

WHERE THE ULTIMATE EQUIPMENT COMES AS STANDARD



MI-OPS Maritime Soldier Systems



At Crib Gogh we are a global leader in the design and development of mission specific soldier systems. We are passionately committed to providing leading-edge solutions and equipment that enhance the overall agility and survivability of the modern warfighter and specialist tactical operator that that give the operational step change they so desperately need. We are the only company at this time that integrates PPE standards into their systems that are independently tested by a globally recognised test house.

We design, develop, qualify and deliver advanced concept integrated soldier systems critical to meet the combat challenges of tomorrow and beyond.

We have two systems that are tested to the international safety at height standards BSEN 361/365/12277 and no ones else manufactures anything close to the operational step change that these systems offer. They meet all of the UK, EU and US safety at height standards for all urban, mountain, arctic and maritime interdiction (MI-Ops). With Ascent, the original vertical assault platform, Vault the new SF operation step change. All three meet the 2312 soldier architecture with unique scalability and multi mission profiles.

We are the only company that currently has all of the Torso Sub-Systems (TSS) in their portfolio completely Velcro (hook and loop) free. We invented a completely new buckle system that allows all of the CG TSS vests scale up to a number of configurations making each of these unique systems multi-mission capable.

Maritime Interdiction Operations can and are often extremely hazardous, having to contend with the threat at hand as well as the unpredictable environment of the sea. This is where the harness system comes into its element for boarding high sided container ships with purpose designed anchor points for fifi hooks, and or powered ascenders.

We developed a unique ceramic fronted floating armour that adds to the Newton's buoyancy of the system. This allows the Maritime operative to swim without the need for an LPU. It also allows you to enter the water and come up with a weapon brought to bear. Something that cannot be done when wearing an LPU (life preserver unit). These plates can be tailored up to Level IV with some special measures if required. The ability to swim in VAULT is also unique as you get full rotator cuff movement maximising the amount effort spent whilst in the water. It was noted on recent trials that tactical systems used with external harnesses consumed more effort whilst getting to the objective than both VAULT and Ascent did.

All of the Crib Gogh Torso Sub Systems are fully codified with NATO Stock Numbers:

We are fully certified to STANAG 2895



1. Scalability

The Crib Gogh TSS platforms are the only systems that come with a genuine scalability that is not only multifunctional and multi-mission profile, but they have no hook or loop in the systems. They all utilise our unique and patented buckle systems that not only enhance mobility and movement, they also make scaling up or down simplistic and fast. As protection is becoming more and more crucial and mission complexity increasing, the physical demands on the soldier are ever expanding. The Ascent Maritime Interdiction Operations (MI-OPS) is complimented and matched by the Revision Caiman scalable helmet boasting a unique operational step changes that make the Ascent MI platform a true step change when faced with maritime threats.

Mission specific needs require having load carriage that integrates seamlessly with the system and options that are tailored to the unique requirements of Specialist Cadre's. Ascent MI takes these operational factors in to account and becomes a risk to life solution that increases survivability and the lethality of the dismount in the execution of their duties.

2. Weight Distribution

Crib Gogh have worked with the Royal College of Physicians and have developed what is regarded as one of the best weight distribution systems (WDS) in service at this time. Unique in its features it not only works with the muscular-skeletal chassis, it also enhances air flow and cooling, gives higher levels of comfort and increases the survivability of the dismount. With high trauma reduction properties that were tested by both Her Britannic Majesty's Defence Scientific and Technology Laboratories and Helston Forensic Laboratories stating that the WDS increases the survivability of the wearer by 70% over the next best vest in NATO.

3. Reducing the Burdens

All of our TSS systems through the innovative design and the input of our working partners has led to the increase in survivability, a significant reduction in the thermal burden and in turn reducing the cognitive burden. This all makes the user, use less energy when operational increasing their operational awareness for longer periods.

4 The Threat

The threats facing tier one operational units seems to change almost daily with asymmetrical combat evolving at an incredible rate. Our MI-Ops capability meets a number of these threats that gives the user unique step changes in the execution of their duties. Vertical Assault from mountain warfare to high rise oil platforms and piracy has huge inherent risks for the troops that train for this operational theatre of combat.

The cost to train these unique and specialist troops is immense and the time to master all of the associated skill sets needed to qualify is significant. Each one of these unique troops is a capital investment by their respective governments and maximising their survivability is both a key and legal requirement to maximise in this unique investment.



5 Technical Knowledge

Crib Gogh was the first company to utilise trauma mitigation as standard in a TSS capability. We were the first to have a completely integrated system in 2009 with the Spartan TSS system. This allowed a rucksack to encapsulate the rear plate protection in to the rucksack design that gave the load carriage seamless integration. Our working partners, The Royal College of Physicians (RCP), The Royal Society of Science (RSOS) Her Britannic Majesty's Defence Scientific and Technology Laboratories (DSTL) Helix DMM of Wales (UK) Ltd, Revision Military HSS Systems UK Ltd and D30 (UK) Ltd have created what is deemed to be an unparalleled vertical assault capability for Urban, Mountain, Maritime and Technical Rescue that is the envy of the defence industry and a complete operational capability in a one stop shop.

6 Tactical Advantage

With all of our working partners the Ascent MI Platform offers a tactical advantage in every operational scenario where ascent or descent capability needs are required. We will provide equipment, systems and training to enable special operators and cadre's to work with speed, ease and safety when accessing objectives across a wide range of environmental terrains; mountain, urban or maritime theatres of combat.

We have been at the forefront of Combat Systems and Torso Sub Systems (TSS) capabilities development for over 10 years and have used our experience to work with units to modify and develop capable fighting systems for the tactical environment.

The entire commercial MI-Ops team have worked closely with a number of tier one units who require that special operational support and unique service that our MI-Ops Operational Capability offers.

VAULT meets all kinetic military drills and covert MI-Ops insertion needs offering 50 Newton's of buoyancy. This will allow covert insertion in waterways, up to an oil platform and various vessels in the water





VAULT

VAULT (Vertical Assault User Light Tactical) is a minimal silhouette Soldier System integrating hard and soft armour protection and a quick access designed for a multitude combat situations involving:

Maritime Interdiction Operations. MI-OPS

Boarding teams, Littoral Combat operations,

Helicopter insertion

Fast boat and powered ascenders

Working in tight spaces such as bulkheads and buildings.

For SF and FIBUA operations

Fast insertion teams requiring high mobility

Vertical Urban Assault

Airborne and Free Fall insertions

CIW teams

Jungle and Arctic warfare

All working at height scenarios, including specialist mountain cadre's

SPIE Rig applications

Rotary wing aircrew

SAR operations

The only system in the world fully tested and certified with an integrated life preserver system

The VAULT tactical vest – A combat and law enforcement protection system, designed specifically for Marine units, specialist mountain warfare cadres, Airborne and fast insertion SF situations. Built around our unique belt centric capability. The system incorporates a standalone plate system or an ICW plate with a unique and patented buckle system that allows for fast donning and doffing and is the only jumpable plate carrier that offers no hook or loop assembly. It is the only one that offers a side option for soft armour inserts to be fitted for blast protection, or the option of just a single web attachment for light fast operations.

It has a unique harness system that is built in to the construction of the vest. Building on the success of the Ascent Soldier System we went further in developing it to work with SPIE Rigs, so it is the only system in the world that has a dorsal lift capability without the need for an external harness. VAULT and Ascent are the only systems in the world where the safety at height regulations are fully met. Both are certified to full BSEN standards

VAULT removes the risks associated with wearing a harness either under or over a tactical vest, where sadly some serious tactical issues have arisen and caused serious injuries to the end user. With full external testing by SGS we completed the full BSEN: 361/365/12277. We have an adjustable centre of gravity at the front of the system with specialist and patented design at the rear of the system that will allow for death dives (running face first down a cliff face or from a helicopter face first) it will also allow you to do an inverted abseil. However when in the normal abseil position the system will not allow to accidentally invert you as systems using external harness do so with an alarming frequency.



Crib Gogh are at this time the only manufacturer of Jumpable Plate Carriers that can scale up to a full fighting belt order that snaps on with the unique buckles. This unique buckle system allows for a full belt and fighting order, or allows the belt order to be used with a yoke or a load vest. Crib Gogh was the first company to introduce combat systems with unique buckle designs and not use hook or loop in 2009 with the Spartan Soldier System.

With quick and easy adjustment it removes the laborious adjustments needed with hook and loop systems with a corset style lacing as in other design options. With a triple front ammo pocket available as an option it also offers a further extension to the system where the unique roll buckles can be added to allow a belt order to be fitted once you have safely landed at your target zone.

VAULT is designed by Crib Gogh Ltd in collaboration with trauma and spinal surgeons registered with the Royal College of Physicians (RCP). The unique features of the system design are:

Improved weight distribution with specific focus on a low operational foot print.

Improved pad design that enhances cushioning thereby reducing injury in the event of a fall or a ballistic strike to the user. Highest trauma reduction of any plate carrier available at the time of publication

Improved ventilation and wicking through the use of advanced fabrics.

Shaped fit for improved ergonomics with five sizes

Outsize measures are available to order

Designed to carry a light compliment of accessible ammo pouches.

Minimal system silhouette design to reduce the risk of being targeted and to facilitate working in tight spaces such as bulkheads and buildings.

Available in all DPM designs.

600d/1000d rip-stop Cordura.

MOLLE/PALS compatible.

Compatible with tier one; blast boxers.

Less than 10 seconds quick access and assembly – no hook and loop.

Increased survivability – Tests conducted by Helston Forensic Laboratory.

IRR compliance subject to specification.

Unique buckle system that spreads load more effectively than the current market standards and facilitates access much more rapidly for donning, doffing and system configuration.

No hook and loop failures as can occur through sand, algae, dirt, ice and water ingress.

No hook and loop performance issues such as lack of ability to expand the diaphragm when breathing heavily Optional SAP inserts for side heart lung protection, or lightweight webbed sides

Optional MOLLE belt attachments for a full belt order that scales up with the unique buckle system design, or with an added seat harness.

VAULT is the only system in the world certified to safety at height standards with a full life preserver system integrated as an operational capability





ASCENT

ASCENT was the first soldier system in the world to fully integrate a harness into an operational capability with Crib Gogh once again taking the lead with mission specific innovation and design.

Within NATO and her Allies the (AW&ML) Arctic Warfare and Mountain Leader Cadre' of Her Britannic Majesty's Royal Marines Commandos are the subject matter experts (SME's) of any beachhead and vertical assault training or development for all NATO SF and specialist tier one and two units.

We have worked with both the AW&ML Cadre' and the Ministry of Defence's DSTL (defence scientific and Technology Laboratories) to develop this new capability.

Within NATO, UK and European law all troops have to adhere to a greater level of health and safety legislation this also includes the safety at height legislation. In working through these guide lines we had to adhere to BS-EN-361 which was the relevant safety standard and ASCENT is the only system in the world that has this certification and is independently certified by SGS. It is also the only tactical vest that has an adjustable centre of gravity for vertical assault and is the only one

in the world that can carry level IV ballistic protection





The platform is based around a MOLLE belt that is designed to allow a yoke and a full complement of pouches, or a load vest to be quickly fitted to allow for basic soldiering drills. It can then be scaled up to a full operational tactical vest. With the addition of the front harness, it is then a tier one system for any asymmetrical vertical assault requirement.

There is absolutely no stress to the spine from weight carried along the back with this system. Putting weight on to the lumbar region of the spine adds to long term disc and spinal damage later on in life. None of the Crib Gogh rang, including the rucksack range, removes the weight from the spine and on to the working muscles along the back.

The system allows the user to assemble the MOLLE belt with the operational pouches required, for the needs of the mission to be completed. The front panel of the vest is MOLLE lined but it is recommended that in any vertical assault that the front of the vest remains clean and clutter free.

The system has a built in belt order capability and this benefits the user by:

- 1. When in enclosed areas (FIBUA, breaching, bulkheads, deck heads, tight crevasses etc.) a clean front will allow the natural articulation of the body to achieve difficult and tight manoeuvres. Systems with pouches on the front prove to be cumbersome and restrictive and do not allow for movement.
- 2. The belt with pouches correctly fitted will allow the user to follow the natural articulation of the lumbar region of the spine. The chest area has no natural articulation and adding pouches reduces of the ability to manoeuvre in tight spaces.
- 3. A clean front allows the harness to fit correctly.
- 4. It will reduce the inherent problems with an arrest fall at height.
- 5. It reduces the silhouette when in tight areas under fire.

Crib Gogh's unique buckle system allows the wearer to scale up in under a minute.





The ASCENT MI meets all kinetic military drills, combat swim requirements without a life preserver, allows full articulation of the rotator cuff and gives full lateral and diagonal twist with not restrictions from the vest or the harness.

The system offers 80 Newton's of Buoyancy

It was considered that the amount of positive buoyancy required should be based on EN ISO standard 12402-5, which is the 50 Newton Buoyancy Aid Standard and which is defined as the required standard that will provide buoyancy support to allow the wearer to swim and "tread water" whist awaiting rescue or recovery. Ascent providing 80 Newton's allowing the wearer to have 18KG of equipment whilst in the water (this includes the system weight weapons and ammunition).

This will allow covert insertion in waterways, up to an oil platform and various vessels in the water.





Operational Support Equipment for Maritime Interdiction

The following core competencies are:

Maritime Operations Rescue and Casualty Evacuation Operational Resupply Egress and Descent Scaling Shafts

Casualty Evacuation

A full range of systems that allow casualties to be extracted from high urban positions from micro systems, that allow fire teams to either lower or raise personnel using full or twin line systems for assisted vertical or horizontal lifts in confined spaces. Systems that also offer multi-operational solutions.

Casualty Evacuation

Equipment and systems to facilitate all sizes of team to evacuate injured personnel across steep and rough water rescue. Comprehensive systems from micro pulley/haul/lower systems to larger company level packs that allow complex 3 dimensional manoeuvres.

Operational Resupply

A comprehensive range from micro systems to allow efficient and fast resupply to larger systems to haul mission specific needs in longer term operations.

Egress and Descent

Ascent allows operators to descend into position or make an emergency egress. The systems can be prerigged with both descender and rope protector for fast deployment and can be converted easily into ascent systems.

Scaling Lift Shafts

Special grab systems allow ascent and descent insertions within the oil platform shafts and lift shafts, highlighting a need when accessing an area that is exposed to IED threats.

Traversing Gaps on a Platform

The ability to cross between buildings or get over blown out floors with ladder systems that can be used as a bridge or with hi-line and Tyrolean rope systems.

Accessing low entry points

The multiple solutions for low level access allow operators the ability to be very flexible in how to access a position; assault ladders, hanging ladders that can reach up to 12m, flexible ladders placed by poles and hook and climb systems with integrated pulley/haul systems. Plus the good, old climbing of external features such as drainpipe.



RATIS – Life Preserver

The driving concept behind the RATIS design was to make a tactical life preserver (LPU) that would be nearly imperceptible to operators in everyday use, but when deployed in a maritime emergency, would provide 40lbs of buoyancy (178 Newton's) to float and self-right operators and their equipment.

Designed for MI-Ops operatives that have to survive and fight in the water whether littoral waters or blue water operations. Many existing tactical LPUs are inflatable so that a small package can provide big buoyancy by releasing compressed gas into an inflatable chamber. But the compressed gas cylinders are heavy and bulky, and the packed-down inflatable chambers are often bulky and uncomfortable to wear.

To make an inflatable tactical LPU imperceptible, the Mustang design team and engineers redefined its traditional cylinder location, introduced a novel packing method, and integrated ultra-lightweight film technology for the inflatable chamber. The result was the RATIS: an LPU that is not only lighter and smaller than any

self-righting collar LPU on the market, but one that is also pliable and easily forms to the tactical vest

systems that Crib Gogh offer to meet an operational step change in Maritime Interdiction.



Sentinel™ Series Tactical Operations Dry Suit

Mustang SentinelTM Series Tactical Operations Dry Suit is a waterproof and breathable constant wear dry suit ideal for users engaged in potentially hostile military and law enforcement maritime operations which require immersed hypothermia protection that won't hinder the primary mission objectives. The SentinelTM Series Tactical Operations Dry Suit was specifically designed with feedback from Naval Special Warfare, select US federal tactical units and state & local police SWAT teams. The result is a durable, lighter and better fitting dry suit with features found on industry leading combat and tactical uniforms.

SentinelTM Series Tactical Operations Dry Suit has three different variants to meet different operational needs:

MSD 674 - Military grade BD6.5 GORE-TEX® waterproof and breathable dry suit fabric

MSD 676 - Military grade GORE-TEX® waterproof and breathable dry suit fabric

MSD 678 - Ultra-Lightweight Special Operations Dry Suit

Closed Comfort System (CCMTM) Adjustable Neck Seal: Allows the user to easily vent the suit reducing the thermal burden but quickly close the neck seal with one hand to make it watertight Padding: Elbow and Knee: Flexible molded foam, adhered to the inside of the elbow reinforcement fabric.



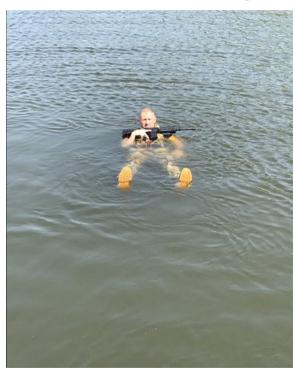




Littoral Military Manoeuvres (LMM)

The access systems and equipment available within the full Ascent range supports vessel boarding's and dive operations with the tools needed to board all types of ships and marine structures. Once on board the same kit allows operators to climb and manoeuvre to inspect containers and to access confined spaces.





Crib Gogh MI-Ops systems are currently the only systems where you can jump into the water and come up fighting. You get full target acquisition that a life preserver does not allow, it lets you change direction and angel in the water that no other systems offer including the under arm floatation devices





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