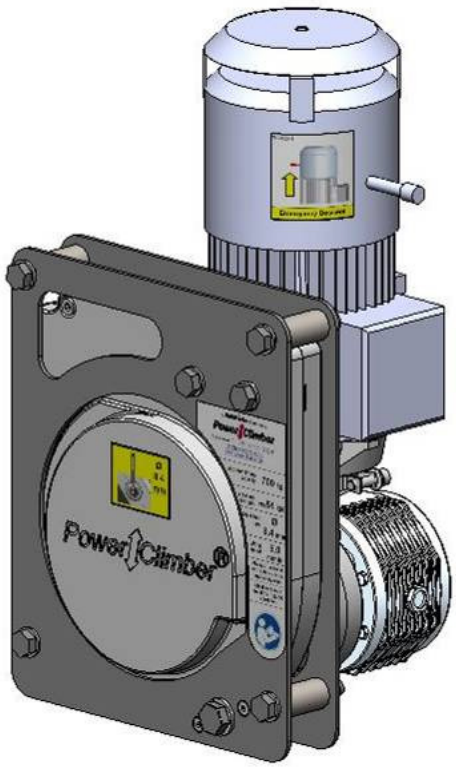
Operating instructions

ATLAS Climber - 700

Model: Three phase: ATLAS Climber - 700 hoist



WARNING:

- All persons operating this equipment must read and completely understand this manual.
- All persons must be thoroughly trained in the use of the equipment, its operational and safety features, and they must also be capable of carrying out the daily checklist.
- Only authorized and physically fit persons shall operate the equipment.
- Any operation in violation of these instructions is at the operator's own risk and may result in serious injuries.
- Keep this manual with the hoist at all times.
- Only use spare parts and steel wire rope from POWER CLIMBER,

Manufacturer: Power Climber b.v.b.a, Satenrozen 7, B-2550 Kontich BELGIUM

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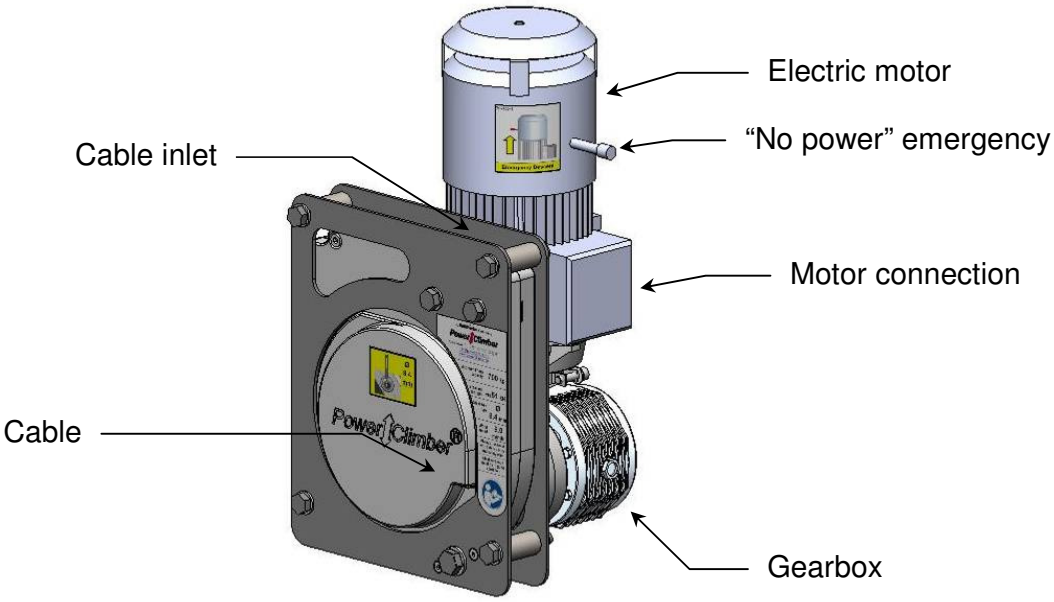
1 GENERAL

		ATLAS 3 phase
MODEL		A-700
Working Load Limit (W.L.L.)		7000N (700 kg)
Power Supply		3*400V / 50Hz (60Hz) + E
Amperage at W.L.L.	*RUN*	3.5 A
	START	10.5 A
Motor Power		1,3 kW
Wire Rope	*Diameter*	8.4 mm
	Breaking Strength	40 kN
Hoisting Speed		8.0 m/min
Noise level	*UP*	60 dBA
	DOWN	64 dBA
IP-Rate		IP 54
Self-weight of hoist		45kg



The ATLAS hoist is a self-reeving traction hoist, powered by an electric motor.
The hoists and the central control box (CCB) are mounted on Temporary Suspended Platforms (TSP) and suspended with steel wire ropes from a suspension system.
The strength of the platform and the suspension system used in combination with the hoists must be in relation to the Working Load Limit (WLL) of the hoist.

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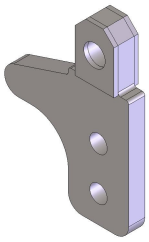
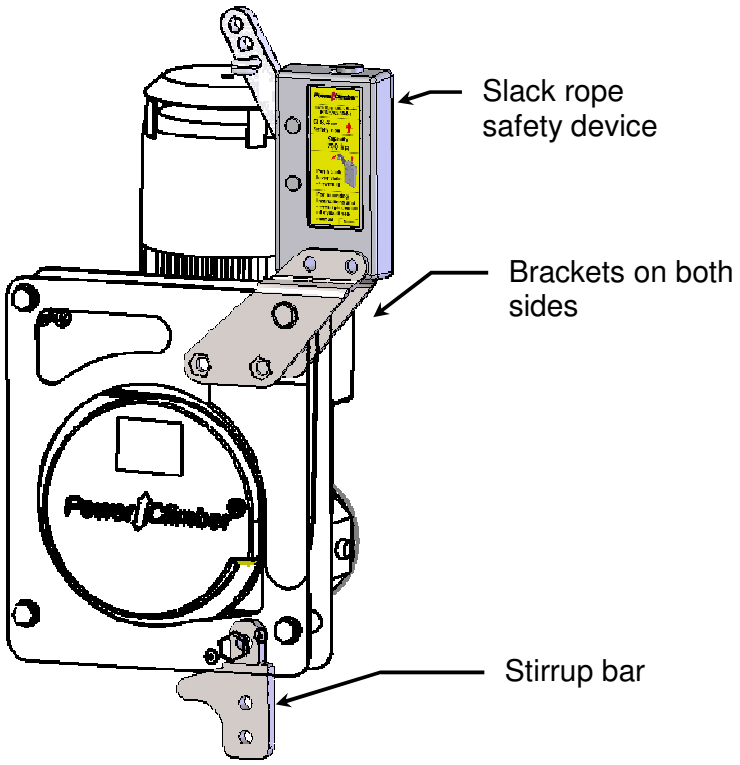
2 Attachment of hoist

2.1 A-frame



For the A-frame type stirrup an adaptor is delivered with the hoist.
Attach this adaptor piece to the underside if the hoist by means of the M16 bolt.

The slack rope now has to be connected to the hoist frame with the 2 delivered brackets and 2 bushings.



2.2 A-frame mounting instructions

1. Take out the M16 bolt from the hoist frame.
2. Put the stirrup bar on its place and secure it using the M16 bolt
3. Now take out both M12 bolts where the adaptor plates need to be secured
4. Put the adaptor plates on the hoist frame and secure them with the bolts
5. Put the Slack Rope device onto the adaptor plates and secure with 2 bolts

NOTE: ALWAYS put the bushings in between the adaptor plates before tightening the bolts. Not doing so can result in serious deformation and malfunction of the slack rope device!

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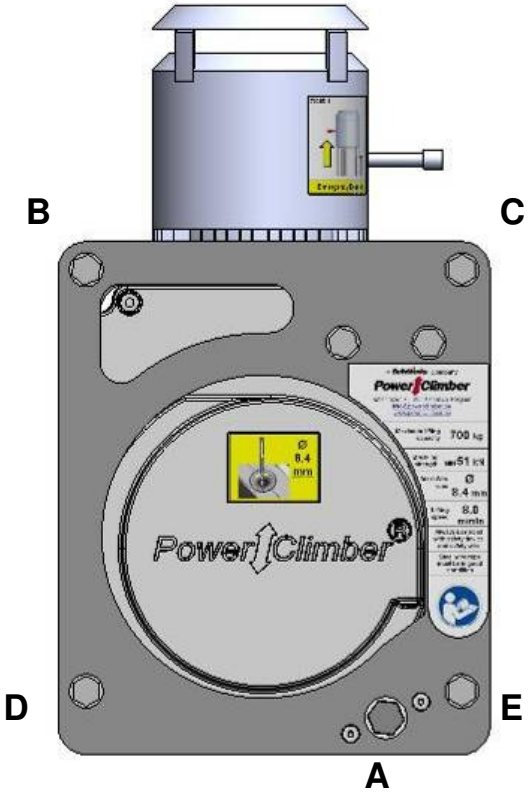
2.3 Other mounting options

There are 5 mounting holes provided on the hoist frame, named A trough E. Following combinations of mounting points are allowed.

- Mounting only by A (See A-frame p.4)
- B – C
- D – E



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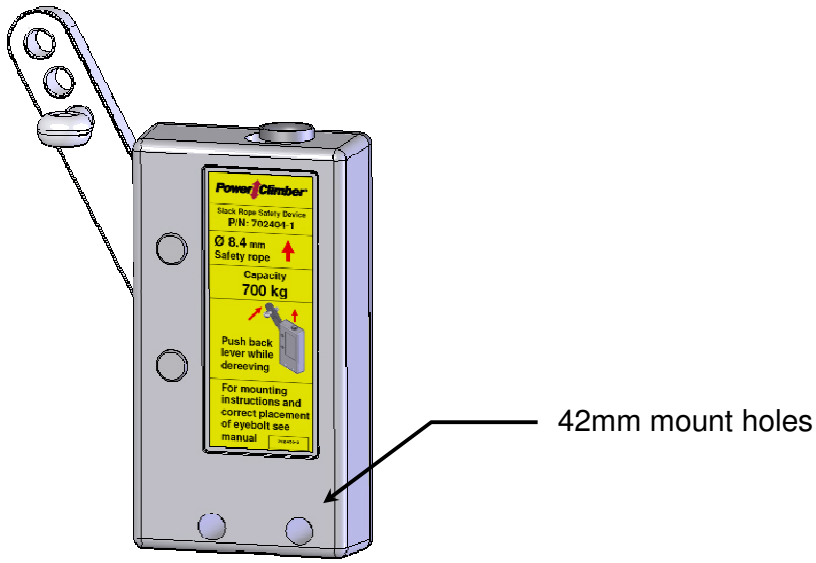
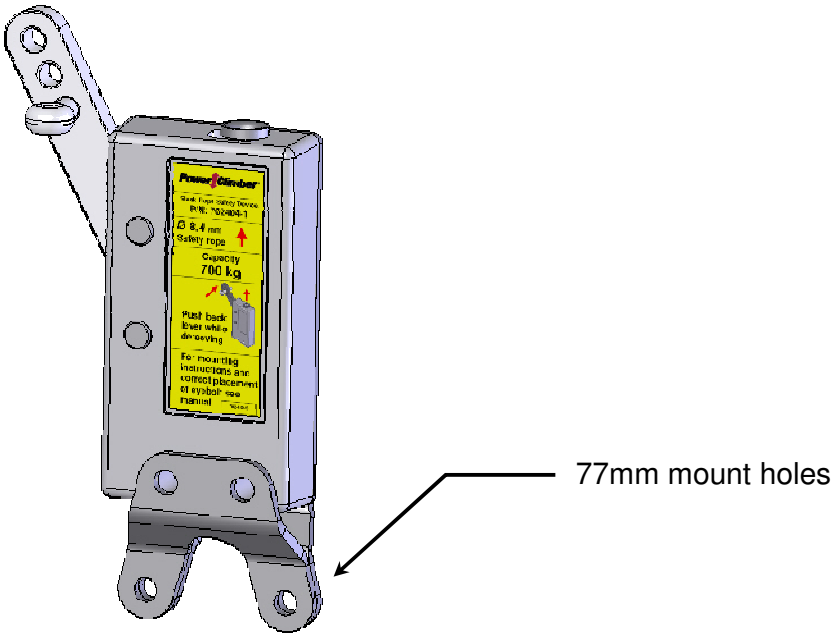
3 Attachment of the Slack Rope device

3.1 On a 42mm mount

To mount the Slack rope safety device on a 42mm mount the bottom holes can be used, as shown in following picture.



3.2 On a 77mm mount



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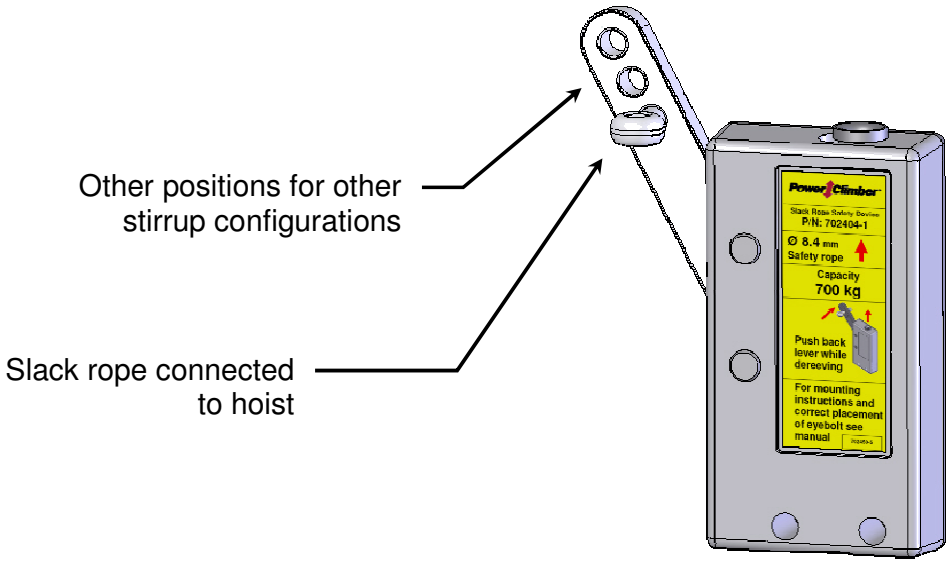
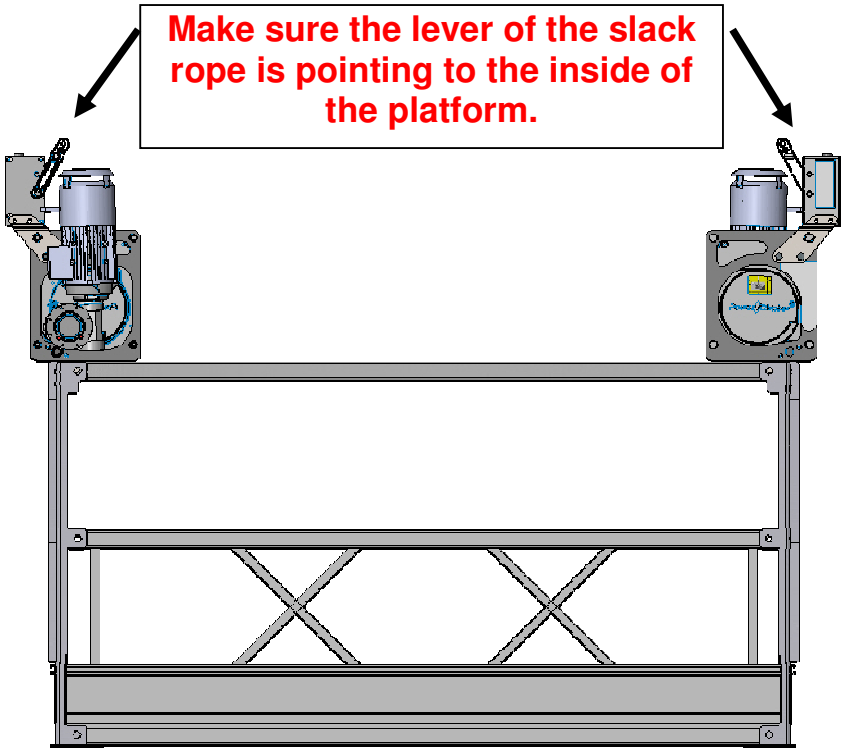
3.3 Position of eyebolt

The eyebolt needs to be placed so that the slack rope safety device will grab at 12°-14° inclination of the platform.



3.4 Position on platform



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4 Installation

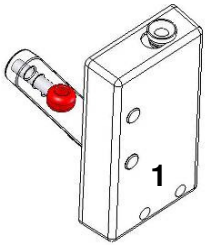
4.1 Install CCB and connect Power Supply

1. Install CCB on the rear platform guardrail away from the working area.
2. Connect the control cables from the CCB to each ATLAS hoist.
3. Connect the main power supply cable to the male plug on the CCB, and secure it to the mid-rail of the platform using the cable retainer.

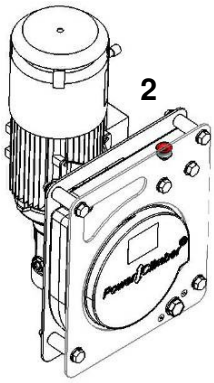
Note: Both hoists have to be connected to the CCB for either hoist to operate.

4.2 Reeve the suspension ropes in the ATLAS hoist

At roof level, uncoil the suspension ropes and lay them on the roof surface. Attach the suspension ropes to the suspension system with the safety hooks fitted to the ropes and lower the ropes to the ground. Verify that the rope is long enough.



1. Insert the suspension rope through the eye of the slack rope lever.
2. Insert the suspension rope into the hoist until it stops.
3. Push the 'up' button on the CCB and the steel wire rope passes through the hoist automatically. The end of the rope will come out from the bottom of the hoist. Make sure the outlet is free and the wire rope can exit freely.



Tip: If there is any difficulty reeving the suspension rope it helps to put a small bend in the end of the rope before feeding it into the hoist.

Tip: If the steel wire rope does not slide into the hoist easily, check the form and dimensions of the bullet. The diameter of the bullet should not be greater than the diameter of the steel wire rope

4.3 Attach the ATLAS hoist to the stirrup

1. Lift the ATLAS hoist up from the ground by pushing the 'up' button on the CCB.
2. Attach the ATLAS hoist to the stirrup of the platform with M12 bolts and self-locking nuts. Make sure that the ATLAS hoist is mounted with the main hoist label towards the inside of the platform.

For mounting options, see Attachment of hoist p.4

NOTE: *Do not over tighten the bolts causing the plates of the stirrup to deform*

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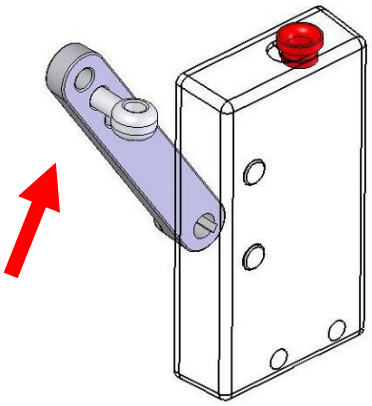
4.4 Reeve the safety rope in the ATLAS hoist



1. At roof level, uncoil the safety ropes and lay them on the roof surface. Attach the safety ropes to the suspension system with the safety hooks fitted to the ropes and lower the ropes to the ground. Verify that the rope is long enough.

2. Push back the slack rope lever (or tension the suspension rope) to open the jaws of the slack rope safety device and push the safety rope through the slack rope compartment. Take out all slack by putting a weight on the tail end of the safety rope.

Tip: *Separately reeving the safety rope and the suspension rope, will avoid getting them twisted together.*

4.5 Carry out Daily Checklist

Carry out the Daily Checklist prior to your first ascent. Always check the suspension system for stability and safety before launching the platform.

4.6 Precautions during use

Please note that the hoist is not equipped with a top limit switch. It is therefore possible the safety device hits the suspension points when there is no care given to this situation. In case the safety device hits the suspension system, ALWAYS perform the complete daily checklist to ensure the proper functioning of the hoist and safety systems.

5 After use checklist:

After using the platform, make sure that:

- The platform is cleared of tools and equipment.
- All power has been switched off.
- Equipment has been secured where it will not be accessible to be tampered with.

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6 Dismounting the hoist

6.1 Dereeving the hoist

Tip: Remove the safety rope first and keep the suspension rope taut, so that the slack rope safety device stays open and allows easy passage of the safety rope.

6.1.1 Safety rope

Manually pull the safety rope out of the slack rope safety device by hand.

6.1.2 Suspension rope

Push the 'down' button on the CCB until the suspension rope no longer comes out of the top of the hoist and pull out the remainder of the rope by hand.

7 Maintenance

To be carried out by an authorized service centre
every 6 months or 105 hours, whichever comes first

1) Completely strip the hoist, clean and inspect all parts for wear and damage. Replace worn parts when necessary.
2) Clean, lubricate and re-assemble the hoist. Particular attention must be given to the slack rope safety device.
3) Place the hoist on a test rig and test that it can lift the rated Working Load Limit.
4) Check all plugs socket connections of the hoist and central control box for any signs of water penetration.
5) Reinstall the hoist and control box back on the platform and carry out the Daily Check List.
6) Write a maintenance record indicating:
    - Repairs carried out and/or parts replaced.
    - Hour meter (optional) reading of the hoist.

Special conditions:
The frequency of inspection and maintenance also depends upon the environmental and working conditions:

- When working with abrasive, adhesive or corrosive materials (epoxy, paint, cement, sand blasting, acids, salt water, spraying), the hoist should be protected with a suitable cover and the daily checklist carried out at least once a day.

NOTE: *Always exercise caution regarding grounding, arcing and insulation, whenever welding or using electrical equipment.*

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8 Troubleshooting

Problem	Probable cause	Solution
Hoists do not work when pressing the 'up/down' push button.	No Main power	Check power that power plug is properly connected or go down using the emergency manual descent
	Three phase hoists only: Phases are reversed	Use screwdriver to reverse phases on the phase reversal power plug of the CCB.
Hoists do not work when pressing the 'up/down' push button.	Emergency stop button has been depressed	Release emergency stop button
	Both hoists are not connected to the CCB	Check that both hoists are correctly plugged in to the CCB
During reeving, the hoist works in the 'up' direction, but the suspension rope does not reeve through	Steel wire rope is not entering the hoist properly	Remove steel wire rope and repeat reeving procedure (see Tip)
Hoist hums, starts slowly or is sluggish, or fails to lift the loaded platform.	Serious voltage drop	Check the power supply and the specifications of the power supply cable
	Single phase hoist only: Start capacitor is defective	Hoist and CCB to be checked by an approved service centre
	Service brake failure	Hoist to be checked by an approved service centre
Hoist works for a short time and then stops. The electric motors are hot	Thermal protection has been activated	Let motors cool down and see advice for "Hoist hums, starts slowly or is sluggish, or fails to lift the loaded platform."
The hoists works for a long time and then stops. The electric motors are hot	The thermal protection has been activated	Let the motors cool down to reset automatically. Tip: The 'no power' descent will still operate when the overheating protector is tripped.
The hoist turns both in the 'up' and 'down' direction, but the platform does not come down	The slack rope safety device is activated, and platform is tilted or has come to rest on an obstruction)	Use the hoist selector switch to bring platform to the horizontal level or go up to come off the obstruction.

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Slack rope device does not catch platform at 8-14 degrees	Hoist or Slack rope device are not mounted correctly on the platform	Make sure the slack rope lever in facing the inside of the platform
	Center distance of steel wires is not set correctly	Check the center distance of the steel wires is the same on the suspension rig and on the platform.
Slack rope lever does not pivot properly	Slack rope mechanism is contaminated by grit or corrosion	Clean and lubricate slack rope safety device
IF PROBLEM PERSISTS, CONTACT YOUR LOCAL SERVICE REPRESENTATIVE.		

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9 Safety devices

9.1 Automatic slack rope safety device:

The automatic slack rope safety device locks mechanically onto the safety rope if:
a) The suspension rope looses tension or breaks.
b) The platform gets out of level by max. 14 degrees. The slack rope safety device on the lower hoist will lock mechanically onto the safety rope.
This is in addition to the automatic levelling system and protects against a slow creep down of the hoist.

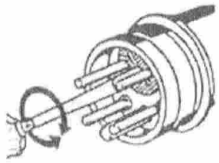
9.2 'No-Power' descent

In the event of a power failure the platform can be lowered at a controlled speed (Approx. 6 m/min.), by pulling the 'No-Power' descent lever on the electro-magnetic service brake.

Warning: *Never use the emergency manual descent when normal powered movement is possible.*

9.3 Phase Protector (for three phase hoist ONLY)

All three phase central control boxes are fitted with a phase protector, which cuts power supply if phases are reversed. When the phases are correctly connected, the GREEN indicator light on the phase protector (only visible when CBB is opened) is ON and the hoists will operate.
If indicator lights are OFF, use a screwdriver to reverse the phases in the phase reversal power plug of the CCB.



WARNING: *DO NOT change any connections in the central control box.*

9.4 Overheating protection for hoist electric motor

The hoist motors are fitted with a thermal contact, which cuts power to the motors in case of overheating.
When the overheating protection is activated, the 'up' movement is halted.
If a hoist motor has overheated, allow it to cool down to continue.

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10 Steel wire rope

ONLY USE POWER CLIMBER RECOMMENDED STEEL WIRE ROPES	
Type	Greenflex
Diameter	8.4 mm
For use with hoist model	All models of ATLAS hoist
Construction	5 x 26 WSR (Warrington Seale Compacted) + HDPP (High Density Polypropylene) core
Structure	Right Hand Cross Lay - Light Preformed
Tolerance	(+0/-0.2mm)
Tensile strength of wires	1960 N/mm2
Minimum Breaking Load (actual)	52.3 kN
Minimum Breaking Load (calculated)	66.0 kN
Weight	0.255 kg/m
Treatment	Galvanized
Identification mark	Green strand

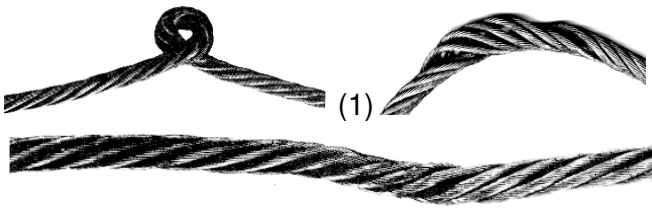
The end of the steel wire rope should be brazed to form a 'bullet' end with a maximum length of 10mm, without loose or broken wires. The diameter of the bullet should not be bigger than the diameter of the steel wire rope.

- Use protective gloves to manipulate the Steel Wire Ropes.
- If Steel Wire Ropes are too long, carefully wind any extra cable into a loop (or onto the wire holders) and tie up, leaving the coil suspended just clear of the ground.

WARNING:

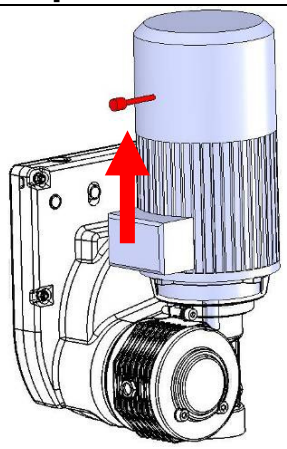
Steel Wires Ropes must be replaced in any of the following conditions:

- More than 10 wires are broken on a length of 25cm
- Excessive corrosion
- Damage due to heat
- Reduction of the nominal diameter by more than 10%
- Kinking (1), crushing (2), bird caging (3) or any other distortion of the wire rope structure.



11 Daily checklist

*Test must be carried out **EVERY TIME** before using the platform*

1	Visually inspect the platform for damaged, loose or missing parts.
2	Check the suspension system for stability before launching the platform. Check that all necessary counterweights are in place and secured. Check that all steel wire ropes are hooked on properly to the suspension system
3	Check that the power is ON and hoists can function.
4	Check that the 'Up/Down' push buttons and the hoist selector switch are functioning.
5	Push emergency stop button and check that the platform cannot go up or down. (turn button in direction of arrow to reset)
↑ Drive the platform 1-2 meters off the ground to continue the tests ↑	
6	a) ON ONE HOIST ONLY, Pull on the 'No Power' emergency descent lever and check that the hoist can be lowered at a controlled speed. b) Continue releasing the service brake until the slack rope safety device is activated (about 14 degrees) and keeps the platform from tilting further. c) Repeat the procedure by manually lowering the other end of the platform. 
7	Run the platform to the top and during travel inspect the steel wire ropes for kinks, broken wires or other damage. Inspect the trailing electrical supply cable for damage.
DO NOT USE EQUIPMENT THAT IS NOT OPERATING PROPERLY	
NEVER OVERRIDE LIMIT SWITCHES AND SAFETY DEVICES	