



## PowerQuick Powered Ascender

### SPECIFICATIONS

The PowerQuick Powered Ascender is a powered, yet lightweight personal lifting device that scales vertical surfaces quickly, safely and inexpensively using standard climbing equipment.

#### PQ 500-AX For use in Hazardous Environments

<b>EC Declaration of Conformity</b>	
<b>Conforming Equipment</b>	PowerQuick Model 500-1 EX Powered Personal Ascender for technical rope access, work positioning and rescue operations. Suitable for use in Hazardous locations.  <div style="display: flex; align-items: center; justify-content: center;"> <span>II 3 G T3 EEx nA nL Ta = 0°C to 40°C</span> </div>
<b>Manufactured by</b>	PowerQuick, Inc. 160 Hwy 50 E , Dayton , NV89706
We declare that the equipment complies with the following directives including the latest amendments: - <ul style="list-style-type: none"> <li>98/37/EC Machinery Safety</li> <li>94/9/EC ATEX</li> <li>2004/108/EC Electromagnetic Compatibility</li> </ul> Provided it is used and maintained by competent personnel as part of the applications for which it is intended, in accordance with the relevant standards and the manufacturers instructions.	
<b>Harmonized Standards</b>	EN 1005-1; EN 1005-2; EN13463-1; EN13463-5; EN 60079-15
<b>Standards and Technical Specifications</b>	EN ISO 12100-1; EN ISO 12100-2; EN 60079-0; EN 60529; IEC 61951-2; UL 248-8
<b>Notification Body holding the Technical File</b>	TRL Compliance Moss View, Nipe Lane, Up Holland, West Lancashire WN8 9PY
<b>Authorised Representative</b>	PowerQuick UK The Bull Pen Castle Square Bletchingley RH1 4DL
<b>Date of Issue</b>	17 April 2008

European and IEC Classification	An area in which an explosive mixture is not likely to occur in normal operation and if it occurs it will exist only for a short time.	North American Classification
Zone 2 (gases, Particles)		Class I Division 2 (gases, particles)

Equipment Group 2 - is defined as equipment that is intended for use in areas where an explosive atmosphere is likely to occur in normal operation and must ensure a high level of protection.

- Ex - Explosion proof in accordance with ATEX.
- II - Equipment group: II surface industries.
- 2 - Category 2 equipment (suitable for use in Zone 1)
- G - Gas: Suitable for atmospheres containing gas.
- E - European certificate in accordance with harmonised standards.
- Ex - Explosion-proof electrical equipment.
- d - Type of protection is 'Flameproof enclosure'.
- II - Gas Group II - surface industries
- B - Gas sub group B

T4 - Temperature class T4 (135 degrees centigrade surface temperature).

The PQ 500-AX version has all the features of the PQ 500 with the exception of the remote control. The remote control cannot be used in hazardous atmospheres.

We are very pleased to be able to add this version to our product line as it will be very valuable for many on-and off shore oil rig customers as well as grain elevators applications.

- **Operational Features**

- Compatible with standard climbing gear (Must be used in accordance with manufacturers instructions meet applicable requirements and regulations)
- Use with 1/2-in (12.7mm) static (low stretch) kernmantle rope (recommend PowerQuick, [New England](#), Blue Water, PMI brand ropes) (Note: Care and maintenance of rope required per manufacturer's instructions.)
- Weight: 28 pounds (13 kg)
- Lifting capacity: 500 pounds/227 kg; gross load 550 lbs (250kg) includes PQ 500 and battery pack.
- Designed for use by one person, for work positioning and/or moving tools and materials
- Easily carries 2 people for rescue applications
- Lifting speed: 0.7 ft/second (.22m/sec)
- Powered descent speed: up to 1 ft (.9meter)/sec (varies with weight)
- Can be operated using remote or manual control

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- **Safety Features**

- Tested to a safety factor of 5 for structural and a factor of 2 operationally
- Temperature sensor shuts unit down in event of hot motor.
- Interlock switch on cover ensures that unit will not operate if rope handler cover is not properly closed.
- Remote control overrides local control
- Rope cannot be removed from ascender when it is under a load.
- Auto-braking in hands-off position provides for both locked-off and emergency or panic lockoff. No force need be applied for panic lockoff.
- Emergency Stop Button: cuts power to unit
- Load limiter: Prevents lifting of load in excess of 900 lbs (409 kg).
- Auto-braking in hands-off position provides for emergency stop.
- Static Load/Stationary holding capacity: 1,100 lbs (500kg)
- Dynamic load capacity: 2,500 lbs (1,136 kg)
- Forward reverse power control
- Palm Interlock must be engaged to start unit
- Low voltage sensor detects low battery voltage and shuts unit down. PQ 500 level is 26 VDC,
- No pinch points
- No sharp edges, points, etc., capable of puncturing or cutting the skin
- Accessible surface temperature do not exceed 65° C
- Rotating parts protection
- No shock hazard

Deleted: <#>Meets requirements for Class I, Div. 2, Groups A-D in accordance with CAN/CSA-C22.2 Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations ¶  
<#>Battery version EP (electrically protected) incorporates a sand filled fuse for use in potentially explosive environments.¶  
<#>Battery cable EP (electrically protected) uses a locking mechanism to lock cable to battery and PQ 500 for use in a potentially explosive environment.¶

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- **Use restrictions**



- Not to be used after shock load of in excess of 1,200 lbs (544kg).
- Not to be used after drop greater than 4 ft (1.2meters) onto hard surface (Must undergo inspection and recertification after these events)

- **Environmental conditions**

- Operating Temperature Range: 32° F to 113°F (0° C to +45° C).
- Moisture: May be used in wet weather. However; do not immerse this product in water, for example, a lake, swimming pool or water puddle. May result in serious personal injury.
- No negative affect from corrosive environments, e.g. salt water or spray. Should be cleaned after use in these environments
- Dust, sand, dirt, mud etc: .The ascender can be used in oily, or dirty conditions without affecting the performance. However; for rope safety, keep ascender clean of heavy debris. Inspect and clean rope prior to each use and periodically during use.

- **Power Supply**

- NiMH Rechargeable Battery: 36vdc, 30 amp, 360 amp minutes discharge to 25 vdc.
- Climbing Time: 500 to 600 feet (152-182m) per charge.
- Battery Pack Weight: 14 lbs.
- Designed to withstand 4-ft (1.2meters) drop on hard surface.
- Battery life: approximately 800 charge/discharge cycles (temperatures extremes can affect battery life)
- Battery is protected with an internal fuse that will disable the battery in event of a short circuit. The normal battery uses a blade type 40 amp fuse.
- The battery cable is 6 foot long with a threaded connector on either end. The cable connectors are such that it is impossible to connect the cable backwards.

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Deleted: The electrically protected (EP) version incorporates a locking collar that has a #8-32 set screw locking mechanism that locks the cable in the installed condition to preclude removal during operation in a potentially hazardous environment. This set screw is removed with a 5/64 hex key tool.

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- **Charger**

- Use to charge PowerQuick NiMH battery packs only
- Input: 115/230VAC 60/50 Hz 1.8/1.0A
- Output 36VDC/2.6A Continuous

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## Personal Safety



- Do not operate if under the age of 18. Do not operate unless YOU HAVE BEEN TRAINED by a certified trainer. Dangerous in the hands of untrained users.
- For information on PowerQuick, Inc. approved trainers contact your distributor.
- Stay alert, watch what you are doing and use common sense when operating the Power Quick Ascender. Do not use while tired or under the influence of drugs, alcohol, or medications. A moment of inattention while operating may result in serious personal injury.
- Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts.

- Use only accessories that are recommended by the manufacturer for your model. Accessories that may be suitable for one model may become hazardous when used on another. See your distributor for the approved Accessories List
- Carefully read the maintenance and certification instructions. Check for misalignment, loosening or binding of moving parts, breakage of parts, and any other condition that may effect the operation. If damaged, have the ascender serviced before using. Many accidents are caused by poorly maintained equipment.
- Do not immerse this product in water, for example, a lake, swimming pool or water puddle. May result in serious personal injury.
- Do not connect or disconnect battery cable from either the PQ 500 or battery in a potentially explosive environment.
- Limit climb or descend to 200 foot intervals. Allow 15 to 30 seconds for unit to cool during long climbs or descents.
- Operation with excessive loads and low battery voltage may cause clutches to overheat and smoke. It is the operator's responsibility to insure that the PQ 500 is not overloaded.
- Keep ascender clean of debris. Inspect and clean rope prior to each use and periodically during use. This is particularly important when the ascender is used in dirty environments.