABSORBICA L57 is authorized in rescue situations with loads up to 250 kg. Above 250 kg, it is recommended to choose another evacuation strategy.

### Clearance

If two people fall on an ASAP + ABSORBICA L57, the tearing of the absorber will be more significant than for one person. In this case: clearance = 5 m + rope stretch

### Rescue training: beware of practicing too close to the ground

To avoid the risk of hitting the ground in case of a two-person fall on an ASAP, it is recommended to perform the rescue maneuvers at least 5 m from the ground (more if the rope length implies a significant elongation under load).





## Tests

The following tests were done in labs, on new ropes and devices, but it is impossible to recreate every scenario. Warning: we did not test every rope on the market; the results of these tests could be different with other types of rope.

**The test values are given for information, to give an idea of the loads involved in such situations.**

Values recorded during tests with new ropes, certified to current European standards (EN 1891 semi-static ropes).

Warning: older ropes are generally weaker. The rope condition at the time of the rescue can also be unfavorable: wet, icy, dirty, etc.

| <b>Fall "factor 0"</b><br>(ASAP above the user,<br>fall height minimized) |        | Absorber       | Impact force | Condition of the rope |
|---|--------|----------------|--------------|-----------------------|
|   | 200 kg | ASAP'SORBER 40 | 6.2 kN       |                       |
|   |        | ABSORBICA L57  | 6.7 kN       |                       |
|   | 250 kg | ASAP'SORBER 40 | -            |                       |
|   |        | ABSORBICA L57  | 6.9 kN       |                       |

\* Dynamic test on 11 mm semi-static rope.

| <b>Fall "factor 1"</b><br>(ASAP at the level of<br>the harness attachment<br>point, fall height =<br>length of absorber) |        | Absorber       | Impact force | Condition of the rope |
|--|--------|----------------|--------------|-----------------------|
|  | 200 kg | ASAP'SORBER 40 | 6.2 kN       |                       |
|  | 250 kg | ABSORBICA L57  | 5.2 kN       |                       |

\* Dynamic test on 11 mm semi-static rope.

| <b>Fall "factor 2"</b><br>(ASAP at the lowest<br>possible point, fall<br>height = twice the<br>length of the absorber) |        | Absorber       | Impact force | Condition of the rope |
|--|--------|----------------|--------------|-----------------------|
|  | 200 kg | ASAP'SORBER 40 | -            |                       |
|  | 250 kg | ABSORBICA L57  | 5.6 kN       |                       |

\* Dynamic test on 11 mm semi-static rope.

