

## Operating instructions Evacuation system Type A, B, C

Model mono-rope for fixed and detachable ropeways



Corresponds to the today's valid, European harmonized CEN standards and the regulation (EU 2016/424 „cableway installation“ and is additionally certified as subsystem

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## 1. Important Information

**Ropeways with hydraulic promotion rope tensioning arrangement have to be switched off before beginning of the rescue, in order to prevent a moving of the rope by the tensioning arrangement. Rescue work within the endangerment range of the rope may take place only after the disconnection was operated.**

These operating instructions manual does not describe the usage of singular devices, but rather the entire IMMOOS Rescue System for chairlifts and gondolas. These operating instructions must be studied and obeyed by the salvage personnel. Read these carefully and keep you all product, guidances and information.

Activities at high altitudes are dangerous and can lead to serious and even fatal injuries. It is solely your responsibility to learn the user and safety precautions. Only medically appropriate persons are allowed.

Each rescue team requires 2 members. (Rescuer on cable and saver on ground)

Only instructed and trained personnel may carry out the rescuing of persons with the IMMOOS Rescue System. Watch at the dangers of pinching and confiscating between rope and reels (especially in loose clothing or long hair).

The owner of the ropeway system is solely responsible for the training of the rescue personnel. Obligatory training repetition provides confidence to the rescue personnel.

Before usage all devices and units must be visually inspected to ensure that the material used is functioning and complete. All materials are to be checked on an annual basis according to EN 365.

The recovery system must always be kept in faultless condition and must be ready for use at any time. After a rescue, if questions arise regarding the condition or function, return the parts involved to IMMOOS GmbH for repair and inspection. Defective parts must always be replaced.

It is forbidden to alter or modify, either totally or partially, the system's original state.

During rescue operations, the safety of the rescue team should always be observe. During all procedures, the Rescuer (on cable) must secure himself with at least 1 hook to dependable points (ladders, rails, platforms, ropes, etc.). The rope shortener should be used to reduce the falling height to a minimum.

The IMMOOS Rescue System may only be used with originally tested ropes. Delivery is exclusive over IMMOOS GmbH.

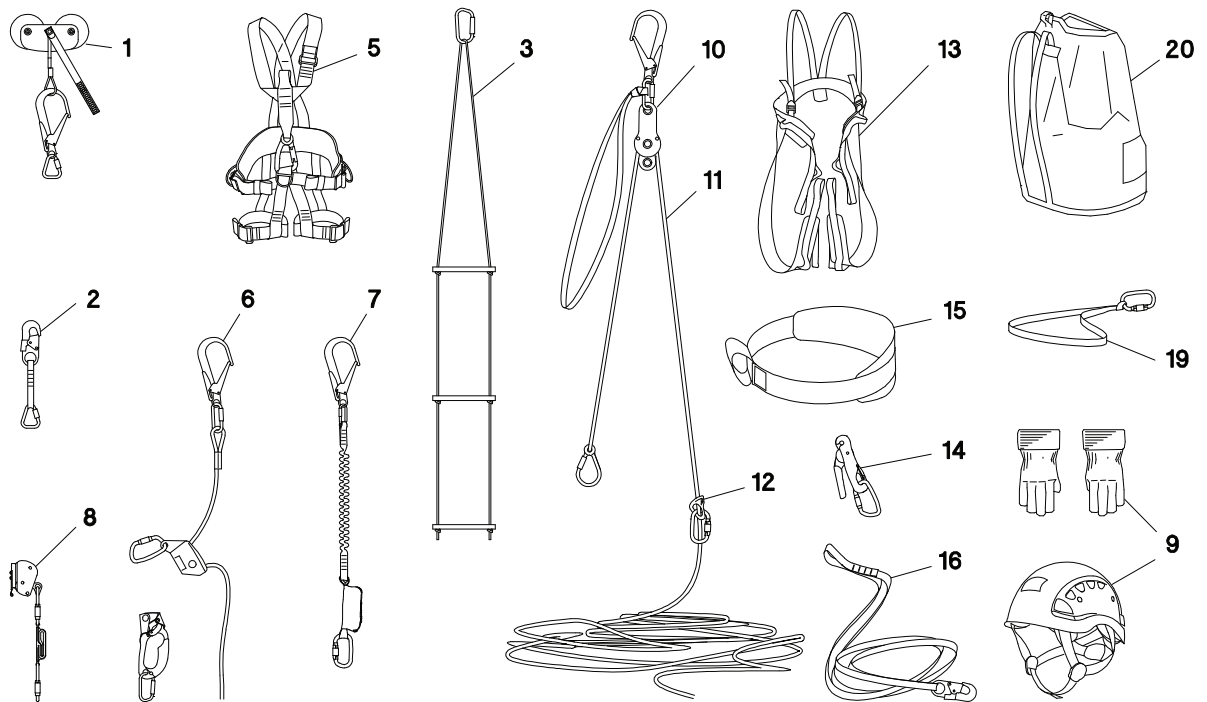
As the danger of rope brake and rope deflection device warming, protective hand gear should be worn at all times during usage.

The annual expert inquiries and the roping work are sequential to document!

The fall arrest device must fit to the rope on the tower (certified)!

The system have to be used only for the rescue. Other use (for example material transports, etc) is not permitted.

## 2. Presentation of the Rescue Equipment (Model mono-rope)



### Equipment for Rescuer (on cable)

1. IMMOOS rescue carriage, 2 rollers, with aluminium safety hook and screw link
2. Connection loop with steel safety hook and screw link
3. Ladder with carabiner
5. Full body harness
6. Safety line with rope shortener, aluminium safety hook, screw link and carabiner, Ascender from grabbing the rope „ASCENSION“ with carabiner
7. Fall absorption lanyard with integrated energy absorber
8. Fall arrest device
9. Safety gloves and helmet
19. Special rope with crabiner

### Equipment for Saver (on ground)

9. Safety gloves and helmet
14. Rope brake with carabiner
15. Retaining belt
16. Retaining loop

### Lowering Equipment

10. IMMOOS rope deflection device with aluminium safety hook and screw link
11. Special rope, 9 mm ø, with carabiner
12. Tibloc
13. Fully adjustable rescue harness (3 sizes)

### Diverse

20. Material bag



### 3. Preparation of the Rescue

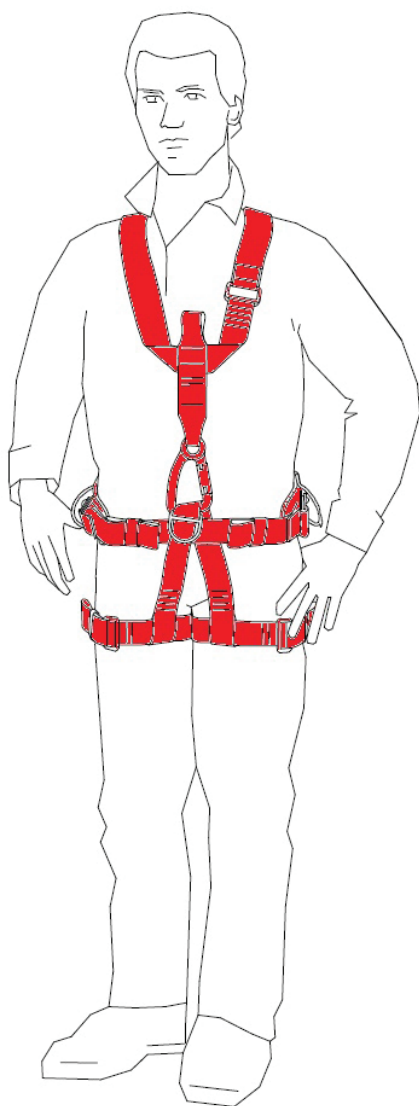


*The function from unlocking the child safety device and from the door release control have to be clarified at the meeting point.*



*Preparations are to be made at the meeting point.*

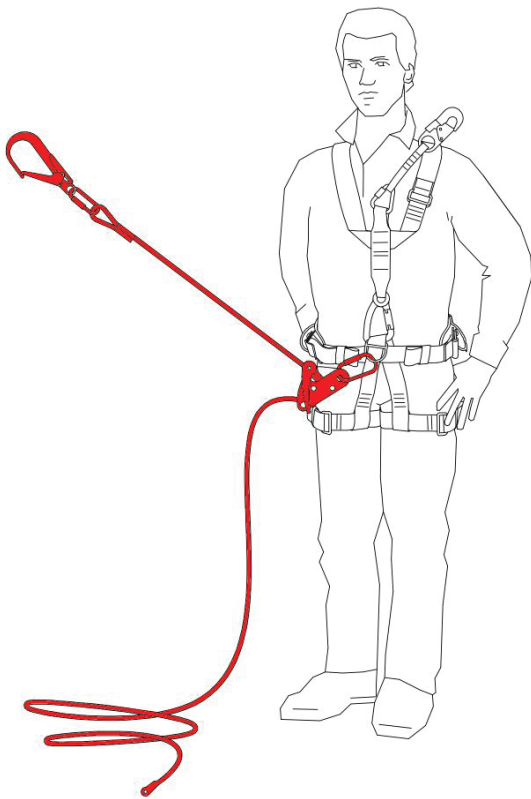
#### 3.1 The rescuer (on cable) is equipped as follows:



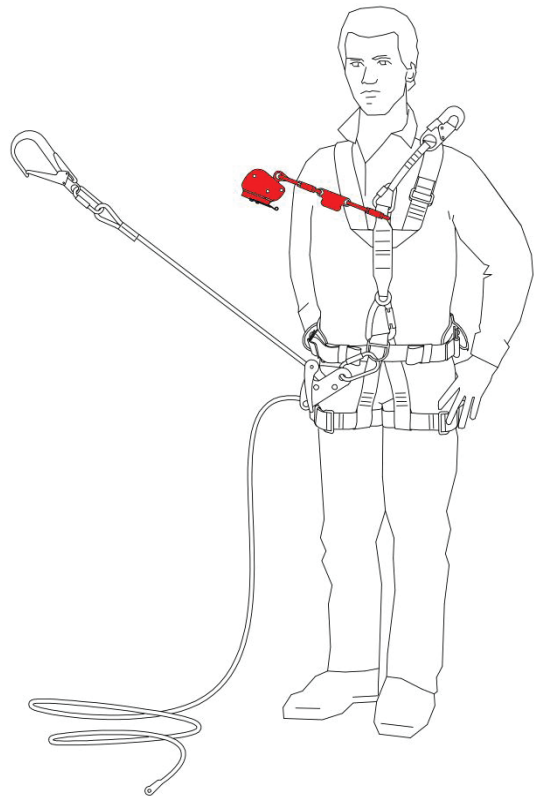
Putting on and adjusting the full body harness. Equipment may only be hooked onto the catch loop (red).



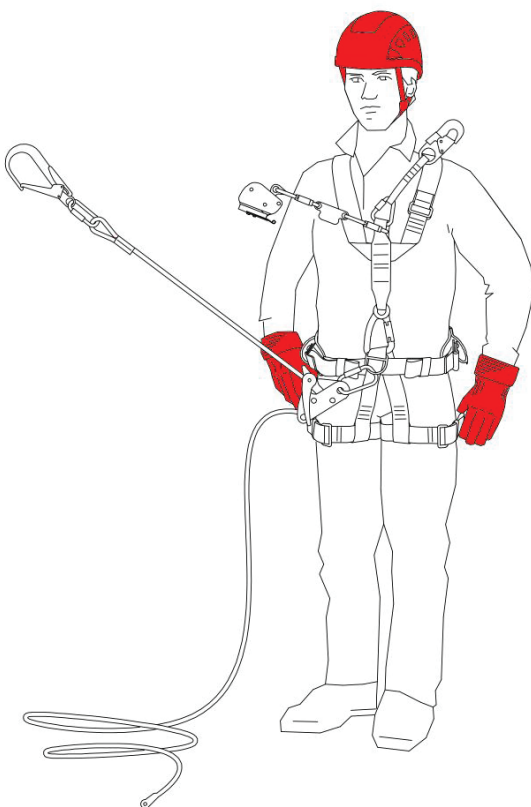
Fastening of the connection element on the full body harness.



Fastening the safety line to the harness's catch loop.

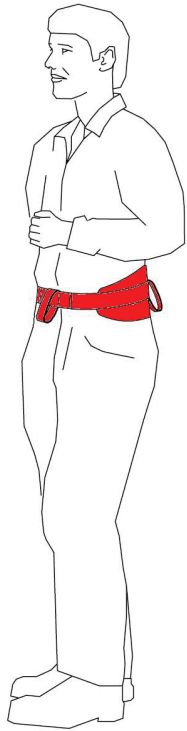


Fastening the fall arrest device to the harness's catch loop.

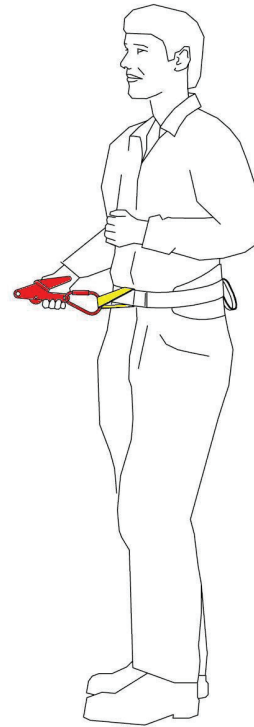


Tighten the gloves and helmet.

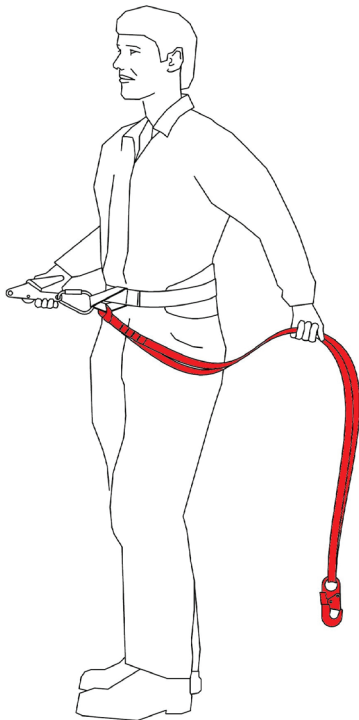
### 3.2 Ausrüstung Retter am Boden



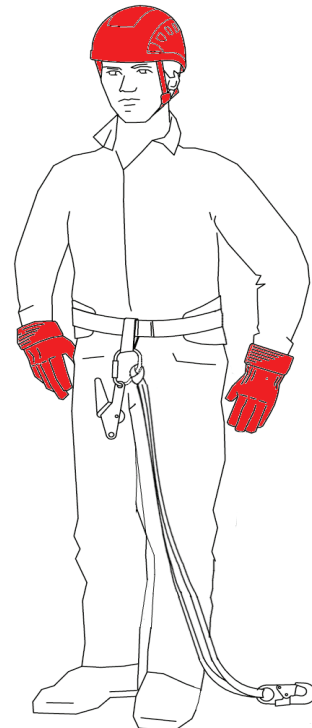
Putting on and adjusting the retaining belt.



Fastening the rope brake to the carabiner on the retaining belt's front securing loop.



Attaching the fixing loop to the retaining belt's front securing loop.



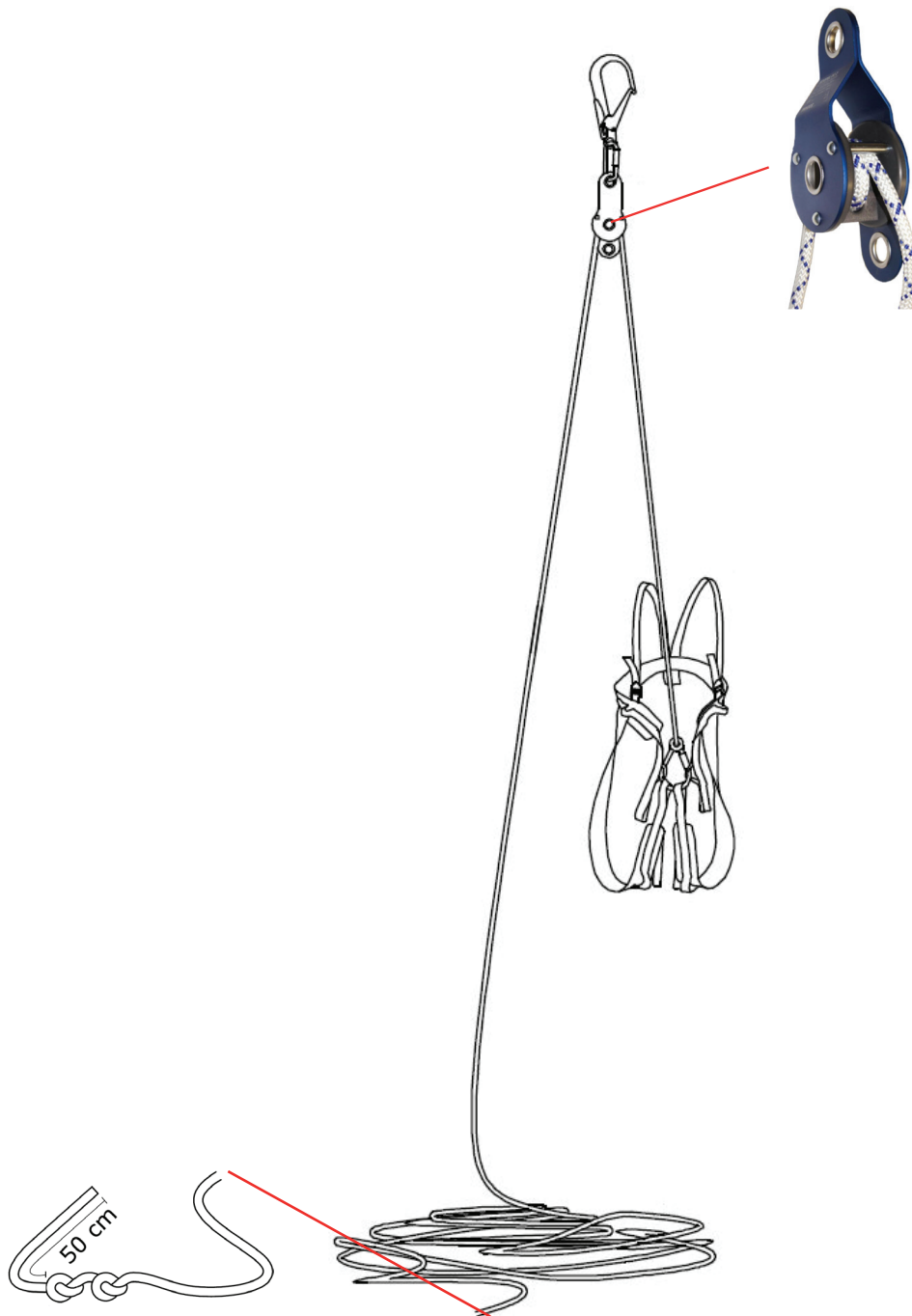
Tighten the gloves and helmet.



### 3.3 Preparing the lowering equipment



*The „operating instructions“ descending and ascending device type „Stopbloc 2“ (GA\_EN\_Ab-Aufseilvorrichtung\_Typ\_Stopbloc2) is an integral part of this instruction manual*



*Das Seilende ist mit zwei Sicherungsknoten zu versehen im Abstand von 50 cm vom Seilende, um ein ungewolltes Durchrutschen durch die Seilbremse zu vermeiden.*

Die Abseilausrüstung braucht keine weitere Vorbereitung.

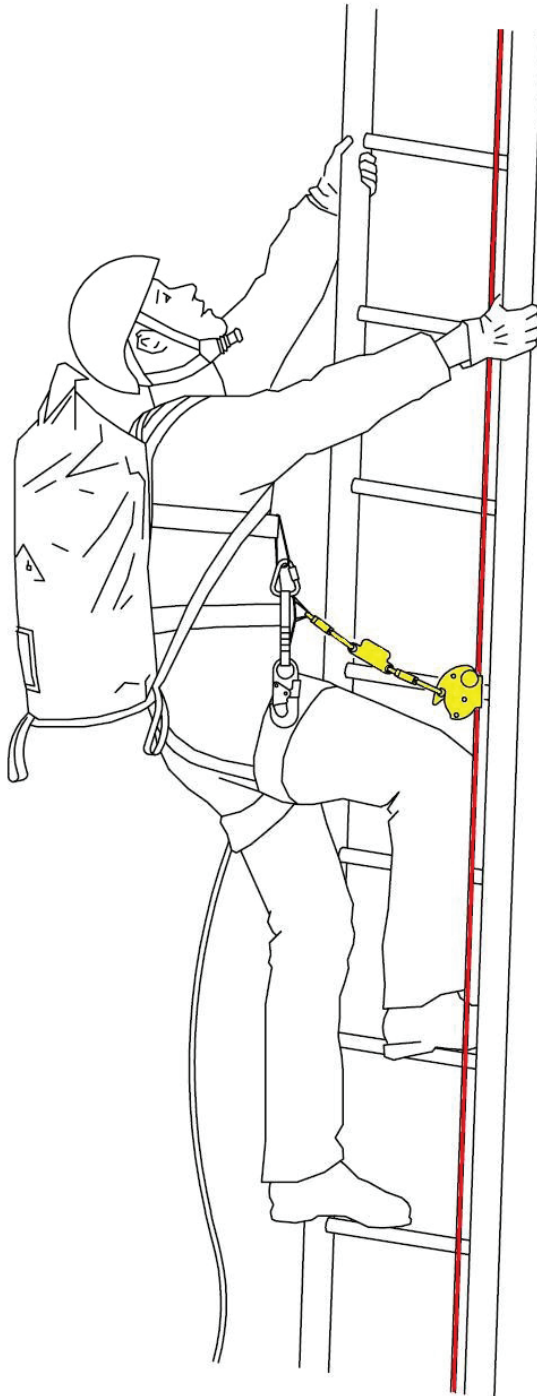
## 4. Rescue Procedure

### 4.1 Ascending to the tower

The rescuer (on cable) climbs to the tower.



*Attach the fall arrest device to the wire rope.*

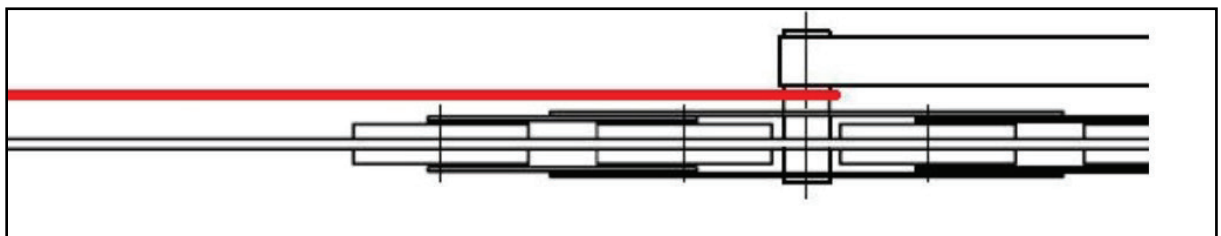
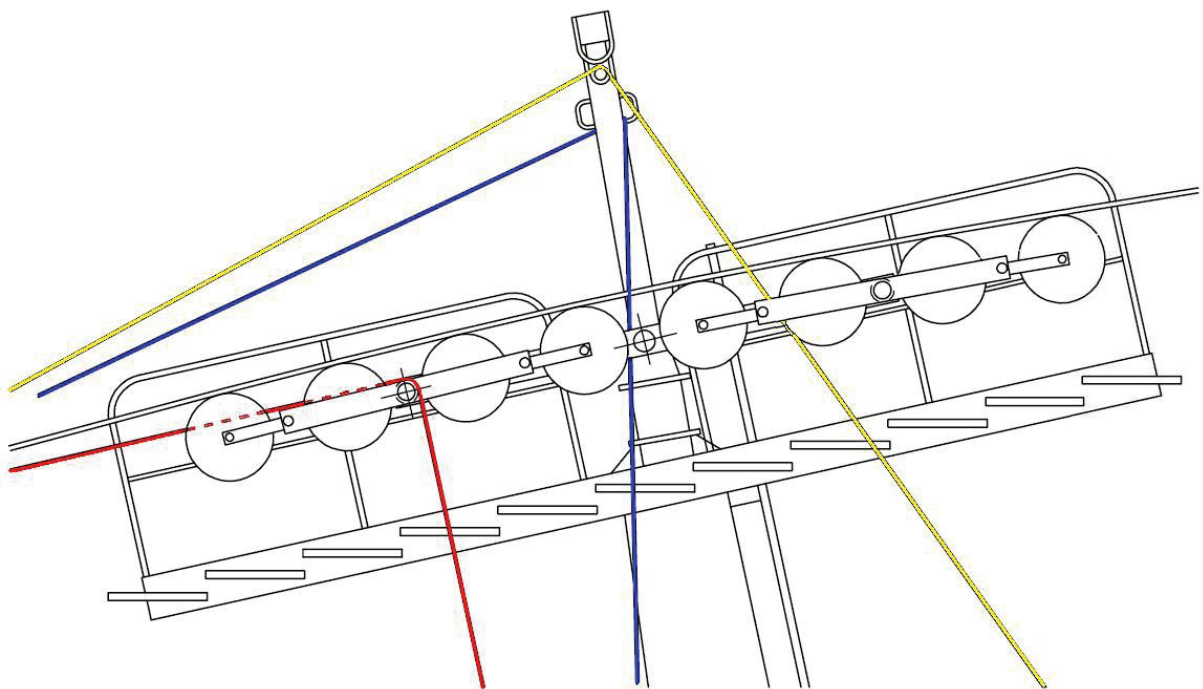
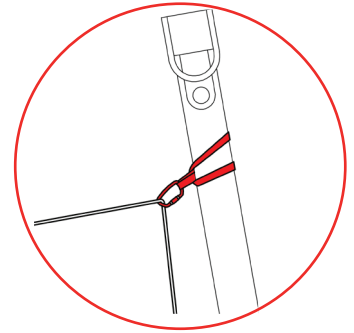


## 4.2 Deflecting the special rope on the tower

The special rope is deflected over the tower.



*The rope is to be deflected in such a way that this is not injured by sharp edges! Possibly a round sling must be used!*



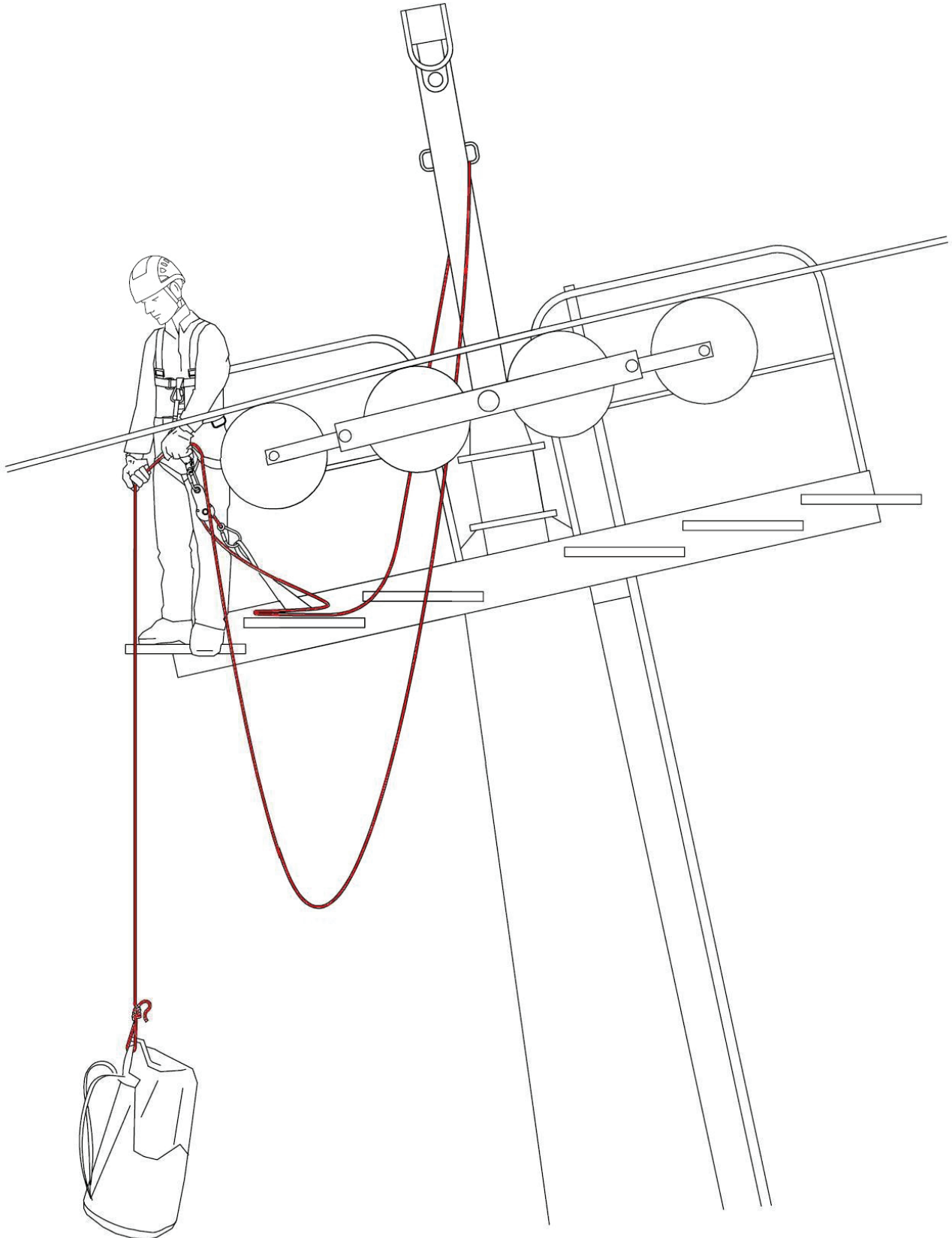
Examples of special rope deflection:

- A Deflection at the sheave battery
- B Deflection at the loop of the rope lifter
- C Deflection at the pipe under the rope lifter



### 4.3 Lowering material bag

Using the special rope for lowering the material bag Do not thrown or dropped down the material bag!



## 4.4 Preparation on the platform

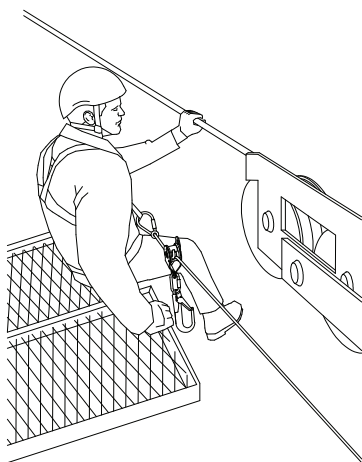
The Rescuer on the cable makes him preparations for traveling on the carrying rope.



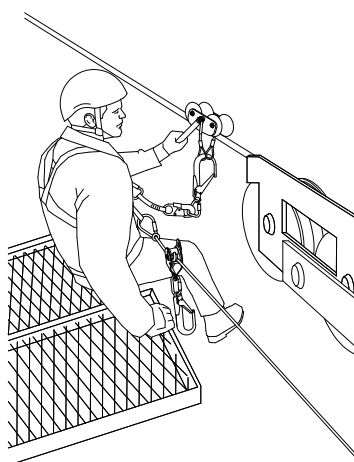
*The hook of the safety line is attached at a suitable place during every action.*



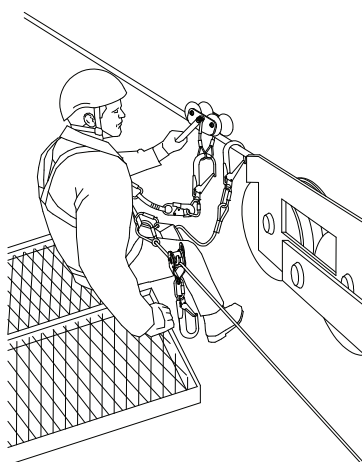
*The rescuer on the rope must attach the carabiner of the rope on his harness. Don't use the hook of the Stopbloc for this action!*



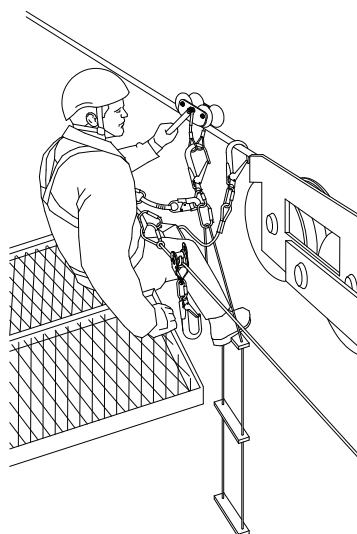
Fasten the special rope to the harness's catch loop



Attach the connection loop and rescue carriage to the carrying rope



Hook the safety line to the carrying rope



Attach the ladder to the rescue carriage

## 4.5 Feeding the special rope into the rope brake

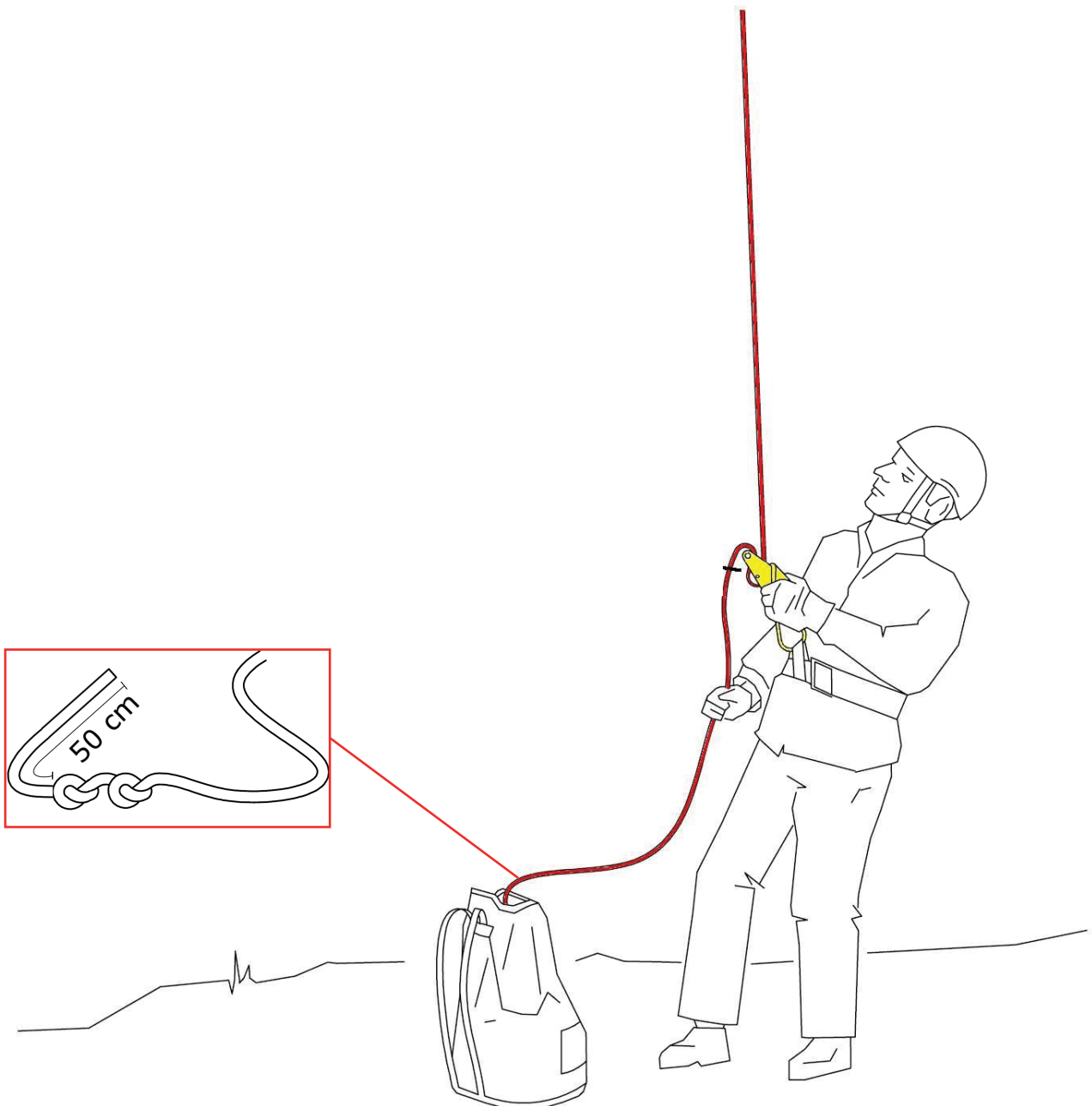
The rescuer (on ground) feeds the special rope into the rope brake.



*Feeding the special rope in the rope brake according to plan (See pattern up on rope brake)*



*To avoid an unintentional slipping through the brake, you have to make two knots at the end of the rope 50 cm away from the end*



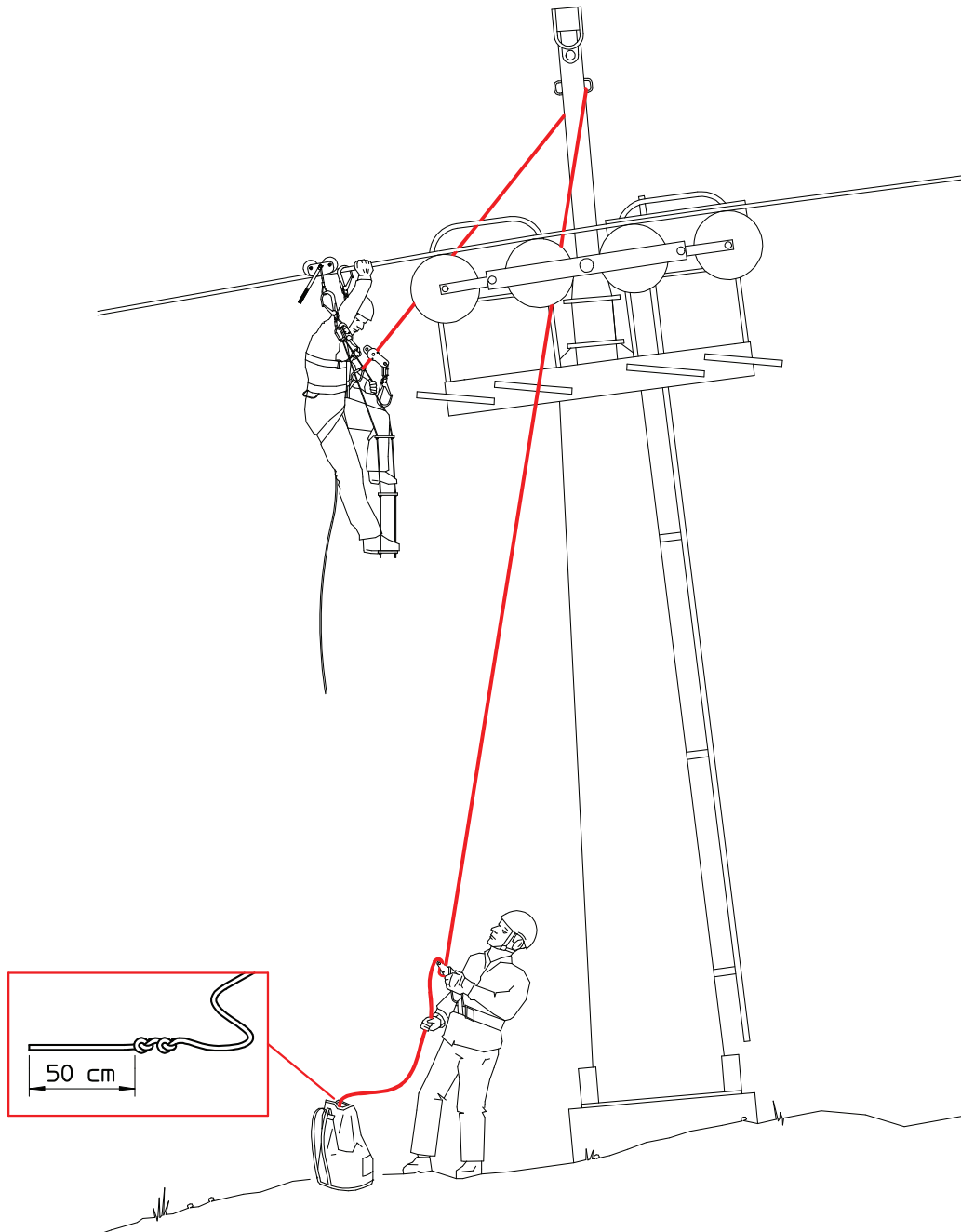


## 4.6 Leaving the platform

The rescuer (on the cable) lowers himself from the platform.



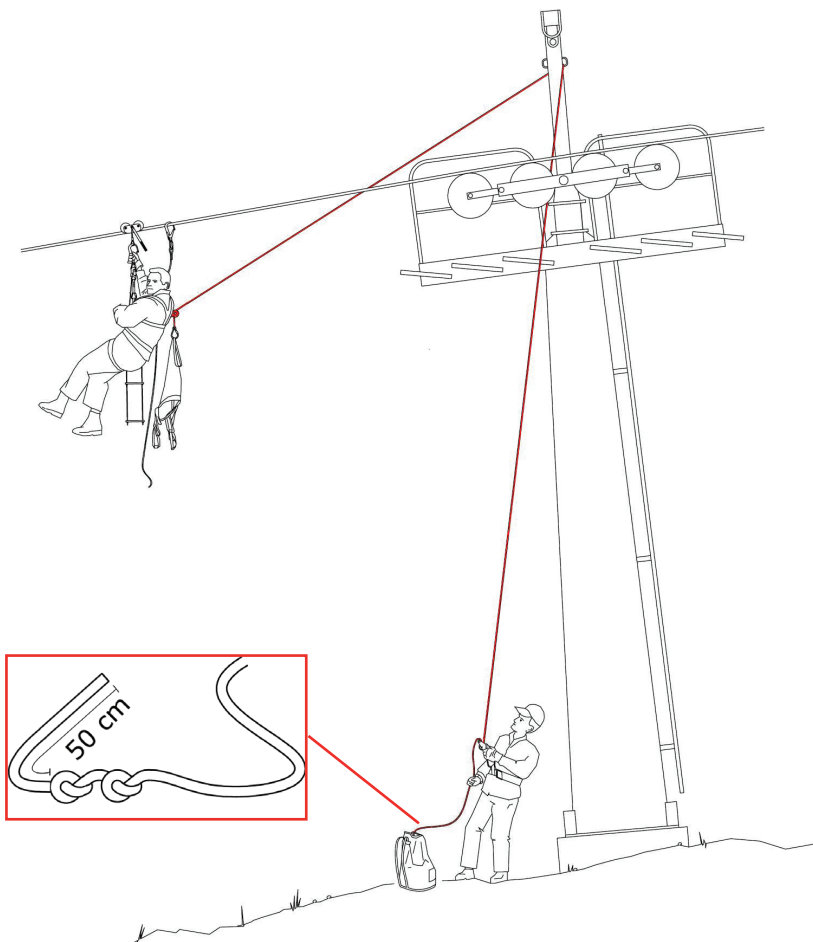
*The rescuer (on the ground) secures the rescuer (on the cable) with the rope brake*



#### 4.7 Traveling to ropeway's carriage



The rescuer travelling to the vehicle.

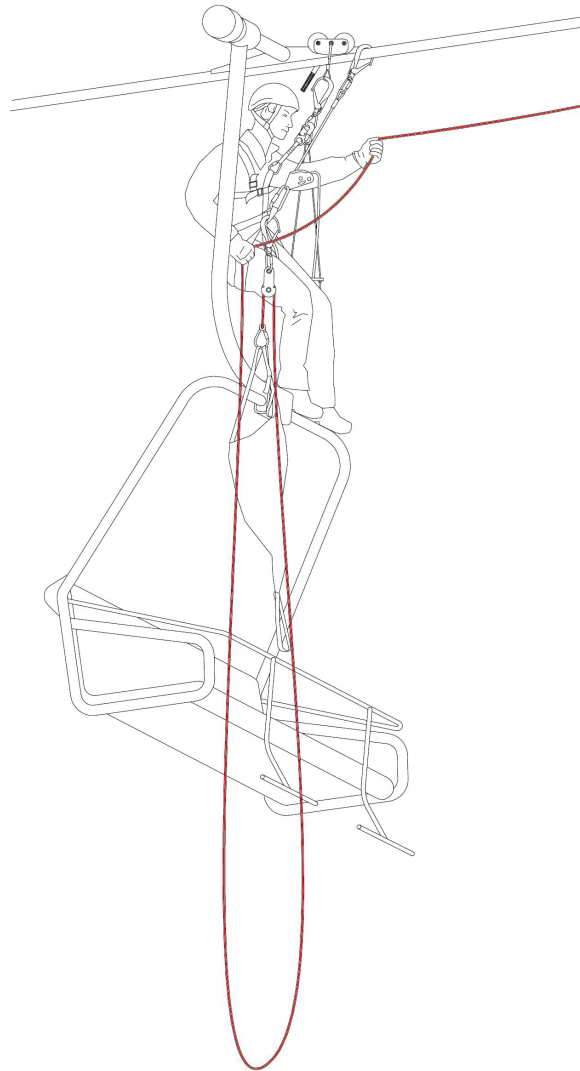
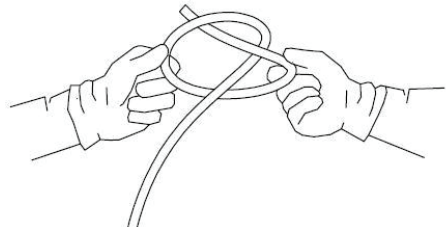


The rescuer (on the ground) lowers slowly the rescuer (on the cable).

#### 4.8 Take off the spezial rope from the rope deflection



*At first, the rescuer at the ground opens the knots at the rope end*



The rescuer at the rope pulls out the spezial rope from the rope deflection.



*After taking off the rope, the two knots at the rope end is to be made again.  
(See page 13)*

## 4.9 Descending to the passenger in the carrier

The rescuer climbs down to the passengers using the safety lanyard.



*If sharp edges are present, the safety lanyard is hung underneath the rope clamp guide roller.*



*The IMMOOS Stopbloc rope deflector is hooked onto the pin of the guide roller (see detailed sketches).*

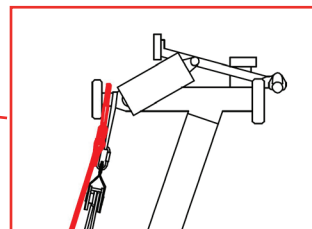
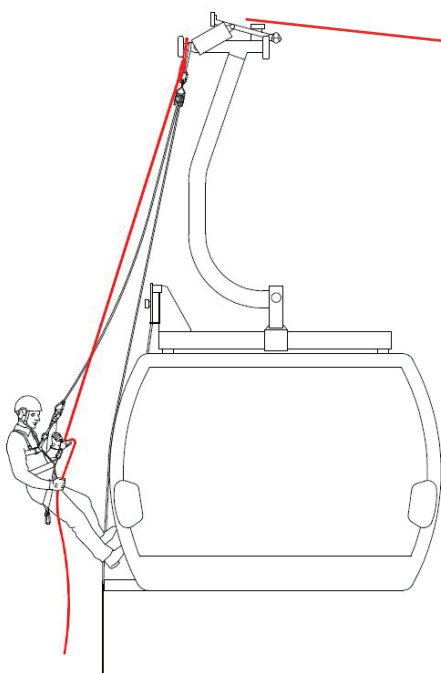
### Detailed sketches

Suspend hook directly from the pin of the guide roller



or

suspend belt sling pos. 14 between the two

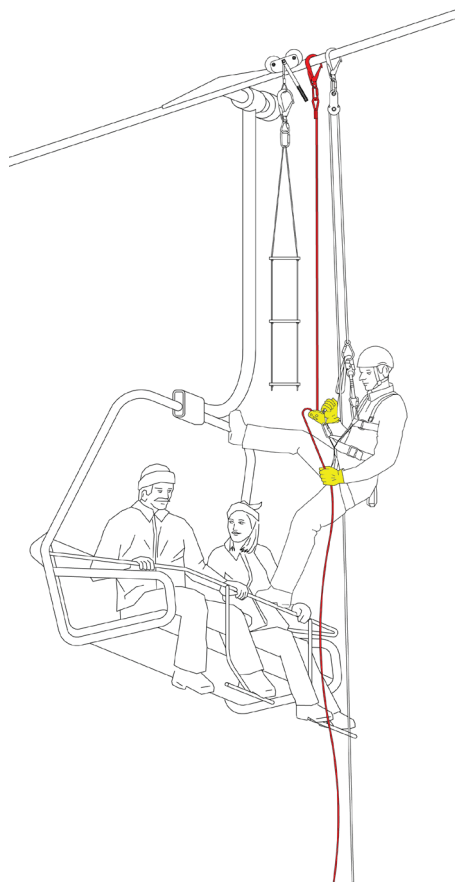


#### 4.10 Descending to the passenger on the chair.

The rescuer climbs down to the passengers using the safety lanyard.



*The safety lanyard remains hooked to the carrier rope.*



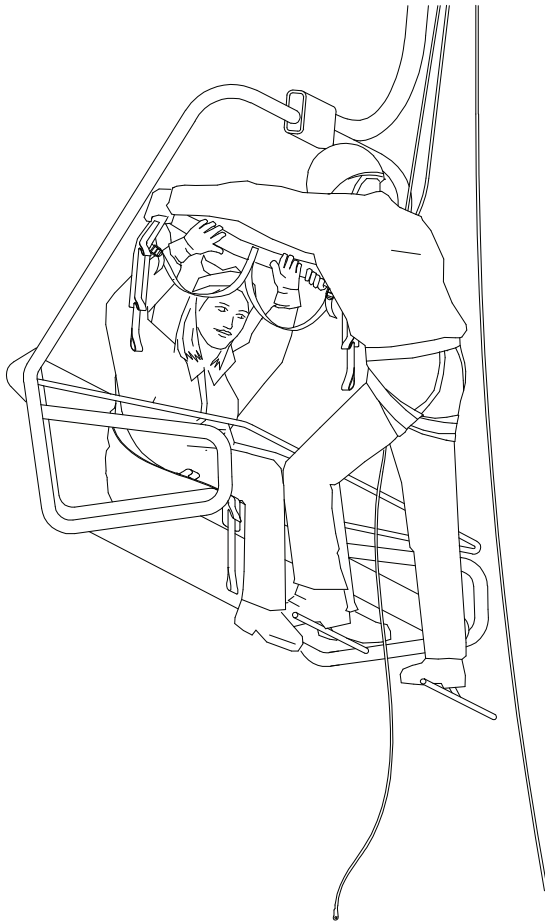


## 4.11 Prepare the passengers for lowering

During the whole preparation the chair's retaining bar remains closed.



*Check correct placement of the rescue harness  
(Take same collars together)*



The rescuer put the passenger the harness on



The spezial rope is to pull under the chair's retaining bar and to fasten at the rescue harness

## 4.12 Lowering the passengers



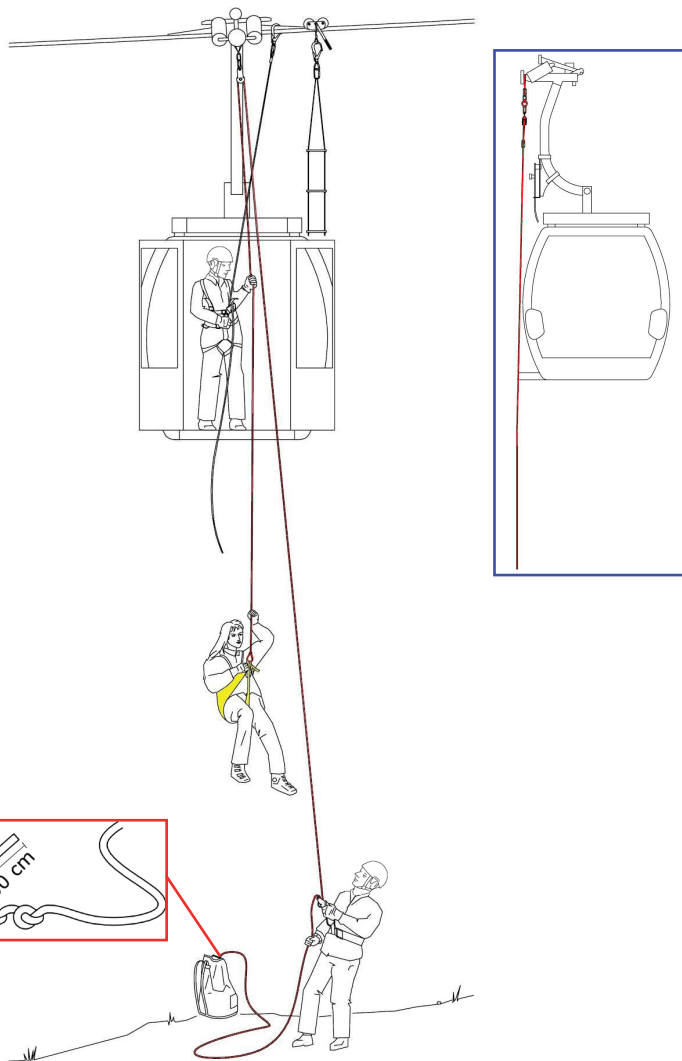
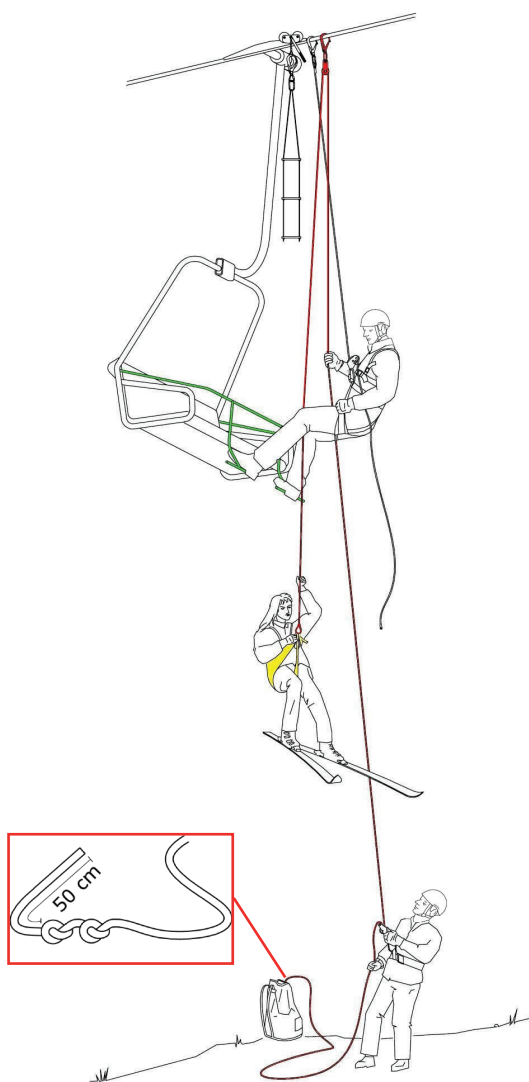
*The passengers have to sit completely back*



*With chairs: Open only the chair's retaining bar to lowering a passenger and close it immediately after a passenger is off the chair*



*Feeding the special rope in the rope brake according the plan (See the pattern up on rope brake)  
Before lowering, the special rope should be pulled taunt*



### 4.13 Lowering with concentricity

Is the landing place vertical below the vehicles adverse, can pull the lowering person with a rope from the concentricity at a side.



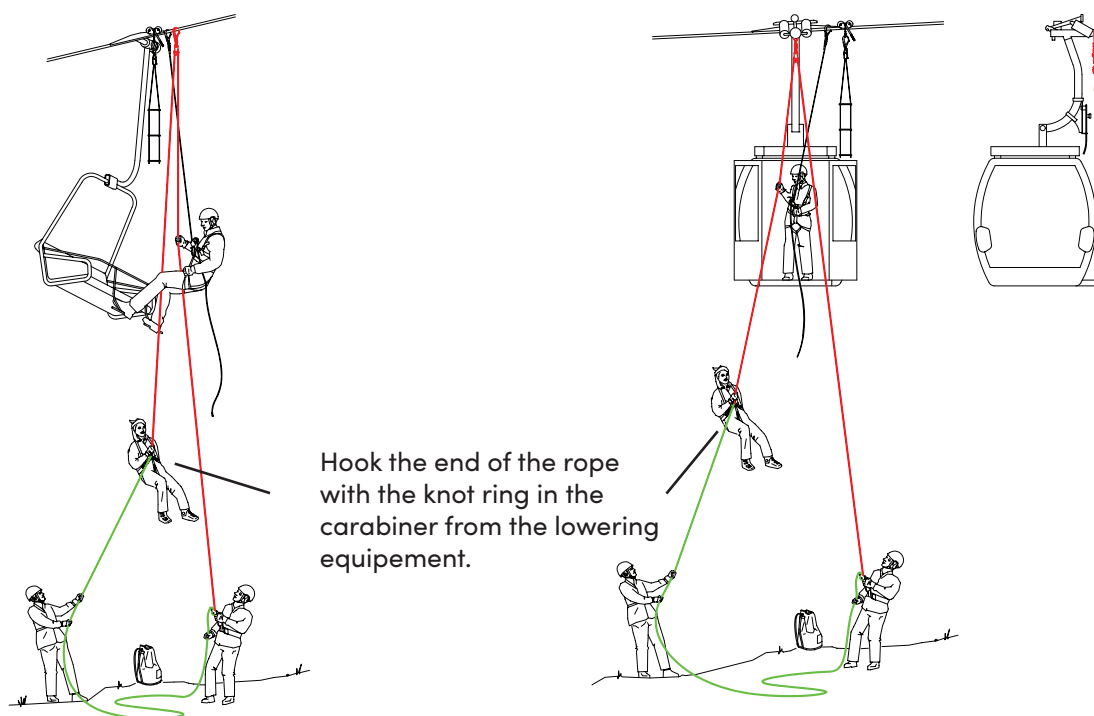
*Take out the rope ends from the bag and open the knot.*



*At the rope ends knot a ring and attach the carabiner at the lowering equipment.*



*An another rescuer lead the concentricity rope and extracts the lowering passenger at a suitable landing place.*



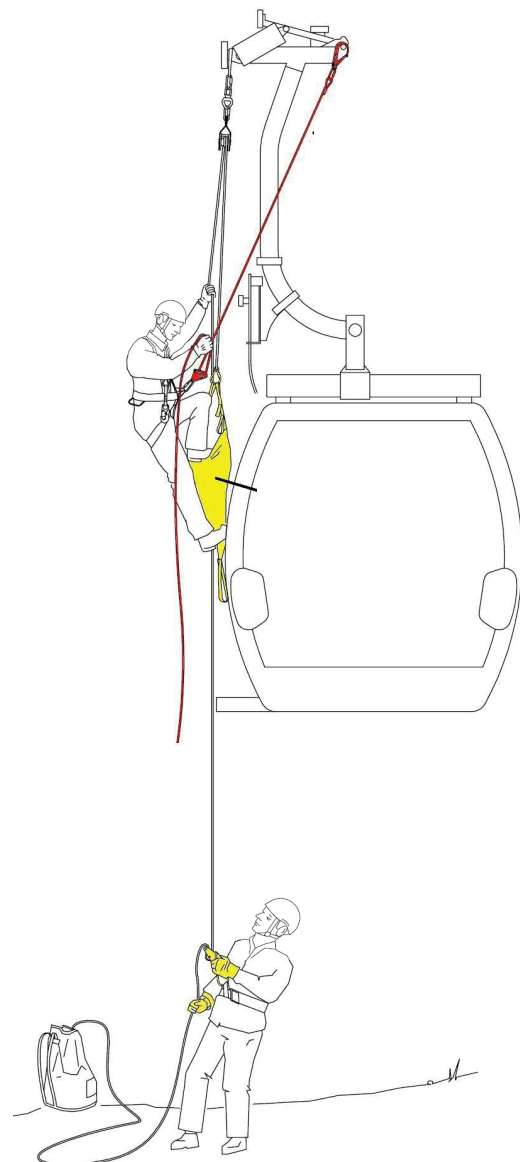
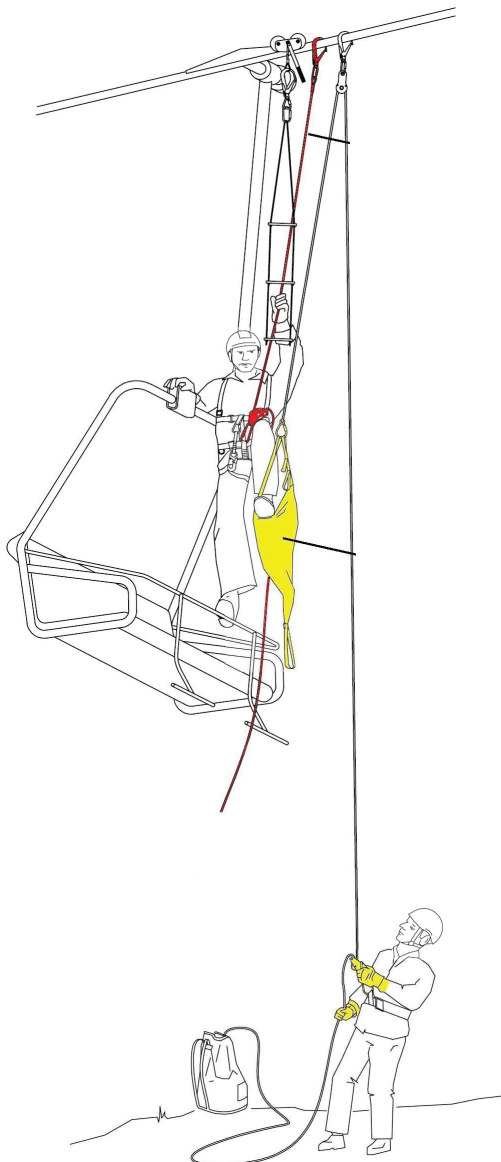
#### 4.14 Ascension of the Rescuer at the rope



*The safety rope should always be taunt*



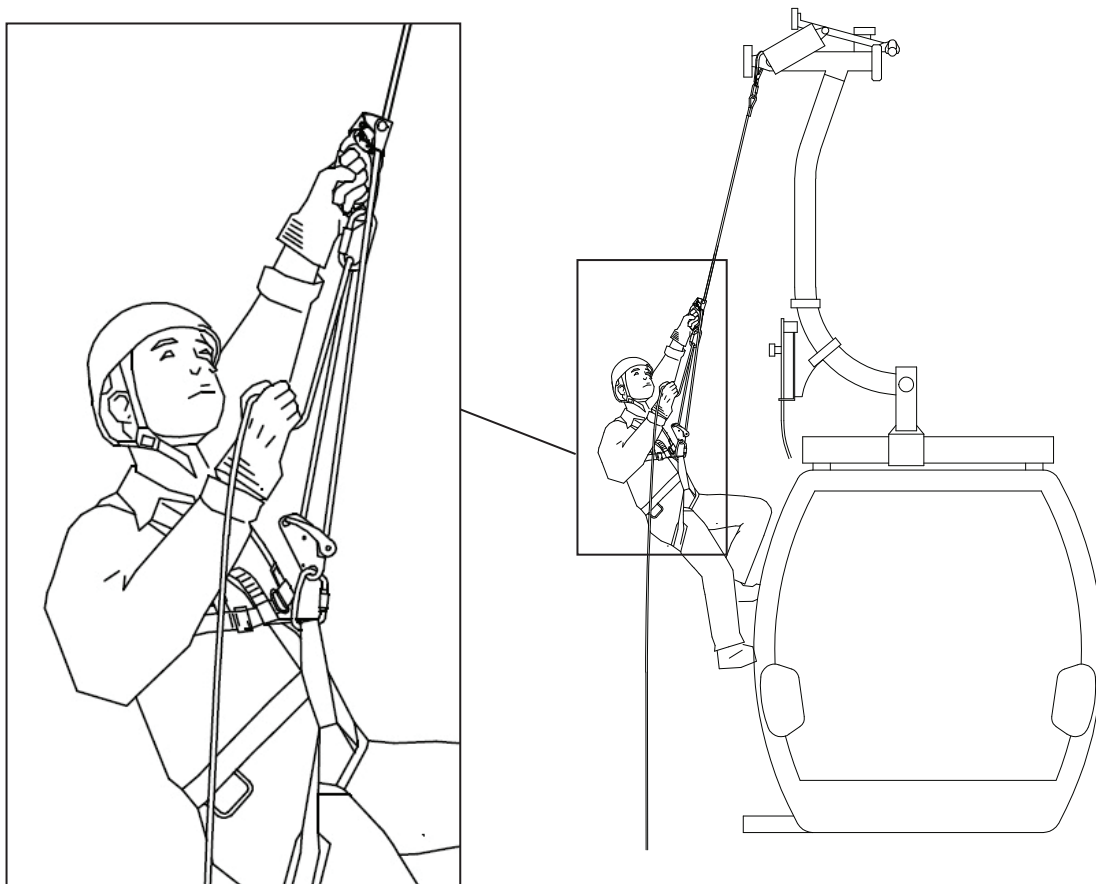
*The rescuer (on the ground) feeds the special rope into the rope brake*



## 4.15 Ascent of the Rescuer on the Rope



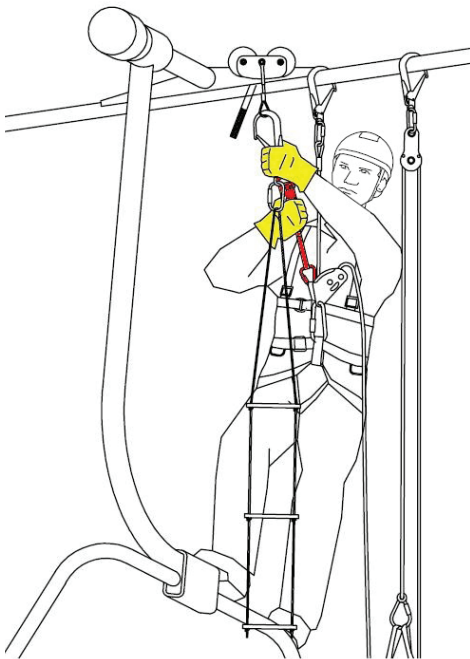
*Always taut rope on safety line.*



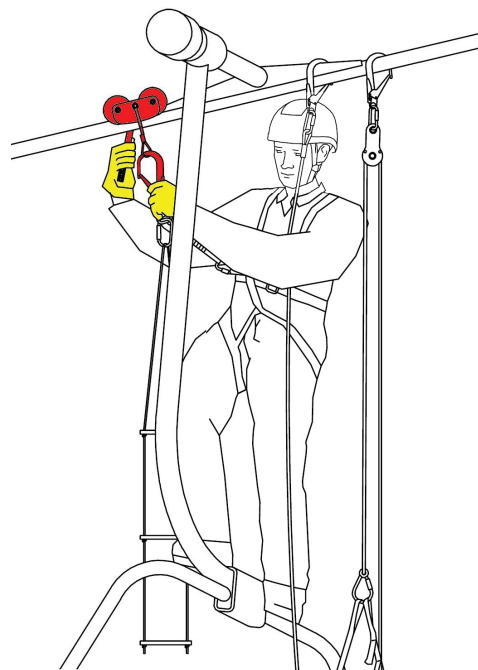
A pulley can be constructed using the hand rope clamp and rope grab for climbing onto the cabin roof. When doing so, the hand rope clamp must be fastened on the taut part of the hold rope. The loose end of the hold rope is then inserted through the spring hook of the hand rope clamp to complete the pulley.



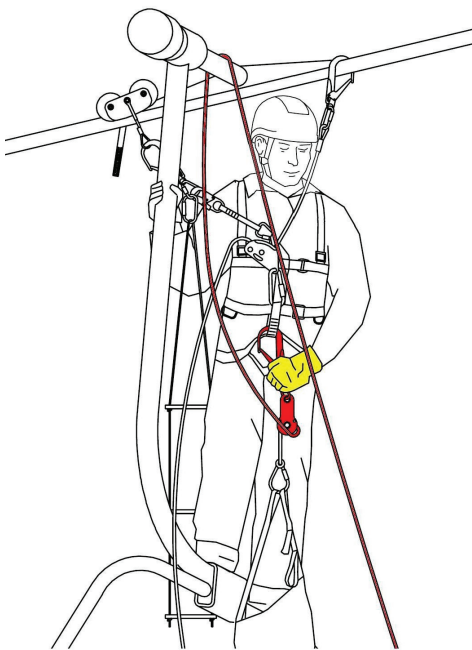
#### 4.16 Preparation for continuing towards the next vehicle



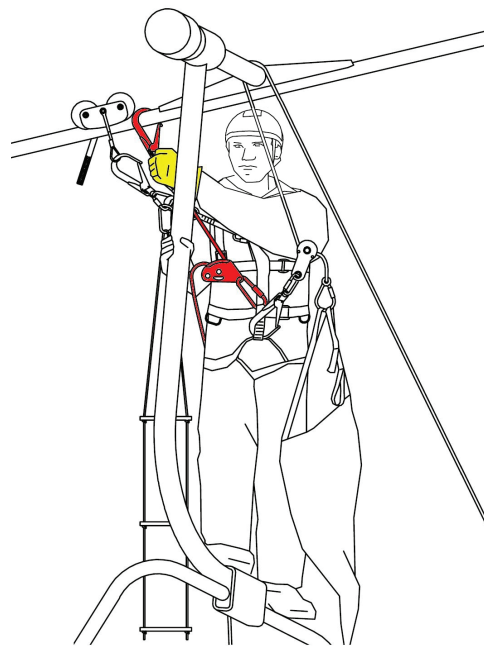
Hook the connection loop in by the rescue carriage



Hook the rescue carriage in to the carrying rope with the grip on the downhill side



Hook the special rope in to the harness's catch loop. The special rope must be over the grip



Hook the safety rope in to the carrying rope with the grip on the downhill side

## 4.17 Travel on to the next carrier



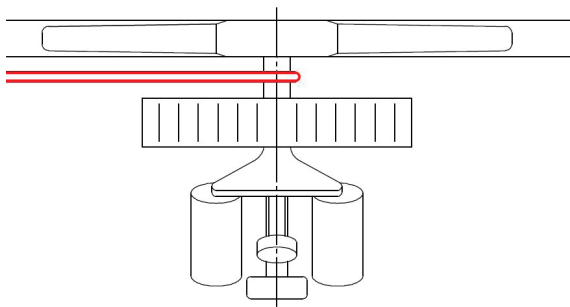
*Deflect the descender rope over the rope clamp.*



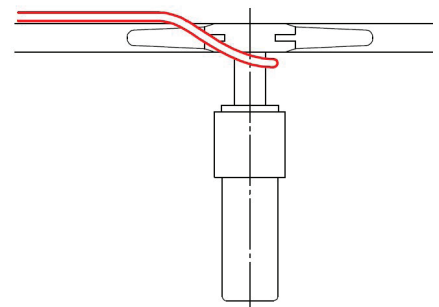
*For fixedly clamped chairlifts, the descender rope must be additionally deflected over the carrying rope.*



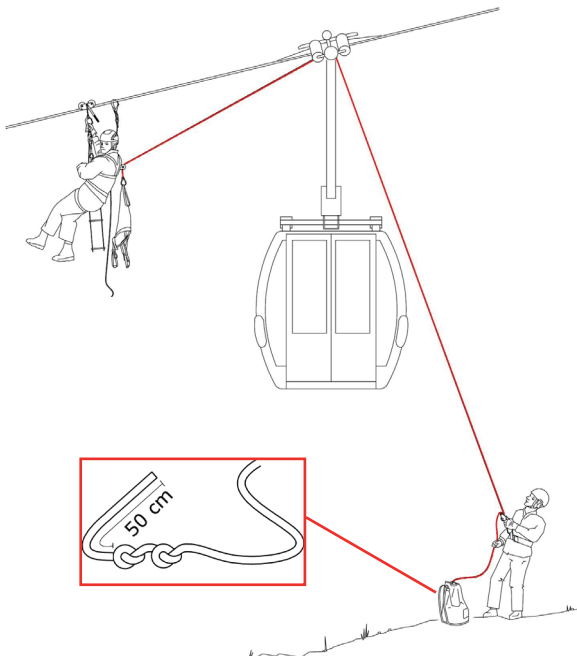
*Look out for sharp edges.*



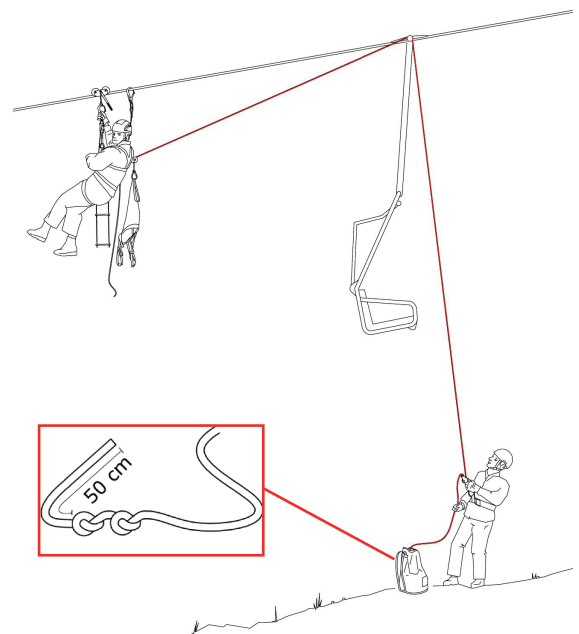
Descender rope for couplable circulating ropeways



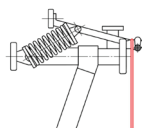
Descender rope for fixedly clamped chair lifts



Deflect descender rope over clamp

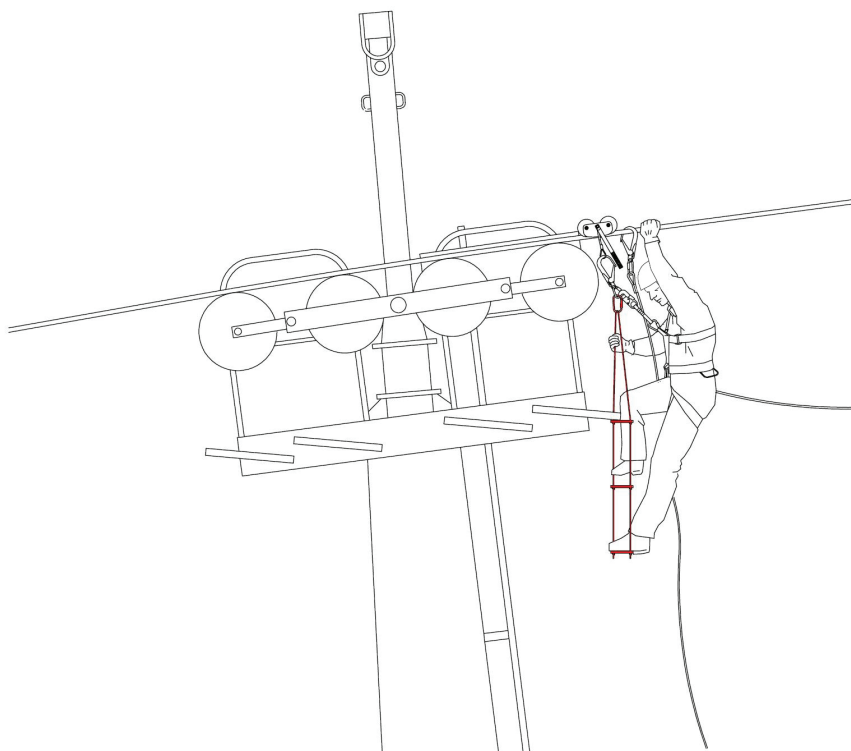


Deflect descender rope over clamp and carrying rope

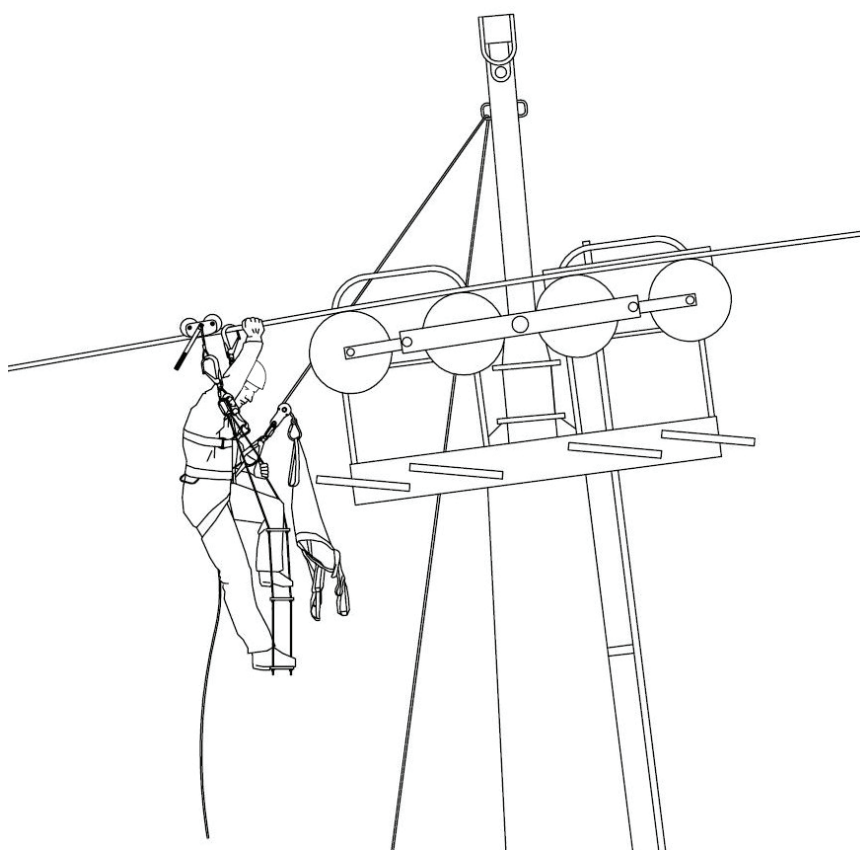


*Deflect descender rope over clamp.  
Rescuer on the ground must be vertically underneath carrying rope.*

## 4.18 Climbing over the tower



Getting onto the platform



Getting off of the platform

## 4.19 Passive lowering from rescuer on cable



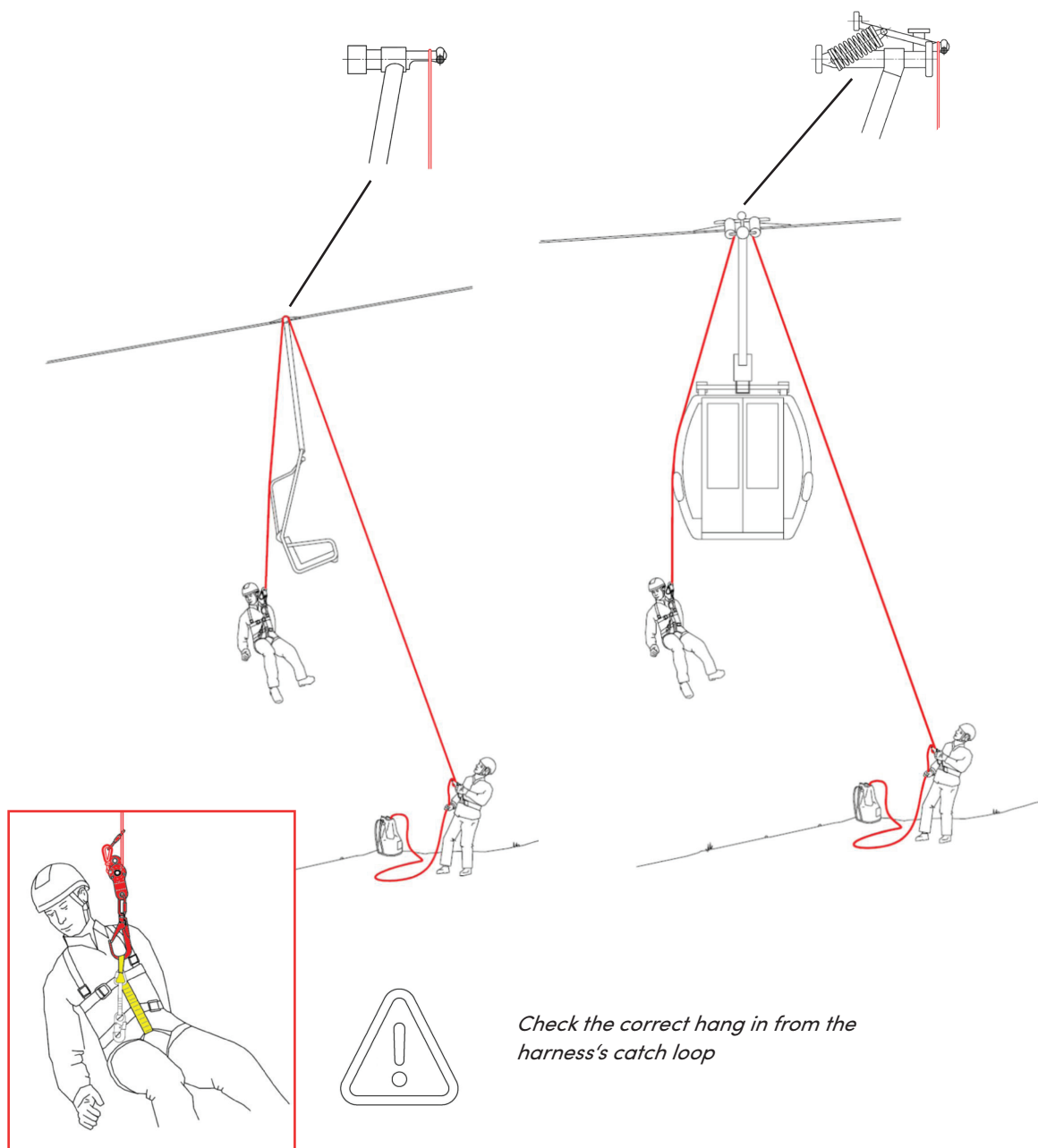
*Release the safety rope only at the beginning with descend*



*Attention: Watch out for sharp edges according to type of grip*



*Deflecting the special rope over the grip*



## 5. Cleaning and Lubricating

Avoid contact with chemicals, acids and oils.

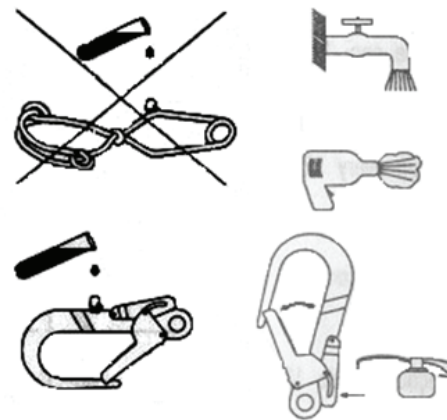
Clean all equipment and components after usage. For cleaning use gentle soap and much warm water (max. 30° C).

Always dry naturally, i.e. never near fire or other sources of heat. Excess water should be wiped away using a clean towel.

Use only silicon for lubrication of moving parts after these are dry.

Lubrication of parts can lead to the correction of malfunctioning. Should lubrication not help with malfunctioning parts, then such part should immediately be replaced. Use of any part with a malfunction is strictly forbidden.

**Notice:** Correct cleaning and lubricating of parts is especially important if used near salt water.



## 6. Storage

Do not store the equipment wet. The place of storage cannot be influenced by excessive warmth of any kind.

After cleaning, store the equipment in a facility which is dark, dry and not effected by chemicals.

Do not store near batteries.



## 7. Inspection / Maintenance / Repair

The IMMOOS rescue-system must be revised after a salvage emergency, after rich the roping work or at a minimum every 8-10 years.

### Before every usage

Visual inspection must be run by the user

### During usage

Regularly inspect the condition of the product and if it's functioning with relevant parts.

### At least once per year

Examination (inspection) by approved specialist (Exception Austria: In accordance with Regulation relating to Operating Material)

The annual inspection is comprised of the following:

- Completeness check
- Visual inspection of all individual parts
- Functional test
- Longevity

In cases of doubt, the manufacturer or a person authorized by him must carry out inspection and maintenance.



*Damaged or incomplete devices must not be used.*

*In case of doubt, the rescue carriage must not be used.*

Repair work may only be carried out by the manufacturer or by a person he has authorized.

## 8. Longevity

The longevity depends on the intensity of usage and handling of this product. It could be after only one usage, you have to replace. Other factors such as salt, snow, ice, humidity, sand, etc can also effect the product's longevity.

Parts in textil: 8-10 years

Ropes:	damaged:	replace immediatly
	uses rarely or never:	after 8-10 years
	after rich the rope working:	7'500'000 Joule

**Note: There is only original ropes permitted!**

## 9. Disclaimer

Die IMMOOS GmbH disclaims all responsibility and liability for damage if accidents or damage are due to:

- Non-compliance with statutory and official regulations
- Non-compliance with regulations or contractually agreed conditions of IMMOOS GmbH
- Non-intended use of the IMMOOS rescue carriage type SS1
- Unauthorized modifications carried out on parts of the device
- Replacement of the parts by other materials
- Additional loads of the parts
- Parts that were not designed, manufactured and supplied by IMMOOS GmbH
- Sabotage, military events and cases of force majeure

## 10. Documentation of the Annual Expert Inspection

Prescribed proof of the accomplished examination (EN 365):  
(Fill out for each rescue-system 1 sheet)

Product: IMMOOS Ascendign and Lowering Device                  Serial number:.....

Owner .....

Purchase date	Date of first use
.....	.....

[illegible]

## 11. Documentation of roping work

Proof of the accomplished roping work.  
(Fill out 1 sheet for each product)

Product: IMMOOS Ascending and Lowering Device                  Serial Nr.: .....

Purchase date: \_\_\_\_\_ Date of first usage: \_\_\_\_\_

[illegible]

## Notes

### Headquarters

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