

# Safetyline security system

technical description  
and assembly instructions

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## **Important information for mounting the "SAFETYLINE"**

This description and installation instructions are only for the installation of the security system "safetyline" - it is not a construction manual for rope gardens (adventure park, climbing park, high ropes), etc. It is only used to install the security system "safetyline".

These instructions must be integrated into the operating manual and handed over to the operator of the rope garden!

The safety system must be installed in accordance with EN15567-1 and -2 standards!

The possible fall factor must be taken into account when installing the safety system. Please pay attention to the static calculation of the rope garden!

The individual components of the safety system "safetyline" (carbines, plates and clamping jacks) may only be used with components of this system only. If other components are combined and used during installation, we assume no guarantee, liability for resulting accidents and material damage!

The carbine "safetyline" must not be used on other safety systems!

This description and operating instructions can be updated at any time and the latest version can be downloaded at: [www.hochseilgarten.at](http://www.hochseilgarten.at).

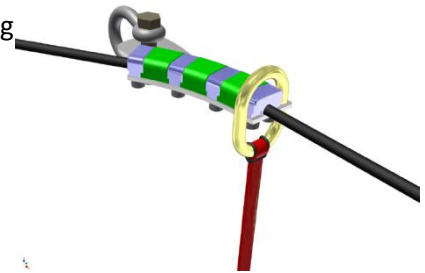
## Mounting the fuse plates - PL1

During installation, the height of the safety system and the resulting lintel factor must be considered! The height must be determined in relation to the body size and the length of the connecting device.

The plate PL1 can be attached to the attachment point by the following methods (tree, mast):

One variant is the assembly with heavy load rails (workingload: 2 t), which are fastened with an anchor stitch.

The attachment to the tree can also be done with a wire rope loop, which is wound twice around the tree. There we recommend a pressed rope end connection by means of thimble (DIN13411-7), but also a final connection with wire rope clamps (DIN13411-5) can be produced! Recommended rope thickness: 10mm or 12mm.



For all other stroke methods either a CE certification or a proof of a test must be available.

For the connection of the plate PL1 with the stop means only the supplied shackle with a WL of 3.2t can be used.

### **Shackle - Mounting and application:**

Ensure that the shackle bolt is properly screwed into the shackle eye. The bolt is first hand-tightened and subsequently pulled with a tool (for example a key or pliers) so that the collar of the bolt rests firmly on the shackle eye.

Then the split pin is to be mounted and bent with a tool.

In the case of the visual check care must be taken that the nut has not loosened and is seated on the sap.

If a shackle component (bolt or bracket) is replaced, the same components of the same manufacturer and the same strength class may be used to ensure safety. We recommend replacing a defective shackle completely.

Care must be taken that the shackle is in alignment with the central axis. The shackle requires sufficient clearance in order to be able to move into this position under tensile load.

## **Wire ropes for the safety system SAFETYLINE**

For the safety system only wire ropes 6x19 with fiber interlacing or steel insert in the dimension 12mm may be used.

### **Fitting the wire rope to the fuse plate PL1**

The wire rope is placed from above on the securing plate and fixed with a clamping jaw and the 2 allen screws M8 at the two external holes, which are opposite the large hole. Important - tighten the two allen screws evenly so that the same distance is created on the clamping jaw and plate. After the first jaw has been mounted, the other 3 jaw clamps are fixed.

When the correct seam length is fixed, tighten the other 3 jaw clamps evenly. Finally the screws are tightened with a torque of 45 NM. After 300 participants the torque of 45 NM has to be checked.

When installing the cable, the necessary sag of the safety cable must be observed. Attention! Avoid a strong tension of the ropes.

### **Installation of the wire rope on the emergency exit panel NA 1**

The emergency exit plate Na 1 is mounted exclusively on the platform in the safety loop. Do not mount in the area of the element on the safety cable! In each of the two large external holes (20mm), a thimble (12mm) is attached and then the wire rope is passed through and then pressed. The clamping jaw is tightened with two allen screws M 8 and the torque of 45NM is checked.

### **Assembly of the wire rope on the switch W 1**

Prior to the installation of the switch, it is fitted with the 8 bolts and after the attachment of a screw lock (for example loctite) with the 16 cap nuts and tightened. At the switch, a thimble (12mm) is then attached to each of the four large holes (20mm) and then the wire rope is passed through and then each rope end is pressed.

### **Mount the wire rope on the angle plate L1**

Depending on the application, the angle brackets are attached to the wooden substructure using torx screws of size 8 or bolted screw bolts. See drilling in the sheet! If a 10mm wire rope is available, the angle plate is fastened to it with 3 wire clamps DIN 13411-5. It is recommended to attach additional cap nuts.

The fuse wire is placed from above on the fuse plate and fixed to one of the two outer bores with a clamping jaw and the 2 allen screws M8. Important - tighten the two allen screws evenly so that the same distance is created on the clamping jaw and plate. After the first jaw has been mounted, the other 3 jaw clamps are fixed.

### **Fitting the fuse wire at the vertical entry and exit**

At the vertical entrances and exits, the fuse wire rope is guided over the ground up to approx. 1m. Depending on the construction of the ascending or descending element, the wire rope is fastened with an angle plate. The wire end should protrude at least 10-15 cm above the sheet metal. On the ascent, a further angle plate must be installed before the transition to the horizontal securing plane so that the drop height is limited when the participant is unhitched from the height safety device. The vertical climbing of the participants on the ascents or descents at which the participant needs both hands for safe climbing, the climbing up or down must be additionally secured with a high safety device. In the case of light ascent or descent, which does not require a high-altitude safety device, the vertical distance of the angle plates must be reduced to approx. 60 cm in order to prevent a large impact. If the distance between the mounting plates is larger, the subscriber's connecting means must be fitted with a shock absorber.

### **Fitting the wire rope to the fuse plate**

#### **PL1 at the Flying Fox**

A hoist is recommended for tensioning the wire rope at the Flying Fox. The hoist with a hook attached to the blue bolt of the shackle. On the second hook a special cable clamp is mounted and attached to the wire rope! The wire rope is then tensioned with the lifting cable until the corresponding slack is made and the wire rope is fixed in the plate PL1 as described above! Then release the hoist again and remove the clamps from the wire rope. At the rear end of the plate PL1 (in the direction of the shackle), a mark is attached to the wire rope with a water-resistant pin. This marking serves to control any slipping of the rope.

**Caution:** Do not spill wire ropes - observe sag!

### **Fitting the carbine of the safetyline**

The Carbine Safetyline is connected to the participant belt by means of connecting means. It should be noted that the connection to the carabines is done by attaching the one eye of the connecting line through the carbine slot. Then the pin is inserted, the roughened side must be at the through hole. The connection to the climbing harness is made with a CE Rapid member No. 8. The carbine can only be separated from the safety rope with a tool by the guardian!

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Before the equipment is delivered, a daily check of the Safetyline carbine has to be carried out with the included test pin!

### **Disconnect the participant from the safetyline in the climbing mode**

If a rescue is necessary, the participant is first secured by the attendant with the rescue system and then the rapid member is opened and the participant can be discharged.

For rapid separation, after the participant is secured by the attendant first with the rescue system also the bolt in the carbine is capped and the connecting eye is removed through the slot of the carbine.

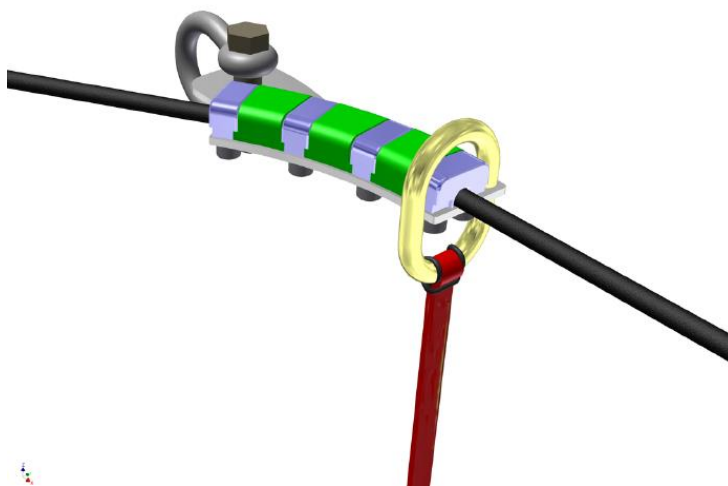
### **Update this guide**

This guide may be updated due to changes or for better understanding!

The current version can be downloaded from the homepage [www.hochseilgarten.at](http://www.hochseilgarten.at)

**Safetyline Sicherungssystem**

Safetyline – plate PL1 +  
 Safetyline carbine KA1



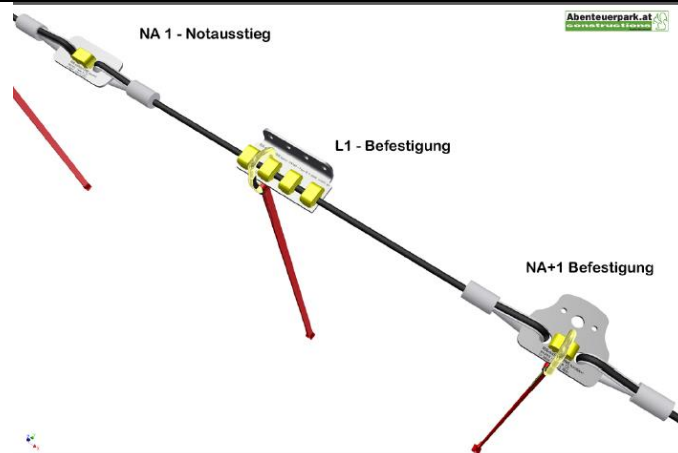
L1





**Safetyline security system**

Overview



NA1



switch W1

