



CE0120

prEN12841
types A, B & C

Manufactured by:
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Type approval:
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Intended Use

The Powerlock is designed for use with low stretch (EN1891, type A) kernmantel rope of 11mm diameter, for the following purposes:

- Descent of a rope
- Lowering of a person
- Ascent of a rope

No other form of use is permitted.

In all of the situations described above, it is important that an additional backup safety system is used, attached to a separate anchor point. The safety system maybe controlled by another person, or the user maybe attached by a suitable rope grab or fall arrester. This condition may not be possible during situations of emergency e.g. evacuation.

Pre-Use Check

The condition of the equipment should be verified before every use paying attention to the following:

- Proper movement of side plates
- Security and fixing of all fasteners
- Free movement of upper and lower friction pulleys
- Return action of spring
- Free movement and return action of handle

Materials

All components are made from stainless steel 316 except the plastic handle grip and the upper friction pulley which is made from aluminium.

Hazards

Do not allow slack rope to develop in any part of the suspension system. When used as a descender, a front harness connection point should be used. Ensure that exclusion zones are used to protect third parties if necessary and that objective hazards are identified before use.

Contamination with oils, lubricants, water or solvents may alter the performance of the device. Behaviour will vary according to the age, type, diameter and characteristics of the rope used. Use only ropes of 11mm diameter. Do not use excessively old, worn or abraded ropes.

SWL Statements

It is difficult to ascribe a 'single' safe working load to this device because of the varied conditions under which it can be used. Regardless of the conditions, the Powerlock should never be used with loads greater than 250kg. The following loading characteristics should be noted (all tests carried out on unused 11mm low stretch rope to EN 1891).

Under a static load, the locking system of the Powerlock will begin to slip at 333kg.

With the handle 'fully open' (i.e. locking mechanism off) and a 20kg restraint force (grip) on the tail rope, the device is able to control a load of 140kg.

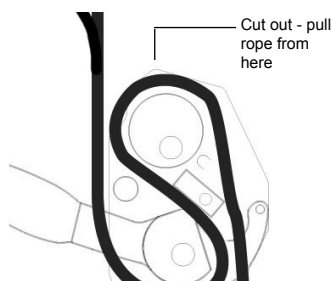
The device is capable of withstanding a fall of 1m (factor 1) with 250kg (in lowering/ descending mode) on 11mm rope. See EN 12841 for more information about this test.

Performance with high loads

The Powerlock is designed for use with loads of two persons. Users must be aware however that such a use may create additional hazards because of the high loads which might be placed upon other parts of the system. It is therefore important that when used for loads greater than one person, operators have received appropriate training and have practical experience of this mode of use and associated hazards. It is especially important to guard against any possibility of high shock loads and/or damage. The Powerlock is not suitable for use with loads greater than 250kg (such loads will also exceed the SWL of most ropes).

Removing Slack

Take hold of the rope at the cut out on the top left corner of the device. Pull the rope to remove any slack. Pull the tail rope to remove the loop of rope from the top of the device.



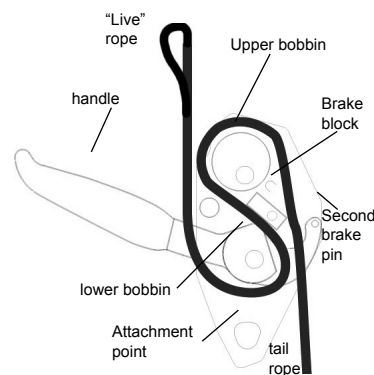
Warnings

Ensure the device is threaded correctly before use (see below). Always hold the tail rope when the device is under load. If it is necessary to let go of the tail rope, first lock off the device as shown below.

Take care not to let anything foul the operation of the handle (fingers, clothing). Attach only via the point shown – it is essential that the attachment connector passes through the holes in both side plates. Never operate the handle without holding the tail rope.

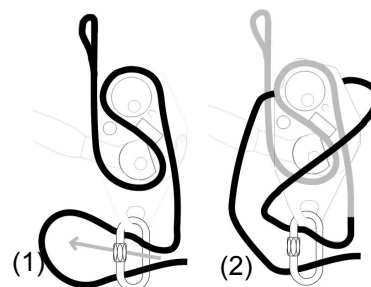
Threading the Powerlock

Hold the device so that the handle is on the left hand side and pivot the top plate open. Pass the rope under the lower bobbin and then close the top plate. Position the rope into the notch on the right of the top plate, then pivot the top plate towards the open position, whilst placing the rope into the gap between the lower bobbin and the brake block and then the upper bobbin and bollard. Pass the rope over the upper bobbin and between the second brake pin and brake block. Pivot the top plate closed. Check for correct threading by pulling on the live rope. The device should lock.



Locking off

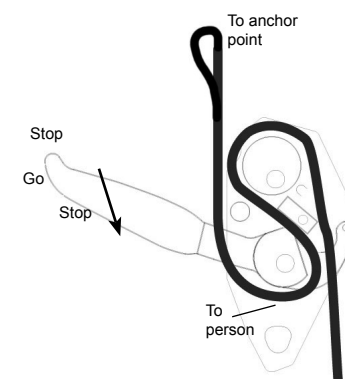
It is possible to 'lock off' the device so that the tail rope does not have to be held. This is necessary whenever the user needs to have both hands free. To lock off the Powerlock pass a loop of the tail rope through the attachment connector (1), pass over the top of the device, and position over the body as shown (2).



Descending

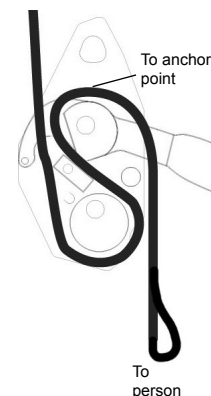
Start with the device threaded as shown. Connect the 'live' rope to the anchor point and the device to the harness. Before descending remove any slack rope from the system as shown opposite.

To descend, hold the tail rope firmly and gently pull back on the handle. As the handle is moved the rope will start to pass through the device. Further movement of the handle reduces the braking action of the lower bobbin and will increase the speed of passage of the rope until the secondary braking system comes into effect. The friction then increases, slowing the passage of the rope. Finally, as the handle is pulled even harder the rope is brought to a halt as it is pinched between the second brake pin and the brake block.



Lowering

Thread and operate the device as for descending. Connect the device to the anchor point and the live rope to the person to be lowered. Before lowering remove any slack rope from the system.



Ascending

It is possible to ascend using the device with an appropriate rope grab and foot-loop. To ascend stand on the foot-loop whilst pulling in slack. Hold the tail rope at all times whilst carrying out this operation.