



HELIX

Motorised Ascenders and Grapnel Launchers



Helix Operations provide a complete capability for vertical access and rescue in mountain, maritime and urban environments.

We are based in the mountains of North Wales and have a heritage of over 40 years supplying tactical climbing solutions to end users. Over that time, we have worked with and become a main supplier of tactical climbing equipment to the UK MOD and have provided equipment, systems and training to many other nations.

The capability offered by our close relationship with DMM has been extended by partnering with manufacturers such as CTOMS, Henriksen, HQH, Protection, Rock Exotica, Highnovate and Cadex Defence to offer complete solutions for working at height in a tactical environment.

ICAGE: U1AG3
Company Number: 10316654
DUNS: 221986629
NCAGE: U1YF9



To be the leading worldwide provider of comprehensive vertical access, rescue and mobility capabilities to the tactical operator in the mountain, urban and maritime environments.

To support vertical access operations for the tactical operator with a range of services including:

- Advice
- Equipment
- Training
- Servicing



Key Brands

REBS®

REBS supply many critical components of any maritime or urban access system. Rapid Entry Boarding Systems - the best maritime boarding equipment that also works well for urban operations. They supply the best grapnel launchers and the lightest carbon ladder systems on the market.



HQH SYSTEM

Robust carbon ladder systems - these are the go to ladders if TLC is in short supply. The FIX-LITE being the new ladder of choice for dismantled troops in urban environments with the ATV carbon bridge ladder demonstrating how tough carbon can be.



ATLAS DEVICES

The best motorised ascenders on the market with a real-life combination of versatility, ruggedness and battery life that is hard to beat.

CTOMS™

CTOMS was founded on the concept of evolving tactical medicine and expanded to encompass aspects of remote and improvised rescue. A key part of this evolution was the development of the TRACE™ system as micro rope system with a comprehensive capability that includes access, egress, hauling and high-lining. CTOMS are our longest standing partner and Helix are one of the very few authorised providers of training for the TRACE™ system.

LIBERVIT

LIBERVIT are an French company with over 25 years in design and manufacture of hydraulic tools and manual equipment for the industry, the special forces and the rescuers.



The DMM International group specialise in the manufacture of equipment and systems for operating safely at height. They have proudly manufactured all their hardware in the United Kingdom since 1981 and over that time they have established a reputation for innovation and quality.

PROTECTION

As part of the same group of companies Helix Operations rely heavily on DMM to design, prototype and manufacture much of the core product in our range.

An impressive micro rope system that is very intuitive to use, fast to deploy and incredibly robust. The system that came top in a recent egress system tender and impressed with its ability to meet the criteria of EN341 with a 160kg load.



Innovative rescue equipment designed and made in their factory in the USA. The range includes products that complement the DMM range of hardware - the Aztec pulley system, the Omni pulleys and the Arizona Vortex are all unique products that we are proud to offer.



Forward thinking equipment and systems designed by former operators to address gaps in current vertical assault capability. The QRAB is a class leading descender for medium diameter ropes that allows fast disengagement whilst the RAFA portable anchor gives security where normal anchors are not viable.



Precision engineering from the USA that specialises in high end rifle systems, but also produce the best small ledge hooks on the market.

Marlow

Designed and manufactured in the United Kingdom with a reputation for outstanding quality and a long history of providing specialist rope solutions to military and rescue units. Marlow Ropes have a proven record as a key manufacturer of quality ropes for access, rescue and specialist products for use in helicopter operations.

Motorised Ascenders



Atlas Powered Ascender APA-2

The Atlas APA-2 Powered Ascender is a small and compact rope ascender, optimized around single person capacity, which can lift up to 350 lbs / 158 kg directly, and handles ropes from 6.5-9 mm in diameter. It can operate at maritime depth (submersible to 10m) and has a hot-swappable battery.

In comparison to the APA-4 and APA-5, the APA-2 is the low-profile option in the Atlas motorised ascender range. It is designed to meet a uniquely broad range of operational, environmental, and technical performance challenges that military operators experience, delivering reliable performance in a critically minimal footprint for size, weight, and employability ruggedization.



Atlas Powered Ascender APA-2

Typical reach height is 427m (1400ft) with the High Capacity Battery with a maximum direct lift capacity of 158kg/350lbs.

The Low Profile Battery gives an ascent distant per charge for a single user of 90+m/295ft @ 113kg/250lbs.

Safety features include an ergonomic safety lock for operation, emergency mechanical descent possible without battery and a non-volatile battery if punctured by ballistic.



The batteries can be hot swapped both in and out of water and are non-volatile if punctured by ballistics.

Compatible with 6.5-9mm static Technora kernmantle toughline rope.

Features a 2:1 hauling clip in point.

Submergence rating allows connect/disconnect at depth.

Atlas Powered Ascender APA-4

The APA-4 is a rugged, battery operated motorised ascender which integrates into current SOPs using a broad spectrum of standard climbing equipment.

Whether operating at maritime depth, in a desert dust storm, or on the side of a remote cliff, the APA-4 brings new capability on a powerful, lightweight package to military and tactical operations. It is a multi-mission device that hauls heavy personnel loads, extends stamina, and reduces mission exposure.

The standard APA-4 lifts up to 160kg / 350lbs directly and an integrated 2:1 attachment allows users to build mechanical advantage systems quickly and easily to lift loads up to 700 lbs. In addition to this there is also a heavy duty version of the APA-4 available that will haul 250kg / 550lbs directly whilst the system can be overridden in an emergency with a manual brake release that allows descent with no battery. Ascent and descent speed is easy to control and allows speeds of up to 66m per minute.



Atlas Powered Ascender APA-4

The device handles ropes from 6-11mm in diameter without changing the drive system and is kind to ropes in applying power so that sheaths are not stripped. The unit works on a wide variety of ropes from 6mm skinny Aramid lines to standard low stretch 11mm nylon and polyester ropes.

Operating time is maximised with batteries that utilise the latest technology for both charging and discharge - a standard 3kg battery gives 210m / 700ft of ascent with a 115kg / 250kg load and the high capacity battery gives 420m / 1400ft of ascent on a single charge. The batteries can be hot swapped both in and out of water. The batteries are non-volatile if punctured by ballistics. The batteries are compatible with the other motorised ascender in the Atlas range - the APA-5

The whole unit has been certified for operational use by the US DOD.

The Atlas APA-4 can be built up into bespoke packages with accessories such as a flotation jacket, wireless remote, hardcase, standard batteries and extended capacity batteries.



The batteries can be hot swapped both in and out of water. The batteries are non-volatile if punctured by ballistics. The batteries are compatible with the other motorised ascender in the Atlas range - the APA-5.

The APA-4 unit has been certified for operational use by the US DOD.

The Atlas APA-4 can be built up into bespoke packages with accessories such as a flotation jacket, wireless remote, hardcase, standard batteries and extended capacity batteries.

Atlas Powered Ascender APA-5

The APA-5 is a lightweight, submersible, battery powered rope ascender that can haul loads of up to 270kg/600lbs on ropes ranging from 6mm to 11mm.

Achieving a tactical advantage, hauling kit, or rescuing casualties often requires the ascent of men and equipment over steep obstacles in mountainous, urban and maritime environments. This is a highly technical and physically exhausting task that impacts mission effectiveness. The APA-5 minimises the burden of vertical obstacles.

The APA-5 Wireless Remote is an encrypted unique paired, depth-rated remote module with two customisable interface options. The interface mirrors the interface controls of the APA-5 ascender including full proportional control across all speed regimes. The wireless remote control expands the capability of the ascender especially in advanced scenarios, such as confined space operations, where it is necessary to have control of both the load whilst negotiating obstacles at the same time. The Wireless Remote also incorporates a rapid-on-the-fly pairing capability to any APA-5 system that establishes a unique, encrypted link.

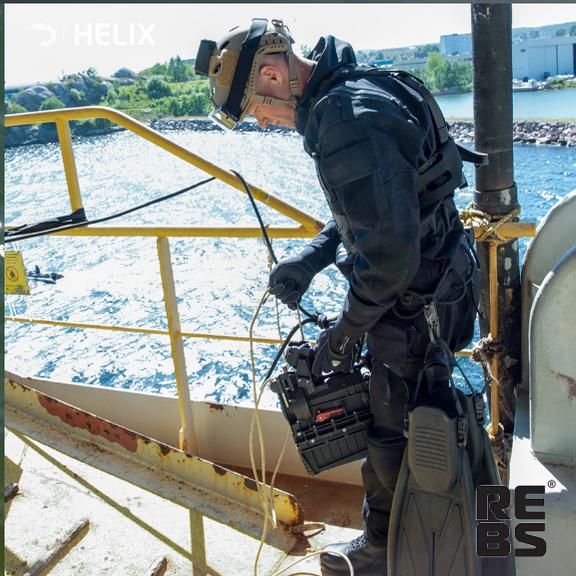


Atlas Powered Ascender APA-5

The wireless Remote allows the user to operate the APA-5 remotely during advanced access operations. For example, in situations such as hoisting into a helicopter where it is necessary to have control of both the ascender and the incoming load at the same time, the remote expands this capability.

The High Capacity Battery is an interchangeable 5.6kg depth rated battery certified by US DoD which can haul 113kg for 427m on a single charge without a 2x increase in volume or weight, over the standard battery. The battery can be quickly changed during operation, under load, and even at maritime depth. This unique capability provides an advantage by extending the performance, reducing cube volume, and distributing the pack load.

Whether operating at maritime depth, in a desert dust storm, 100' AGL in a helicopter, or live bonding transmission lines, the APA-5 is a smaller unit offering a force multiplier that effortlessly reduces time and exposure during vertical operations. Lightweight and powerful, the APA-5 lifts up to 600 lbs directly, handles ropes from 6.5-11mm in diameter, operates at maritime depth, and has a hot-swappable battery.



Atlas Powered Ascenders Comparison Chart



	Material Construction	Weight (without STD battery)	Weight (with STD battery)	Dimensions (without STD battery)	Dimensions (with STD battery)	Typical Reach Height	Max. direct lift capacity	Ascent / Descent Speed	STD Battery Weight	Rope	Operating Temperature Range	Certifications
Atlas APA-2	Aluminium	6.2kg / 13.7lbs	9.6kg / 21.3lbs	28.6 x 13.97 x 20.32cm 11.25 x 5.5 x 8in	28.6 x 24.13 x 20.32cm 11.25 x 9.5 x 8in	427m / 1400ft	158kg / 350lbs	0.66m/s 0-2.15ft/s	3.4kg / 7.6lbs	6.5-9 mm static Technora kernmantle Toughline Rope	-10° F to +120° F	<ul style="list-style-type: none"> - Meets relevant IMCA Standards for safe use of electricity underwater - Meets relevant standards for Safe Use of Energized System at Operational Maritime Depth by U.S. Navy Experimental Diving Unit - NAVSEA 9310 Certified by US DoD - US DoD Test and Evaluation Command Safety Confirmation - Certification for Operational Use - Environmental: MIL-STD 810F, MIL-STD 167
Atlas APA-4	Aluminium	7kg / 15.4lbs	10.3kg / 22.9lbs	23.8 x 12.8 x 29.6 cm 9.4 x 5.1 x 11.7 in	33.4 x 12.8 x 29.6 cm 13.2 x 5.1 x 11.7 in	427m / 1400ft	158kg / 350lbs	1.1m/s 0-3.5ft/s	3.3kg / 7.25lbs	6.5-11 mm static Technora kernmantle Toughline Rope OR Larger rope diameter capability: Optional 9-13 mm	-10° F to +120° F	<ul style="list-style-type: none"> - Meets relevant IMCA Standards for safe use of electricity underwater - Meets relevant standards for Safe Use of Energized System at Operational Maritime Depth by U.S. Navy Experimental Diving Unit - NAVSEA 9310 Certified by US DoD - US DoD Test and Evaluation Command Safety Confirmation - Certification for Operational Use - Environmental: MIL-STD 810F, MIL-STD 167
Atlas APA-5	Aluminium	6.7kg / 14.8lbs	10kg / 22.3lbs	27.2 x 12.7 x 26.7 cm 10.7 x 5 x 10.5 in	27.2 x 12.7 x 36.8 cm 10.7 x 5 x 14.5 in	427m / 1400ft	272kg / 600lbs	Variable	3.3kg / 7.25lbs	9-11mm static Technora kernmantle Toughline Rope OR Smaller rope diameter capability: Optional for 6.5-11mm	-10° F to +120° F	<ul style="list-style-type: none"> - Meets relevant IMCA Standards for safe use of electricity underwater - Meets relevant standards for Safe Use of Energized System at Operational Maritime Depth by U.S. Navy Experimental Diving Unit - NAVSEA 9310 Certified by US DoD - US DoD Test and Evaluation Command Safety Confirmation - Certification for Operational Use - Environmental: MIL-STD 810F, MIL-STD 167 - Meets ANSI Z359.4

Grapple Launchers



REBS® Compact Grapnel Launcher

The Compact Launcher enables users to access high-up entry points by launching a grapnel hook on to a permanent fixture and then ascending ropes fixed from that point. The Launcher is perfect for entering buildings, bridges, ships, platforms or cliffs as well as crossing ravines or rivers, both for military and rescue scenarios. It is a high performance pneumatic launcher that can be used for both dive and RHIB operations.

The system is powered by pressured air, the 0.35L bottle can be easily be re-filled from a normal 300 bar diving bottle. Lower pressure diving systems can also be used to charge the tank. Users can set the firing pressure on the fly depending on the height required. A compact rope container can be mounted on the barrel and fits 35m / 115ft of 8 mm rope or 16m / 53ft of rope ladder. Multiple shots can be fired from a single bottle charge. The Compact Grapnel with spring-loaded folding arms will hook into any object such as wire, fences, railings, and structural and natural features. It can be used to deploy a climbing rope, flexible ladder or a horizontal traverse line.

The Piston Kit upgrade reduces both recoil and sound levels, providing both tactical and HSE benefits. It is easy to maintain and has a long and robust service life with proper post operations care. The Compact launcher is available in several kit options. A custom made transportation and storage box makes the Compact Launcher highly transportable and user friendly.



Air pressure and reach can be adjusted on the fly to optimise performance.

Can be used with a variety of rope options from 6 to 11 mm to allow use of powered ascenders and optimise reach/security for a particular task.

35m max height with grappling hook.

Optional (highly recommended) piston kit reduces noise signature and recoil.

16m max height with rope ladder.

Compact and lightweight (4.4kg).

REBS® Compact Grapnel Launcher System Overview



Piston Kit



REBS® Compact Launcher



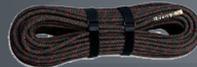
Bottle 0,35liter Aluminium



Rope/Ladder Container



REBS® Grapnel



REBS Rope Sterling 9.5mm 30m



Maintenance Kit



Fill Line Valve



Wire Ladder for Launcher



REBS Rope Ladder 16m



Compact Carry System



REBS® Standard Launcher

The Standard Launcher enables users to access high-up entry points by launching a grapnel hook on to a permanent fixture and then ascending ropes fixed from that point. The Launcher is perfect for entering buildings, bridges, ships, platforms or cliffs as well as crossing ravines or rivers, both for military and rescue scenarios. The Launcher is powered with pressurized air, which facilitates low noise operation and enables easy reloading from ordinary diving bottles. The grapnel hooks come in high strength aluminium alloy and titanium and can reach distances of 50m in height and a horizontal distance of 100 meters. A climbing ladder can be launched as high as 25m.

The power of the launcher can be preset on the fly by adjusting the pressure using the pressure gauge. The Launcher can be used several times at various heights for each tank refill. The number of shots between refills depends on the pressure used for each shot. The Launcher Piston Kit reduces both recoil and sound levels, providing both tactical and HSE benefits. It is easily installed on existing units, and is also recommended as a standard part on new deliveries.

For ease of transportation and increased comfort at very high pressures we provide a stand platform which can be bolted to any flat surface and we also provide custom interfaces for any boat or vehicle. A flexible solution is the Launcher Mount that can be used both with a flexible padded base, or the rubber pad. Allowing the Launcher to be fired safely even while rested on the ground.



Can be transported subsurface. Designed for dive operations and can be attached rigidly to a deck mount for boat deployment.

Most powerful pneumatic launcher on the market. Allows user to reach heights of 50 meters and lengths of 100 meters, powered by a 4500 psi pneumatic cylinder.

Pressurized air facilitates low noise operation.

The Launcher Piston Kit reduces both recoil and sound levels with 19-22 dB, providing both tactical and HSE benefits.

REBS® Standard Grapnel Launcher System Overview



REBS® Standard Launcher Basic Unit



Rope/Ladder Container



1L Composite bottle w/ valve



Launcher Grapnel w/ Titanium Arms



REBS Rope Sterling 9.5mm 40m



Toolkit for Launcher/ Grapnel



Fill Line Valve



External Air Bottle Use System



Transportation Box



25m Rope Ladder w/ alu steps



Launcher Mount Kit



Launcher Piston Kit



Shoot with the REBS Launcher from a ground supported position with the Launcher Mount Kit

REBS® Launchers Comparison Chart



	Colour	Max Height With Grapnel Hook	Max Distance with Grapnel Hook	Max Height with Rope Ladder	Weight (Complete Launcher)	Length	Bore	Standard Grapnel MBL (tip)	Pressure Air Bottle	Grapnel Max Height (vessel)	Grapnel Max Distance (man held)	Capacity Rope Container	Rope Size	Rope Ladder Length
REBS Compact Launcher	Black	25m / 82ft	60m / 197ft	16m / 52.5ft	4.4kg / 9.7lbs	839mm / 33in	50mm / 2.17in	420kg / 926lbs	0.35litre / 300bar	Rope 9.5mm / 0.37in: 25m / 82ft vertical	Rope 6mm / 0.24in : 60m / 196.85ft horizontal	6mm : 2 x 30m	6-11mm	16m / 52.5ft
REBS Standard Launcher	Black	30m / 98ft	100m / 328.1ft	25m / 82ft	7kg / 15.4lbs	1070mm / 42.1in	67mm / 2.6in	600kg / 1323lbs	1litre / 300 bar	Rope 9.5mm / 0.37in: 30m / 98ft vertical	Rope 6mm / 0.24in : 100m / 328ft horizontal	2 x 50m 6mm / 2 x 164ft 0.2in	6-11mm	25m / 82ft

REBS® Launchers Servicing and Training

Helix Operations can deliver on request, closed courses for up to 10 students covering the safe operation and user servicing of the REBS Compact and Standard Launcher.

This training program has been designed in conjunction with REBS and is delivered on their behalf.

We are also certified to service and maintain these launchers on REBS behalf.

The training provides a minimum of 6 contact hours and covers theoretical use (classroom based), safety procedures, user maintenance and practical charging and firing.

Location

To meet users' requirements

Duration

1 day





Connect With Us



Keep updated with Helix operations across platforms such as helixoperations.com, Tactical and Rescue Instagram accounts as well as LinkedIn. We share exciting information regarding products we manufacture ourselves as well as key products from brands we work with.

Stay informed with key innovations across all product ranges in the tactical and rescue field as well as new courses.

Our website lists our entire range, including any certifications, technical specifications, and variations of products. You can also find information regarding courses and training, including our accreditation.



Helix Operations evolved out of DMM International when it became apparent that there was a need for a specialist company to support the government, tactical, and rescue markets.

DMM International has a global reputation as a leading manufacturer of superior height safety equipment and has supplied the UK and overseas military and government institutions with equipment since 1985. Growing demand for a broad range of complete, specialist systems where all components are selected and proven to work together led to Helix being founded on this broad wealth of expertise and experience. With a remit to bring together a portfolio of the best equipment, the resulting partnerships with companies such as REBS, CTOMS, and Atlas amongst others have allowed us to offer a complete capability for vertical access and rescue across Urban, Mountain, and Maritime environments.

Helix's mission is to provide the tactical end user with the very best equipment and systems for vertical access, egress, and rescue scenarios.

We understand that first class equipment is only one part of the equation, and that without a trained operator or enabler it is unlikely to be utilised to its true capacity. That is why Helix also offers training packages alongside systems and kit. Training can be delivered through a range of options; from standard courses for the operator, maintainer, or supervisor, through to bespoke courses covering specific scenarios. These training courses are either accredited by Helix or through external validation depending on the end user requirement and course syllabus.



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