

HELIX

**Triple E / Helix Operations Partnership:
Tactical Training Facilities**

Triple E Ltd





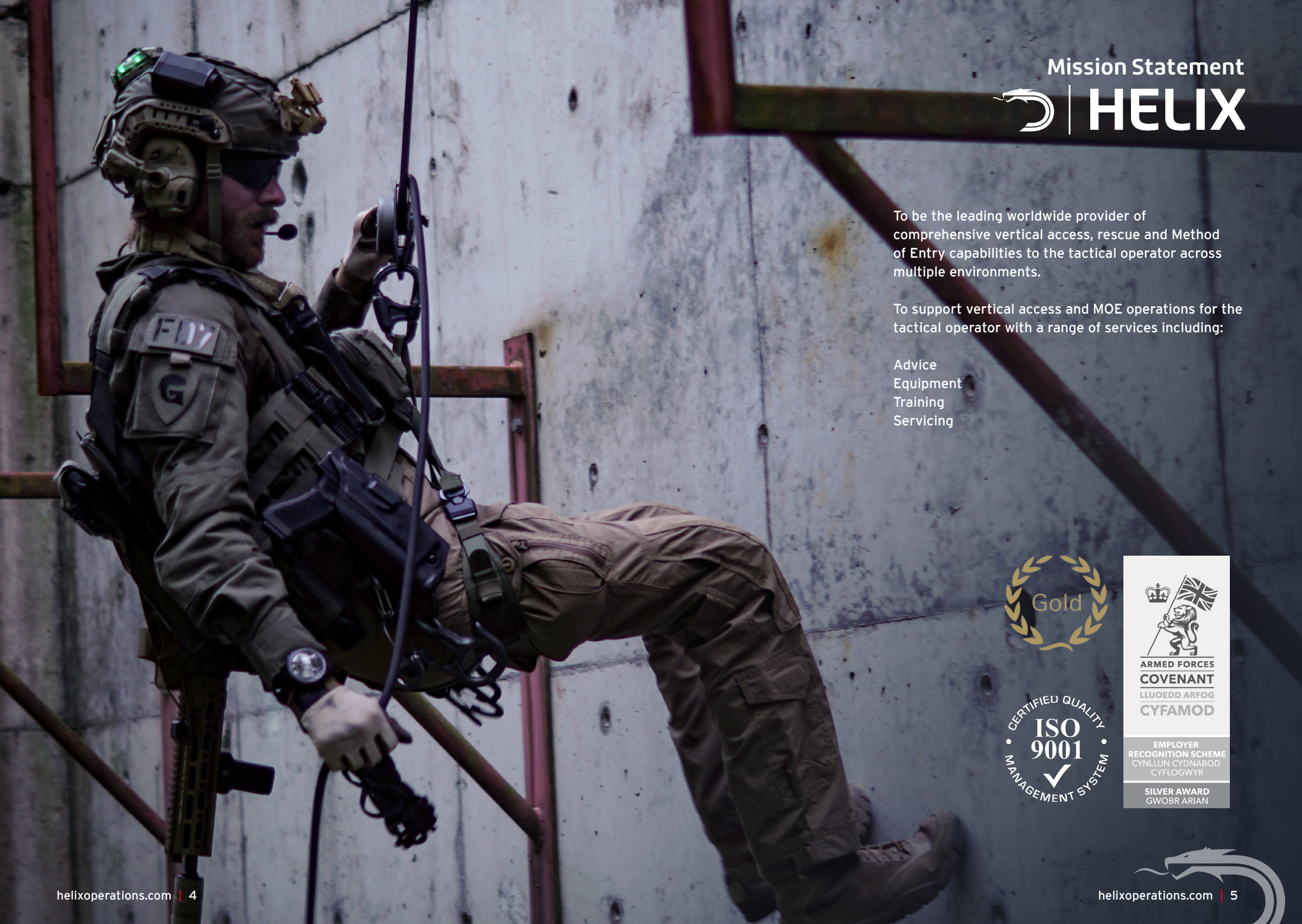
Helix Operations provide a complete vertical access, egress, rescue and MOE capability for urban environments.

We 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 currently hold multiple contracts to provide both vertical access and MOE capability.

We have also provided equipment, systems, and training to many other nations.

The capability offered by our close relationship with our sister company, DMM, who manufacture work at height equipment has been extended by partnering with manufacturers such as Swedish Entry Tools, Libervit, Triple E, 4GD and HQH, to offer complete solutions for working at height and breaching in a tactical environment.

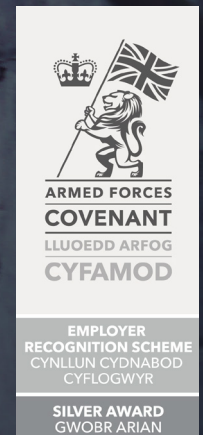
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Company Number: 10316654
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To be the leading worldwide provider of comprehensive vertical access, rescue and Method of Entry capabilities to the tactical operator across multiple environments.

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

- Advice
- Equipment
- Training
- Servicing



Key Brands

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.



Established in 2016, 4GD's mission is to blend contemporary military experience with the best technology available to deliver the highest quality training experience to soldiers. As a company we are ruthlessly focused on delivering training capabilities that improve the performance of troops on operations.

Triple E Ltd



Triple E have been designing, manufacturing and installing the most rugged, reliable and silent entertainment engineering solutions since 1984. Their solutions carry into the tactical market by providing clients with bespoke training facilities, modernised training structures in line with modern urban access needs.



Tactical Training Solutions have over 20 years' experience in steel fabrication work to an incredibly high standard, specific to defence training. Their current training site is continuously being developed, to ensure class leading facilities for government agencies.



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.



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.

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.

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.

PROTECTION

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.

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.



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.

Triple E / Helix Operations Partnership: Tactical Training Facilities

Helix Operations and Triple E have a long-established relationship that began with a simple conversation, which then grew into a full partnership. The partnership was formed with a view to developing new ways to provide clients with bespoke training facilities, and to modernise training structures in line with modern urban access needs. To give operators the ability to adapt and train, to overcome issues encountered within ever-changing urban environments and cityscapes, became the aim of the project.

The overall concept of the Helix / Triple E relationship is to give end-users the ability to build their 'Blue Sky' facility, in a way that could replicate operational requirements, and to have the arena to enhance basic skills, along with the adaptability to plan and train for pre-planned operations. Helix Operations are the Tactical vertical access, rescue and working at height training provider to specialist operators (both military and police). Due to holding multiple contracts with Tier 1 organisations, we have been privileged to gain a full insight into the needs of the modern-day operator. Through conversation and consultation, it became apparent that despite the experience and expertise of both Helix Operations and Triple-E, to achieve the builds that we were being asked to provide, we now needed to draw on our well-established relationships with other, key partners to provide a full capability.

With Helix now in collaboration with other key, high quality training and capability manufacturers, we feel that we can now create the perfect storm. Introducing TTS for all steel 'modular' fabrications, along with Libervit (breaching capability) and 4GD (CQB and Performance Monitoring), the synergy now exists to provide to any organisation operating across Urban, Maritime and Mountain environments, in a completely modular sense.

All of the Helix facilities have the ability to be enhanced and increased in size as budget allows, to have the ability to bolt on more modules as required, and to move CQB arrangements at will, giving operators complete control of their training needs. To completely strip and re-build a facility (or indeed move it completely) is perfectly manageable.

We hope that you enjoy reading through the possibilities that this brochure covers in brief, although when it comes to real discussion and consultation - we are more than happy to travel to meet you and discuss your specific needs in person. Welcome to the future of operational training.



Blue Sky Training Facilities

Based on conversation and consultation with Tier 1 organisations and specialist police units, Helix Operations has put together a list of requests that we have been asked to achieve via consultation, on more than one occasion. Most of these organisations have been using old school training facilities, or very basic cargo container style builds. They either need to completely rebuild facilities or are looking to add new elements to enhance existing training areas.

Requests:

The ability to have a 85ft Fast Rope Egress Point with staggered lower platforms.

Helix Facilities can achieve this height. This ability is based on the a) having the correct foundations in place to ensure structural integrity, and b) by utilising the Triple-E Beem, we can build as high as required, along with staggered lower egress points to enable operators to build up skillsets, to practice at full operational height.

Urban / Maritime VA – Hook and pole option into windows, ledges, and shipping guard rails. Perfect extras to have on the structure, to be able to make it as multifunctional as possible.

Via consultation, Helix can ascertain what type of ledge / windowsill materials end-users are coming across in their native environments. Our partner TTS can add modular windowsills made up of either polished concrete, softer masonry, or wood.

Climbing wall with ability to use ice climbing tools, so that operators have the ability to train across environments.

There are a multitude of ways to incorporate an internal or external climbing wall of any angle (or adjustable angle) onto a structure. We also have access to climbing holds that have been manufactured specifically for artificial ice climbing. This is an important element to have on a training facility, especially if crossover training in collaboration between mountain and urban units.

Breaching options on the ground floor – Internal and external doors/windows and option to look at watertight door breaching.

Having a close partnership with both Libervit and SET has given Helix Facilities to have full breaching capability.

Incorporate a lift shaft from top to bottom – this would allow us to teach additional urban climbing methods or conduct more complex confined space rescues.

Triple E where recently involved in a build, that required a replication of a lift shaft. It would be possible to offer this ability within a facility design.

Build an additional complex opposite our current gantry at a lower level, with interconnecting passages. Potentially some smaller containers stacked opposite, so we can incorporate more high line rescues into our training.

A collaboration build between TTS and Triple E would be a strong route to take in terms of this capability and feature, ensuring the best of both brands to achieve a solution.

An angled apex roof. This is needed due to more modern structures being built with angles, with skylights. Can this be a consideration?

Triple E have already achieved this with a UK CSTFO unit, using Triple E Beem, along with other materials. To replicate on a scale as budget allows (either on an internal training tower, or an external build) would be achievable.

The ability to have a replication of a ship?

Helix Facilities can achieve this by utilising sheet steel on a section of a build. The railing of this section can be made to ensure the correct dimensions for correct hook use. 15 meters could easily be achieved if deemed necessary for training electric / hydraulic pole systems at full height. This would even give the ability to use magnetic climbing systems.

Storage – can we have the ability to store all the Kit and Equipment needed to carry out fast roping and abseiling.

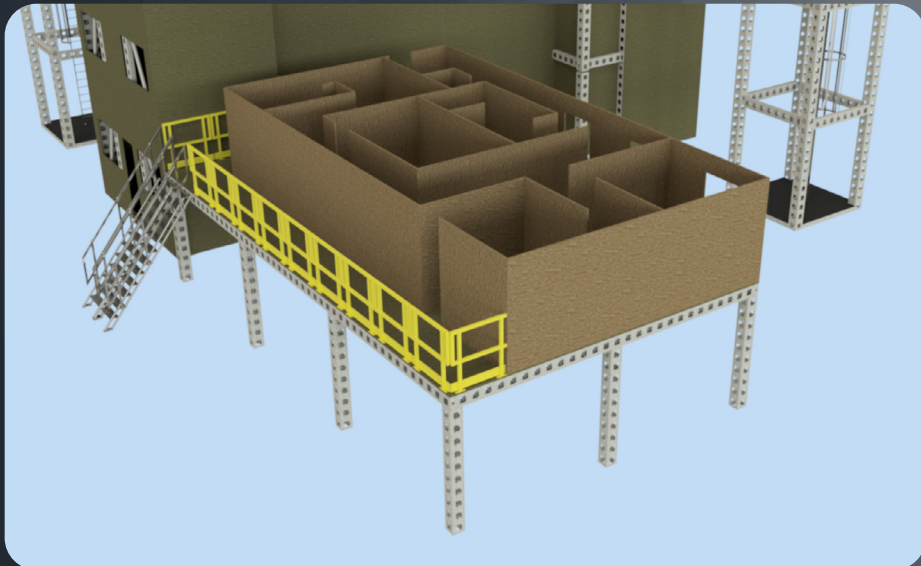
By utilising the shipping containers that the training facilities are delivered in, allows us to convert those containers into offices and stores to allow safe storage and PPE management of all equipment used on the training facility.



Triple E

Triple E - have been designing, manufacturing, and installing the most rugged, reliable, and silent engineering solutions on the market since 1984. Founded to solve a problem, they continue to provide solutions across the globe in a variety of industries, using our unique skill set and experiences gained from decades of working on high pressure, public and government facing projects.

For this particular style of build, Triple E utilise their BEEEM™ system. BEEEM™ is a product designed from the bottom up for use in demanding applications. From its inception it has been designed to give over 10 years lifespan on a dockside in wet weather or under the baking sun in a desert. A variety of surface finishes are available - you can powder coat BEEEM™ to ensure it blends in with the natural landscape surrounding it or galvanise it for maximum life span.

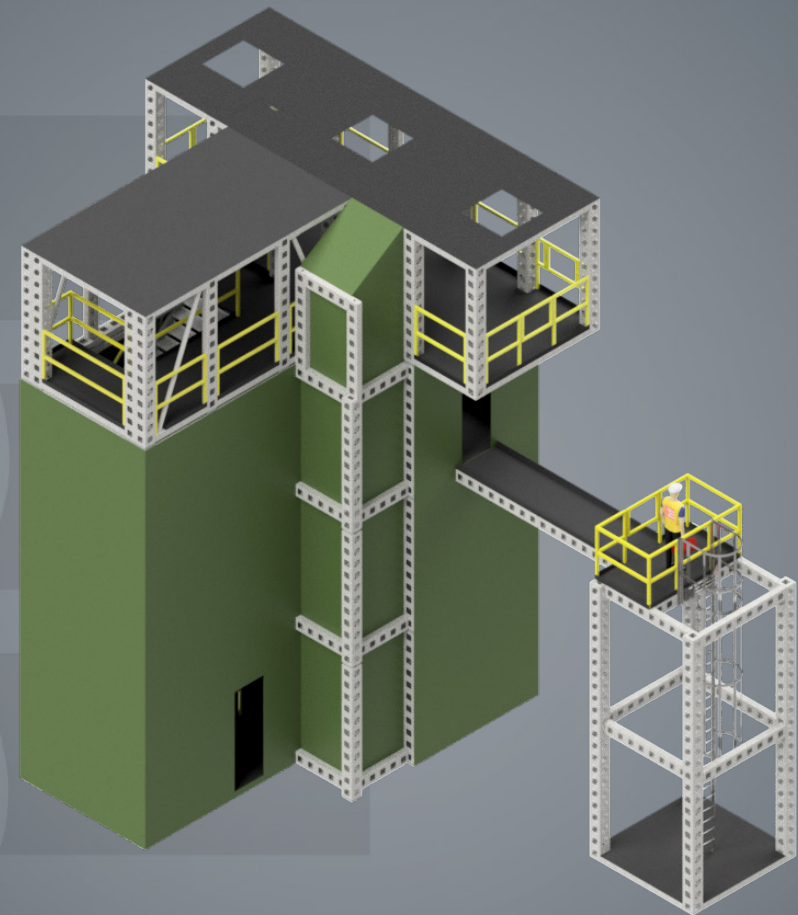
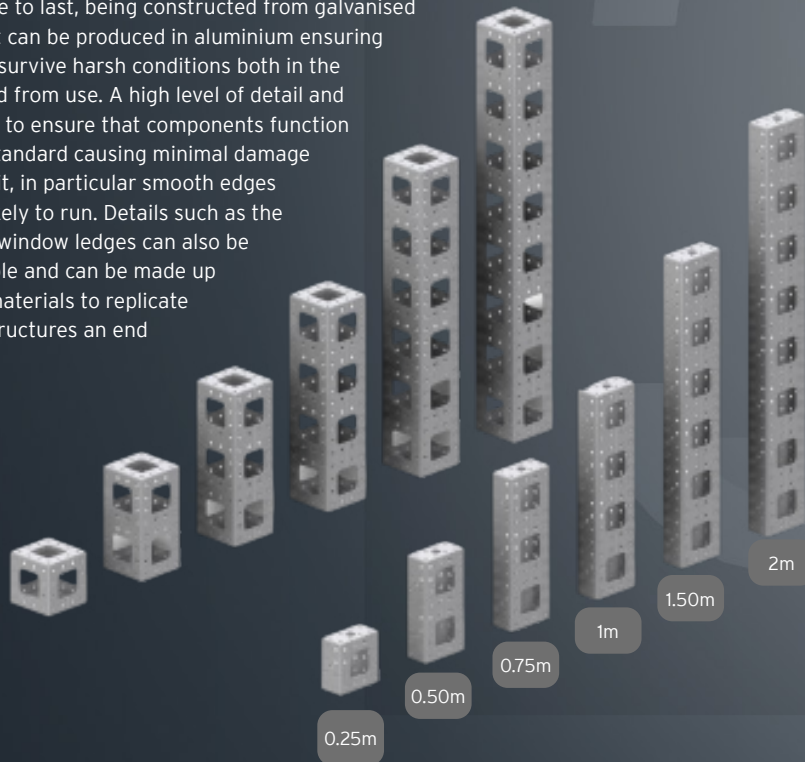


BEEEM™ Modular Structural System - How It Works

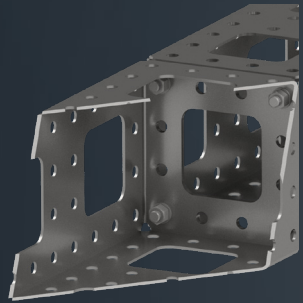
The towers are constructed of BEEEM™, a unique modular construction system with a repeating hole pattern allowing for the construction of anything from a simple platform style drill tower to a more complex multistorey training facility with the ability to integrate tactical training doors, walls and windows suitable for MOE and breaching training.

BEEEM™ and its repeating hole pattern lends itself to an adaptable facility to expand its uses and capabilities not yet commonly seen in other training facilities. Operators are then challenged with a new environment as the training scenarios and needs develop. Automation products such as hinges and hydraulics put the system and structure into motion, meaning a structure can change its functionality in a relatively short time frame, ideal for scenario and real world training.

BEEEM™ is made to last, being constructed from galvanised steel, however it can be produced in aluminium ensuring that towers will survive harsh conditions both in the environment and from use. A high level of detail and thought is given to ensure that components function to the highest standard causing minimal damage to operational kit, in particular smooth edges where rope is likely to run. Details such as the construction of window ledges can also be fully customisable and can be made up from different materials to replicate the variety of structures an end user may face.

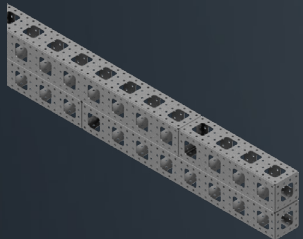


BEEEM™ Modular Structural System - How It Works



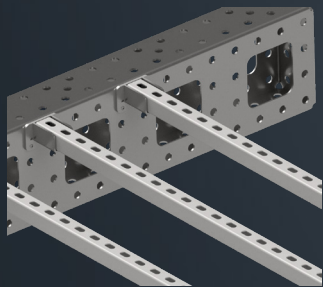
Four Bolts

With no special fittings or widgets to create a connection in any of the six axes it does not get any simpler than this. Four bolts, any positions, any face, to build whatever you need. Angled joints can be created with hinges or flat plates for adjustable or fixed angled connections. With no pins, R clips, 'eggs', or latches, the beauty is in the simplicity.



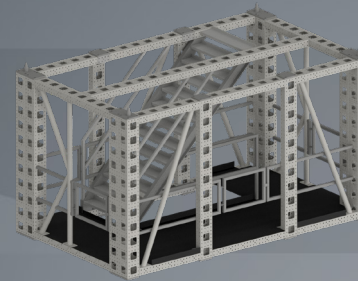
Strength

Adding plates or additional laminated layers of BEEEM™ gives you exponential strength increases enabling you to create immensely strong structures. Consult our load tables to see just what you can support.



Fast Fit for Rapid Deployment

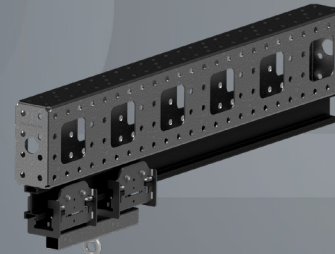
With the simple and easy four bolt connection that is quick to explain to site crew, BEEEM™ structures come together fast. Our range of fast fit accessories includes flooring, walls, handrails, lifting points and more can be rapidly installed to complete any structure.



Pre-build

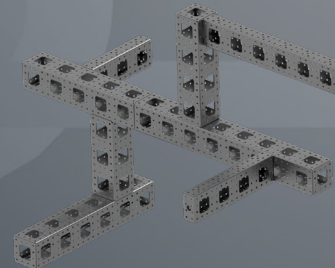
Pre-build modules for swift installation or movements around your site. Your team can work on segments of structures in controlled conditions before moving into place. Create structures that are easy to move between your locations.

With a huge range of options including lifting points, heavy duty castors, and drop-down brakes we have got the solution for your requirements.



Adaptability and Integration

Integrate additional equipment, such as winches, chain motors, flooring, lighting, and of course our industry leading tracking. Our huge range of complementary systems can enable a whole range of projects.



Re-use and Reconfigure

BEEEM™ is designed to be reused, giving you a kit of parts to be repurposed if required or reconfigured if your work requirements change over time. By eliminating wasted parts, we help to reduce the single use of products offering on going value for money, and a lower carbon footprint by reusing materials over and over.

Triple E Structural Information and Standards.

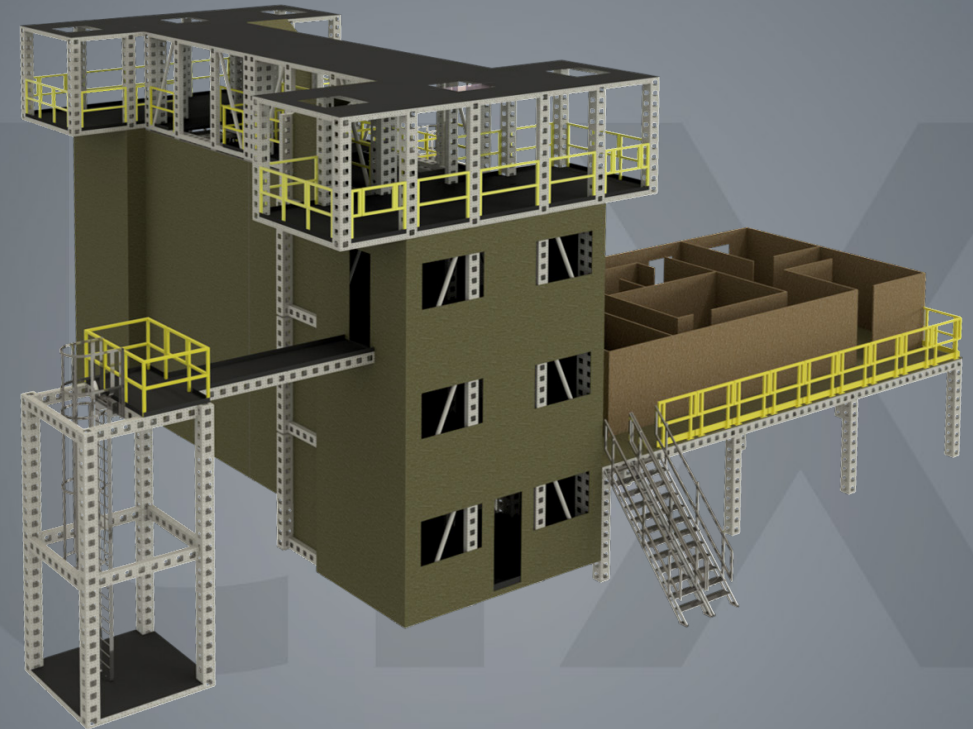
To give full peace of mind with regards to Triple E professionalism and ability, we have developed a separate document to explain in full the quality and standards adhered to throughout the build process.

When you choose to proceed with one of our bespoke modular structures, there is then a multi-step project delivery process which has been designed to ensure what we supply is exactly what has been requested. Honesty and transparency are key cornerstones in all work undertaken by Triple E, along with customer satisfaction and the creation of products and structures that are both highly functional, and aesthetically pleasing.

Stages:

- Inquiry, consultation, rough order of magnitude and progression to order
- Quotation and quotation drawings
- Site survey
- Design engineering (including) - design, structural engineering, wind management, foundations and ground works.
- Design approval
- Procurement
- Pre-build and installation
- Project handover and documentation

For full information with regards to the above points, and multi-layered EN certifications, please refer to the Triple E Structural Information and Standards Document provided by Helix Operations.



Example design. Triple E can generate imagery subject to requirements specified through consultation.

Tactical Training Solutions

Tactical Training Solutions – have over 20 years' experience in steel fabrication work to an incredibly high standard, specific to defence training. Their current training site is continuously being developed, to ensure class leading facilities for government agencies. The way in which the facilities have been designed and fabricated insure that multiple units, with multi-operational needs benefit in the best possible way. Some of the units that would benefit from using Tactical Training Solutions are:

- Special Forces
- Sniper Teams
- Firearms Units
- Dog Sections
- Close Protection Teams
- Weapon & Optics Development

All Tactical Training Solutions (TSS) are designed to fit perfectly onto (or into) the initial Triple E structure, ensuring that all structural standards are kept in place throughout the process, through to the finished build.



Outside Modular Fabrications

Windows and Balconies

Urban climbing skills can be practiced on different placements with a variety of different hooks.

Ledges can be adapted to hold different materials such as wood, metal and concrete to mimic different building edges, giving the option to use different hooks when climbing.

Windows can be used for simple climbs or more complex scenarios such as multi-pitch climbs and rescues.

Railings are also an option as hook on points, or they can be used as anchors and give the option to redirect rope lines.

Edge transitions can be practiced with abseil and egress systems. Balconies give the option to use foot placements whilst windows can make for more considered egress.



Windows with shutters



Locking Windows



Upper Railing



Balcony



Railing anchor



Window Ledge

Outside Modular Fabrications

Anchor and Climb Points

Fixed points will enable users to create anchors and use them as simple clip in points. They can also be used in combination to build into more complex rigging.

Climbing the structure externally can also be achieved with fixed points to aid climb or be used as running protection for experienced urban lead climbers.



Drain Pipes

Drain Pipes - Gap



Anchor Points

Outside Fabrications

Abseil and Fast Rope Dispatch Point

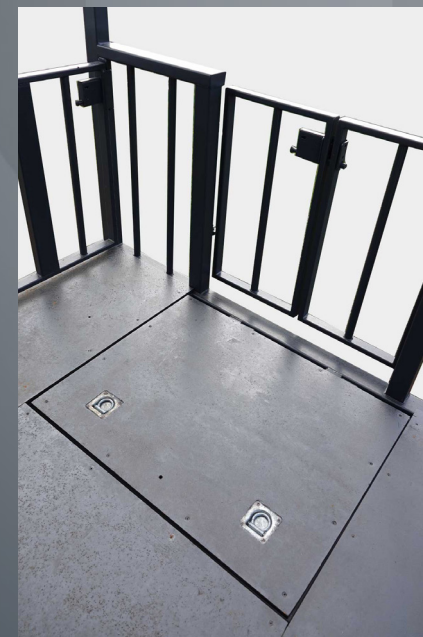
Abseil and fast rope platforms can be built into the design of the structure allowing easy rigging options for descents. They can also be designed to mimic different helicopter layouts providing solutions where there is a need for platform or gantry descents before rotary wing descents.

High anchor points will give space for ropers to get in to position as well as allow room for ropes to be rigged in a clear space. Drop hatches, gates and steps can be added to supplement the platform to suit preferences.

Platform heights can vary depending on the overall height of the structure but platforms can be added and stacked to allow for progressive abseils up to the maximum height required.



Abseil and Fast Rope Dispatch Point



Inside Modular Fabrications

Ladder Abseil - Hatch Installation

The ladders offer a comprehensive solution for standard access, working at height training, and various tactical scenarios. Ladders can be integrated with hatches to simulate real-world challenges, allow for incorporated safety lines, and be rigged to anchor systems. The inclusion of hatches opens new training dimensions. These hatches can feature rounded edges for rope protection, adding a safety element to your training exercises. Alternatively, they can come without rounded edges, presenting a more realistic challenge for operators to consider when using the hatch for egress or haulage systems.



Hatch Installation

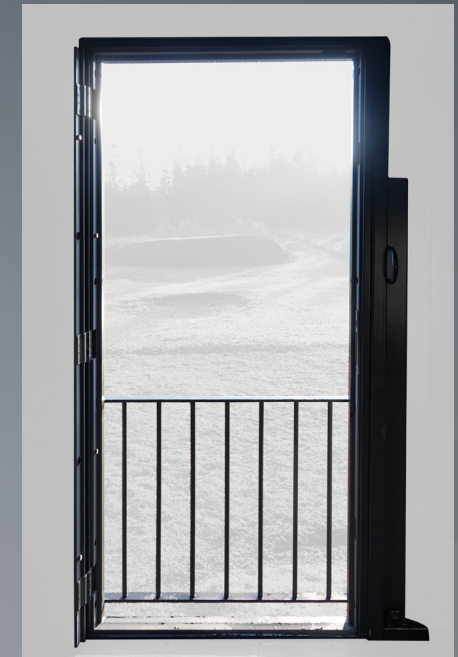
Inside Modular Fabrications

Doors, Staircases and Railings

Our doors are designed to provide realistic access points for tactical training. These doors can be secured, breached, and used in various training scenarios, adding authenticity to exercises. Staircases offer safe and efficient vertical movement within the training tower. These staircases can be used for standard access training, providing a controlled environment for honing CQB skills in ascending and descending. Internal casualty evacuation can be practiced along with confined space CQB and rescue drills. The railings serve as versatile components for a variety of anchors and hook-on points. They can be used with urban or maritime access hooks, as a part of an anchor or used for redirecting rope lines, all enhancing the range of training options available within the structure.



Doors



Door with Safety Railing



Staircases

Libervit TTDoor-S Breaching Door for MMOE

When training operators entry tactics, the TTSdoor-S helps practise all kind of manoeuvres with any tool such as battering rams, lever, and hydraulic entry tools such as DOOR RAIDER light, OP55, HR7, etc.

The training door is fixed to a wall and simulates manoeuvres you could encounter in real operations.

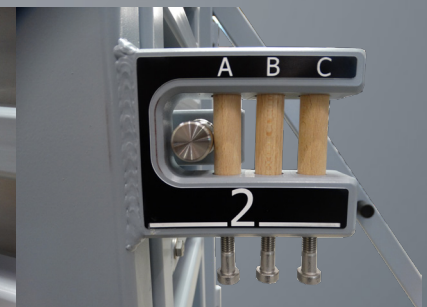
Three lock simulators with calibrated wooden fuses reproduce the resistance from single lock or multi-points lock doors.

The lock simulators can be fitted with 1 to 3 fuses to reproduce the progressive opening of a door close to reality.

The TTdoor-S has been designed to give the intervention groups the opportunity to train and practise their entry-tactics to develop the reflexes to succeed in their operations.



TT Door S Training door fixed to a wall



Libervit TTDoor Breaching Door for MMOE

When training operators to entry tactics the TTdoor helps realizing all kinds of manoeuvres with any tool such as battering rams, lever, DOOR RAIDER light, OP55, HR7, etc . Three lock simulators with calibrated wooden fuses reproduce the resistance from single locks or multi-point lock doors.

The lock simulators can be fitted with 1 to 3 fuses to reproduce the progressive opening of a door close to reality.

The TTdoor has been designed to give the intervention groups the opportunity to train and practice their entry-technique to develop the reflexes to succeed in their operations.

Removable, the TTDoor can be transported by its lifting rings and used on difference locations. An identification plate can be engraved on demand.



TTdoor training door
with base

Libervit SG/CTDOOR Breaching Door for MMOE

The configurable convertible breaching and shooting tactical training door helps to train the use of different tools and techniques to open doors.

When training operators to entry tactics the SG/CTDOOR helps realizing all kind of manoeuvres with any tool such as breaching manual tools but also hydraulic door openers or with a breaching shotgun.

At the top and bottom of the training door, two fixed hit pads (ref. TTpad) and at the location of the lock, you have the option to install a cartridge for shotgun shooting or a hit pad to train breaching training.

Three lock simulators with calibrated wooden fuses reproduce the resistance from single lock or multi-points lock doors.

The SG/CTDOOR has been designed to give the intervention groups the opportunity to train and practise their entry-tactics to develop the reflexes to succeed in their operations. Removable, the SG/CTDOOR can be transported by its lifting rings and used on different locations.

An identification plate can be engraved on demand.



SG/CTDOOR configurable convertible breaching & shooting training door





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.

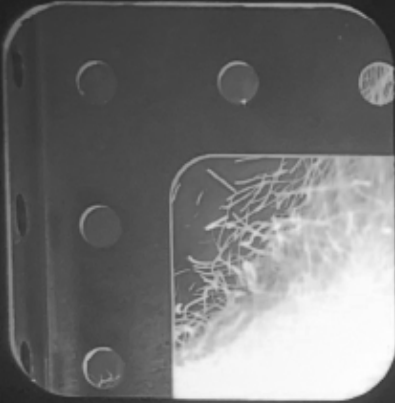


Helix Operations evolved out of DMM International when it became apparent that there was a need for a specialist company to support the government, tactical, and rescue markets.

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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