



## Safety and rescue system

## Operating and Maintenance Instructions

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# 1. Safety Instructions

## 1.1 Important instructions for use of the safety and rescue systems

The Rollgliss R350 product range has been developed following decades of experience in the manufacture, maintenance and making of safety and rescue systems. The product is inspected and certified to meet or exceed the most recent technical and safety regulations and has been granted the approval of the CE : EN 341 and EN 1496.

It is essential that these operating and maintenance instructions are studied and observed. This will ensure that you are able to enjoy many years of reliable use from your newly purchased Rollgliss R350 safety and rescue system. Manufactured under ISO 9001 quality process.

### IMPORTANT!



**These operating and maintenance instructions must be observed and followed with absolute precision before using the Rollgliss R350 rescue and safety system.**



**Practice and regular training are essential, as personal injury may be suffered as a result of misuse of the equipment.**



**When practicing, the use of additional protection against a fall is strongly recommended in case the equipment is operated incorrectly.**



**Under no circumstances shall CAPITAL SAFETY be liable for damages arising as a result of failure to comply with the operating instructions.**

# 1. Safety Instructions



## 1.2 Important operation instructions

Strict observance of these operating and maintenance instructions is essential. Failure to comply with the present instructions will result in CAPITAL SAFETY refusing to accept any liability for damages.

The required visual and functional load tests must be carried each time the equipment is used.

To guarantee the required safety standards, it is forbidden to modify the system from its original state either in part or in full.

If you are in any doubt about the condition or mode of operation of the equipment, then the system, or parts thereof, must be replaced without delay and before the equipment is used.

Such work must be carried out exclusively by the manufacturer (CAPITAL SAFETY) or by CAPITAL SAFETY authorised Service Centre.

For reason of safety it is important to discontinue to use a system or a component part that has been subject to strain as a result of a fall and to return the system or component part to the manufacturer (CAPITAL SAFETY) or to a CAPITAL SAFETY authorised Service Centre for servicing and renewed certification.

The system (the rope in particular) may not be exposed to any acids, alkaline solutions or any other harmful substances and should not be exposed to prolonged UV rays or sunlight.

CAPITAL SAFETY should always be consulted if there are any doubts as to the possible effects of environmental or industrial agents upon the equipment.

The equipment or system may only be operated by trained and experienced individuals, who have been appointed or directed by the owner for this purpose.

The owner of the system shall be responsible for setting a policy regarding training and for all visual checks and functional load tests, which are to be completed by the user.

## 2. Principle

### 2.1 Four Systems

The Rollgliss R350 product range is a modular safety and rescue system made up of individual components. According to the respective applications, the following systems can be assembled :

Rollgliss R350 Rescue System for rescuing individuals from heights and depths.

If individuals have to be pulled up, appropriate pulleys can be used to reduce the ascending or descending forces upon the rope.

ref : AG6350ST11



ref : AG6350ST21



ref : AG6350ST31



ref : AG6350ST51



# 2. Principle

## 2.2 Pulleys

Depending upon your needs, the addition of pulleys will provide you with a mechanical advantage. These pulleys can be incorporated at any time. Care must be taken to ensure that as the rope length is reduced, pulleys are added accordingly to gain a mechanical advantage. When lowering 2 persons, a minimum mechanical advantage ratio of 2:1 is required.

Fixed : Mechanical advantage 2:1  
Art.No. AG6350200



Running : Art.No. AG6350210

Mechanical advantage 3:1  
Art.No. AG6350220



Art.No. AG6350230

Mechanical advantage 5:1  
Art.No. AG6350260



Art.No. AG6350270

### Fixed Pulleys

AG6350200 Anchor point  
AG6350220 Fixed pulley  
AG6350260 Double fixed pulley

### Running Pulleys

AG6350210 Running pulley, 1 hole  
AG6350230 Running pulley, 2 hole  
AG6350270 Double running pulley, 2 hole

- **Mechanical advantage ratio 2:1**
- **Mechanical advantage ratio 3:1**
- **Mechanical advantage ratio 5:1**

## 2. Principle

### 2.3 Function of pulleys

In order to gain a mechanical advantage, pulleys can be incorporated in the Rollgliss R350.

R350	1 : 1	2 : 1	3 : 1	5 : 1
descending	1 person max : 150 kg	1-2 persons max : 250 kg	1-2 persons max : 250 kg	1-2 persons max : 250 kg
ascending	...	1 person max : 100 kg	1 person max : 150 kg	1-2 persons max : 250 kg
recommandation for use	descend 1 person	descend 2 persons	descend and ascend 1 persons	descend and ascend 2 persons



Warning: Oblique load on the pulleys may not exceed 20°.

### 2.4 Checking of pulleys

#### 2.4.1 Visual check

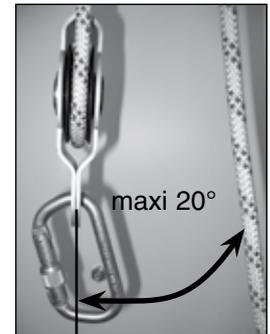
Make sure that:

- the pulleys are clean and free from grease;
- the rope contact surfaces show no signs of damage;
- the side plates are not bent

#### 2.4.2 Functional load test

Make sure that:

- the pulleys can be rotated freely and without resistance;
- the running pulleys allow deflection;
- the "fixed pulleys" can be inserted with both side plates in the R350 and the locking bolt locked

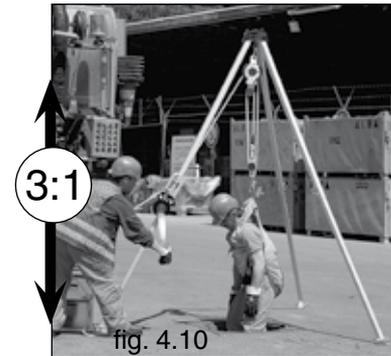
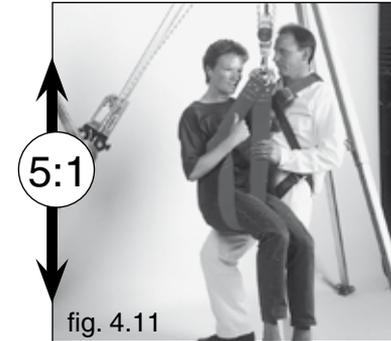
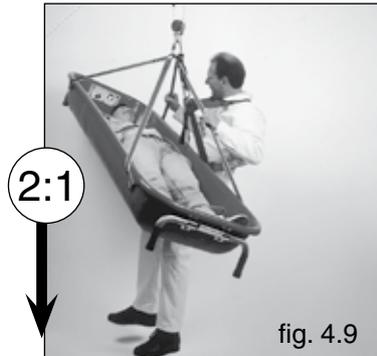
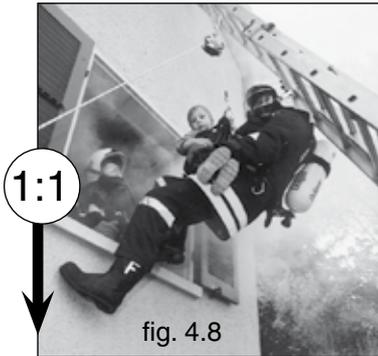


## 2. Principle

### 2.5 Application of the Rollgliss R350

#### Rollgliss R350

A system for rescuing individuals from heights and depths. If individuals have to be hoisted up, appropriate pulleys can be used for gaining a mechanical advantage over the ascending or descending forces.



## 3. Additional Accessories

### 3.1 Hand winch

(Art.No. AG6800300B)

The optional hand winch assists with hoisting and retrieval operations. The winch is flanged to ensure that it can be simply secured to the AM100 aluminium tripod.



### 3.2 Handle

(Art.No. AG6800260)



### 3.3 Braking handle

(Art.No. AG6800260B)



Unladen weight approx.: 3,0 kg  
Tested in accordance with: EN 1496, Class B

## 3. Additional Accessories

### 3.4 Aluminium tripod

(Art.No. AM100)

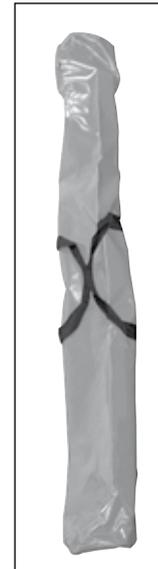
An aluminium tripod is available as a mobile anchor point (in accordance with EN 795, Class B). It is fully adjustable 2.35 m in height (8 settings).



Maximum load: 2 persons or 500 kg  
Unladen weight approx.: 14.5 kg  
Erected height: 1.35-2.35 m

### 3.5 Tripod bag

(Art.No. AK0100)



## 4. Operation of the Rollgliss R350

### 4.1 Technical specifications for Rollgliss R350

#### Rollgliss R350

##### Rope diameter 9mm (3/8 inch)

Maximum working load: 30-150 kg (250 kg)

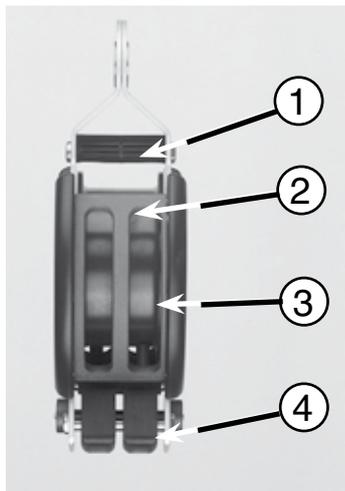
Number of person: 1 (2)

Max. descending height: 340 m

Tested in accordance with : EN 341 Class A, EN 1496 Class B

Environmental temperature limits : -40°C to +90°C

From 70°C the max. descending height of the rope is reduced to 100 m



Rope retention bar (1)

Guide frame (2)

Rope pulley (3)

Guide block (4)

# 4. Operation of the Rollgliss R350

## 4.2 How the Rollgliss R350 works

### 4.2.1 Connecting fixed pulleys

The following policy applies in respect of the pulley variations.

1. The pulley requirements must be set using a mechanical advantage ratio (see page 5).
2. The rope should be prepared in such a way that it is possible to thread it into the respective pulleys.
3. The rope should be threaded before actually inserting into the pulleys



**Warning: Care should be taken to ensure that excessive turning forces are not exerted upon the rope in the pulley block!**

4. The upper deflector guide (or notch) should be inserted completely into the left bolt (fig. 4.1).
5. The locking bolt should also be loosened by simultaneously depressing the front and rear pin, and pushed to the right against the spring action. Insert the deflector guide (or notch) fully and allow the locking bolt to retract.(fig. 4.2).
6. To ensure the pulley is locked in position, apply pressure to the pulley pushing the puleys side to side. (fig. 4.3)



**Warning: Check it attached properly!**



fig. 4.1



fig. 4.2



fig. 4.3

# 4. Operation of the Rollgliss R350

## 4.2.2 Connecting running pulleys

1. Rotate or swivel the supporting face plates to expose the roller on the pulley, thus enabling the rope to be threaded through the pulley (fig.4.4).
2. Bring the supporting face plates together, then snap on and lock the Karabiners through the holes provided (fig.4.5).



**Warning: Check if the pulley & Karabiners are attached properly!**

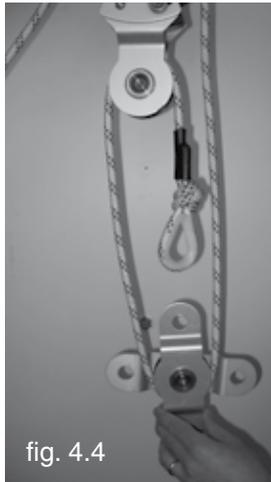


fig. 4.4



fig. 4.5

## 4.2.3 Anchor point for Rollgliss R350

Check the entire system once again to ensure everything is correctly attached and hang the Rollgliss R350 from a suitable anchor point (in accordance with EN 795) using the top Karabiner.

Examples of anchor points include:

- Rollgliss tripods (above manholes) (fig.4.6).
- Sufficiently large beam around which the steel cable AM401G can be wrapped, to which the Rollgliss Top/R350 can then be fitted (fig.4.7).

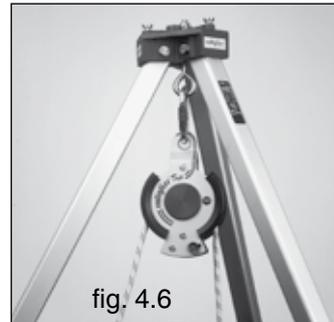


fig. 4.6



fig. 4.7

# 5. Operation of the rope control device

## 5.1 How the rope control device works



**Warning:** The rope control device should always remain on the rope (slack end).

If the device is taken off the rope, for example, to clean the rope or by accident, the following should be observed:

### Threading the rope (slack end)

1. Hold the rope control device by the handle body with the left hand.
2. Completely retract the safety latch (1) using the middle or ring finger. Using the thumb, pull back the locking lever (2) (fig. 5.1).
3. Thread the rope. The tensioned rope must always be inserted at the top, and the slack rope should always feed out at the bottom.
4. Allow the locking lever and then the safety bolt to snap back into place (fig. 5.2).
5. The rope control device is now ready for :
  - locking,
  - ascending,
  - descending.



**Warning:** The rope control device should always be used as a basic means of protection!

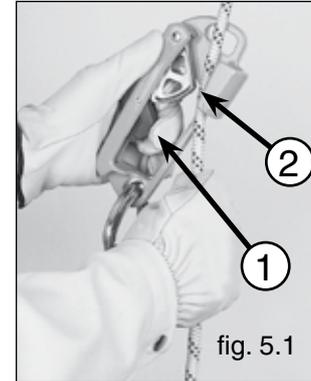


fig. 5.1

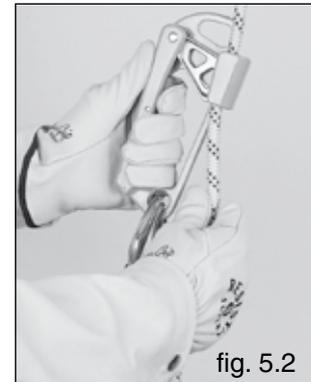


fig. 5.2

# 5. Operation of the rope control device

## 5.2 Descending without braking aid

Hold the rope taut with one hand (the lower hand) and push the rope control device slightly upwards (releasing the locking lever) and pull back the locking lever using a your thumb. Now let the rope run through the device while maintaining control with the lower hand.



**Warning :** Do not open the locking lever (fig. 5.1 (1) p.13) so far (locking ratchet fig. 5.1 (2) p.13), that the rope is able to become unthreaded out of the device.

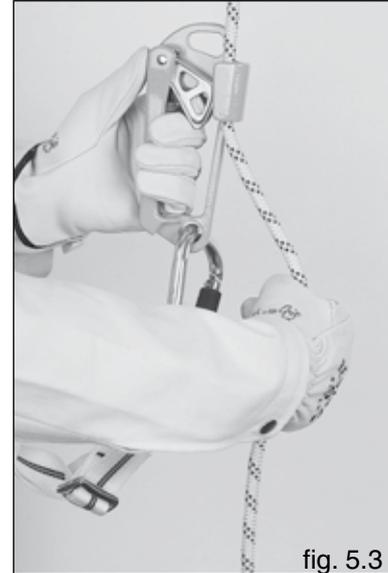
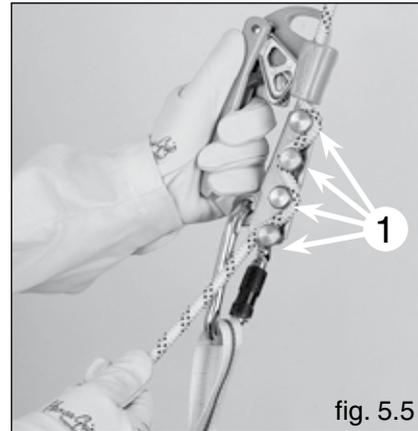
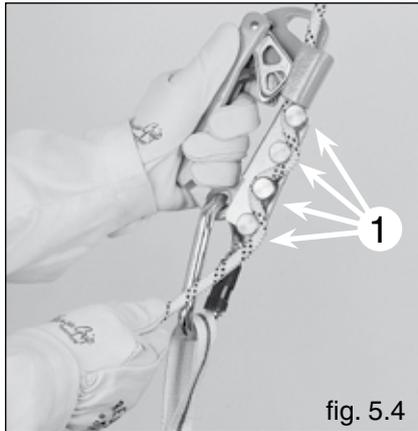


fig. 5.3

## 5. Operation of the rope control device

### 5.3 Descending with braking aid (ref AG6800260B)

For heavy loads, long descents or frequent recourse to make descents, pass the rope through the braking aid (1) as shown, see fig. 5.4 (medium braking force) or fig. 5.5 (high braking force).



# 5. Operation of the rope control device

## 5.4 Checking the rope control device (ref AG6800260 or ref AG6800260B)

### 5.4.1 Visual check of the rope control device

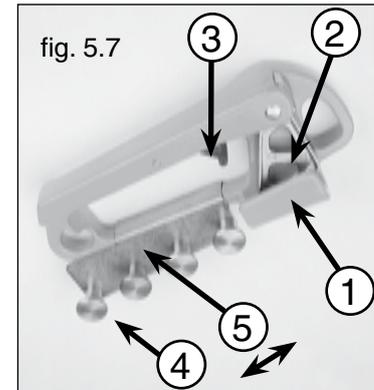
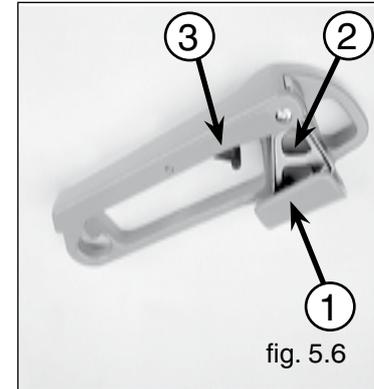
Make sure that:

- the rope guide (1) is clean and free from grease;
- the locking lever (2) and the safety bolt (3) are present;
- the locking lever (2) and the safety bolt (3) are under spring tension;
- the braking bolts fig. 5.7 (4) cannot be rotated;
- there are no cracks, dents or bends in the handle or locking lever.

### 5.4.2 Functional load test

Make sure that:

- the locking lever (2) and the safety bolt (3) can be moved without jamming;
- an inserted rope does not slip under tension;
- an inserted rope is released when subsequently tugged (push rope control device in direction of anchor point);
- the braking aid fig. 5.7 (5) can be displaced about 10 mm on the rope control device.



# 6. Maintenance

## Rollgliss R350 System

- The bearings used have been lubricated for lifetime`s usage and are protected from soiling and humidity by special measures.

- The Rollgliss R350 System, or any components belonging to it :

a) For reason of safety, a visual and functional check, respectively, must be carried out on the system or any individual component parts thereof by an expert (as specified by the owner of the equipment) every twelve months in accordance with EN 365.

- The Rollgliss R350 inspection and checking rules :

a) The system must be annually inspected by a competent person. During this yearly inspection, if there a doubt or failure, it shall be returned to a service centre for internal check.

b) In any case, after 10 years of annual inspections, it shall be sent to a service centre, for an internal check.

c) Between the 10<sup>th</sup> and 15<sup>th</sup> year of the device, continue with annual inspections.

d) The next date of internal check (like b) is the 15<sup>th</sup> anniversary.

The lifetime of ropes of the Rollgliss R350 system is identical to the rule for textile components : 5 years of use or 7 years after year of manufacture (in case of long storage before first use).

# 7. Storage

## Storage policy for the Rollgliss R350 Rescue and Safety System

The following storage policy must be strictly observed in respect of the whole system:

- Clean, dry (max. 65% relative humidity) storage area.
- Avoid exposure to UV radiation, i.e. choose a dark storage area.
- Avoid extreme temperature fluctuations differing from normal ambient temperature (+20°C)
- Avoid contact with oil or grease.
- Avoid exposure to harmful substances such as acids or alkaline solutions or vapours emitted by them.
- Avoid exposure to engine exhaust gases.
- Avoid exposure to mechanical forces such as, for example, the application of weights, crushing or walking upon the ropes.
- Carry out regular checks.
- Always store ropes loosely, i.e. never wind them around an object or an arm, as doing so is likely to cause twisting, shortening and stiffening of the ropes.
- Only store dry ropes (to prevent corrosion, rotting).



**Capital Safety:**

USA: 800-328-6146

Canada: 800-387-7484

Asia: +65-6558 7758

Northern Europe: +44 (0) 1928 571324

Europe, Middle East & Africa: +33 (0) 497 10 00 10

Australia : 1800 245 002

New Zealand: 0800 212 505

Or visit: **[www.capitalsafety.com](http://www.capitalsafety.com)**

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