



# HELIX

HQH LADCARB FIX-LITE Ladder System



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: U1AG3

**Our Mission Statement:**

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





# HQH SYSTEM

HQH was founded in 1993 by former security service operators as a provider of access systems for counter terror units. Over the last 30 years they have fine-tuned their position as a manufacturer of tactical carbon fibre access systems under the brand Ladcarb, which are setting a new standard for functionality, toughness and versatility.

The Ladcarb carbon fibre tactical access systems and products were developed and field-tested in close cooperation with both the Czech and other European tactical units.

The Ladcarb Fix-Lite system is a very versatile and tough ladder system that can be used as a leaning ladder, hanging ladder, bridge, breaching tool, stretcher and assault platform.

There are two types of Fix-Lite ladder:

**Fix-Lite Seclad**

A totally modular system based on 2 or 3 rung sections that allows ladders of various length to be built from the sections available.

**Fix-Lite Sinlad**

Longer single section ladders for specific tasks such as breaching aircraft doors.

# HQH LadCarb FIX-LITE

The HQH LADCARB® FIX-LITE is a fully modular and scaleable carbon composite ladder system that can be used as a leaning or hanging ladder, bridge, stretcher and window breacher.

The HQH LADCARB® FIX-LITE has two versions; SECLAD refers to the modular system based around sections with two lengths, a 2 rung 70cm long section and a 3 rung 1.0m section. This offers a very versatile system with multiple possible combinations of the 2 different length sections allowing ladder lengths to be customised across a broad range of operations. The FixLite Seclad system offers virtually any length of ladder from 0.7 to 5.0m. Whereas, the FIX-LITE SINLAD is a more traditional single section assault ladder, normally supplied in longer lengths for specific tasks such as breaching doors on aircraft.

Both versions are lightweight compared to traditional aluminium ladders; a 0.7m length only weighing 0.9kg. Both versions can achieve a max reach of 5m. Designed with ergonomic round rails, and non-slip rungs both the SECLAD and SINCLAD versions can use the wide variety of HQH ladder accessories such as raptor feet, window breaking heads and hooks.



A 3-section Fix-Lite section equipped with serrated Raptor feet for vehicle assault.



Hanging ladder system giving access to a 1st floor access point.



2 rung section of the Fix-Lite Seclad carbon ladder that forms the basis of a very compact ladder system for urban operations.

# HQH LadCarb FIX-LITE SECLAD

The HQH LADCARB® FIX-LITE is a fully modular and scaleable carbon composite ladder system that can be used as a leaning or hanging ladder, bridge, stretcher, window breaker, assault platform and smoke jump ladder.

The ladder sections come in 2 different lengths; a 2 rung 70cm long section and a 3 rung 1.0m section. The standard base package consists of 4 x 1.0m sections and 2 x 0.7m sections - this allows ladders to be created in multiple lengths to match the height of the access point. Further fine tuning of the ladder can be achieved by using the 18cm long adapter that also allows use on steps, stairwells and uneven ground.

Shorter sections are an ideal solution for urban operations in confined space like ventilation ducts etc. In addition to this, these sections fit into a NATO approved parachuting container which can accommodate 3m long ladder with accessories and other gear.


The ladder packs down to a compact size for transportation and a 5m ladder can be deployed in under 2 minutes.

Characteristics include high strength, low weight, increased impact resistance and precisely adjustable lengths.

MBS	Lean	Hook	Bridge
	400kg	300kg	150kg

 Carbon Composite

 Available in Black


 1.45kg + 2.2kg

 5m Max Reach

 Bridge Ladder

 Leaning Ladder

 Hook Ladder

 Emergency Stretcher

 Halo

 Assault Platform

 Window Breaker



Capacity of up to 5m bridging ladder without the need for any additional accessories.

# HQH LadCarb FIX-LITE SECLAD

## Sets

Parameter	Standard Set 5.0m	Compact Set 3.8m
Number of Sections	2/4	6
Maximum Length	5.0m	3.8m
Total Weight	11.4kg	8.7kg
Section Length	1.0m / 0.7m	0.7m
Section Weight	1.45kg / 2.2kg	1.45kg
Width (inner/outer)	360 / 460mm	360 / 460mm
Rung Spacing	300mm	300mm
MBL Leaning Ladder	400kg	400kg
MBL Bridge	200kg	200kg
MBL Hook Ladder	300kg	300kg
MBL Rung	500kg	500kg

## Standard Set

A standard ladder set (5 meters) can be divided into one long or more shorter ladder depending on specific tactical situations. The only thing needed is a sufficient number of anti-slip endings that can be ordered as accessories. This makes this ladder a perfect tool for tactical operations requiring climbing to more different heights - e. g. attacking buses, double-deckers, trains etc. However, this configuration is just one of possible options.



## Compact Set

A compact set consists of short 2-rung sections only. The most common version is a 6 section set but other options can be ordered as well. Such a compact set will easily fit in a car trunk or can be carried on a comfortable frame backpack for long distances in a rough terrain.



# HQH LadCarb FIX-LITE SINLAD


FIX-LITE SINLAD single ladders can be made according to the specific needs resulting from pre-defined scenarios where using sectional ladders is time consuming.

The best example is attacking hijacked airplanes or hostage rescue operations. Single ladders can be connected together by Dual ladder connectors for faster entry of larger assault teams.


Custom-made lengths from 1.4 to 5.0 m by 0.3 m.



MBS	Lean	Hook	Bridge
	400kg	300kg	150kg


 Carbon Composite

 Available in Black

 5m System = 10kg

 5m Max Reach

 Bridge Ladder

 Leaning Ladder

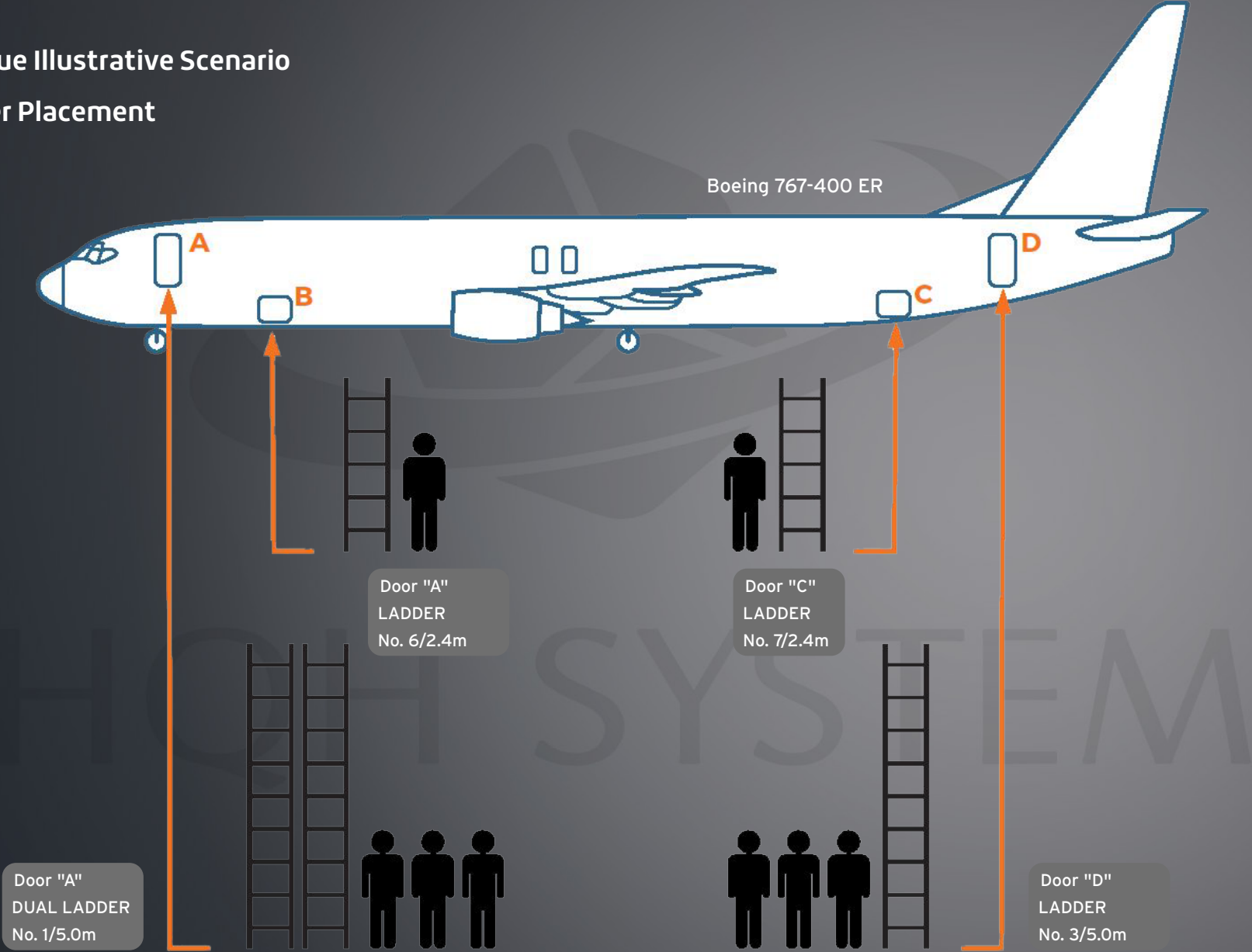
 Hook Ladder

 Assault Platform

 Window Breaker

# HQH LadCarb FIX-LITE SINLAD

Hostage Rescue Illustrative Scenario  
Assault Ladder Placement





# HQH LADCARB® FIX-LITE Leaning Applications

## Anti-Slip Endings

Universal LADCARB TOP Anti-slip Ending is an essential part of most of the ladder applications. It prevents the ladder rails from slipping and also protects the rail ends from damage.

Despite the fact that it is recommended to be on the upper part of the ladder, it can be also used on the lower part if the situation does not allow turning of the ladder. Rubber Anti-Slip Foot is easily replaceable.



Top Ending



Bottom Ending



## Stand-Off Devices

Mobile Stand-Off devices are essential parts of a hook ladder. They maintain the distance of the ladder from a wall assuring safe position of feet on the rungs.

These devices can be placed to any part of a ladder depending on the wall profile. They can be also used on the Emergency Stretcher to prevent contact of an evacuated patient with the ground.

Simple design consists of an aluminium clamp secured by a bolt with a wing nut and replaceable stand-off extenders with anti-slip rubber foot. Extenders are available at 2 different lengths. Special wing nut allows easy manipulation even with gloves and it is secured against unintentional release.



## Mobile Stand-Off Device



## Stand Off Extenders



Universal STAND-OFF EXTENDERS with an M10 male thread can be attached to Mobile Stand-Off Device clamps, to Universal Bottom Endings and to LADCARB MARINE boarding ladder.

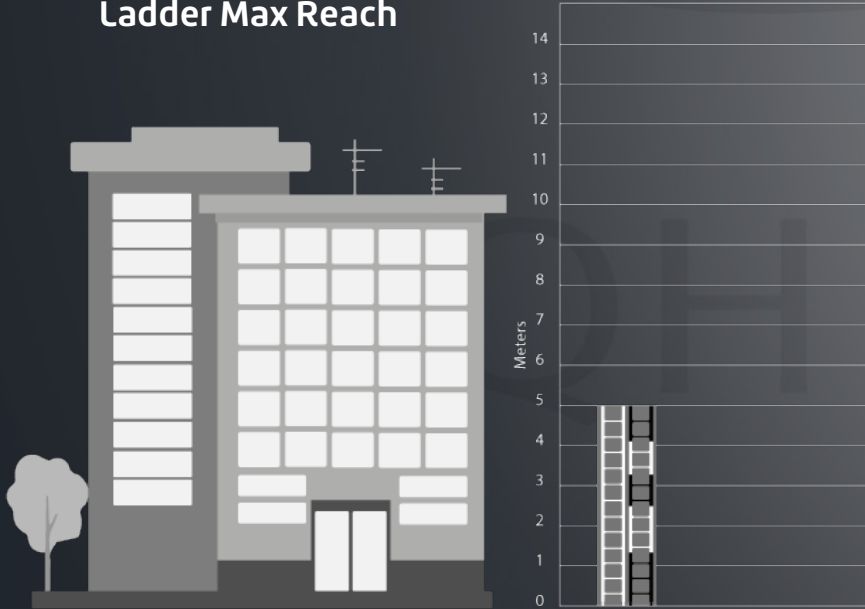
Extenders are available at 3 different lengths (100 mm, 150 mm) but the longest ones are mostly used only for MARINE boarding ladders.

Anti-slip foot made of special rubber prevents slipping and reduces noise when leaning against a wall or a ship hull.

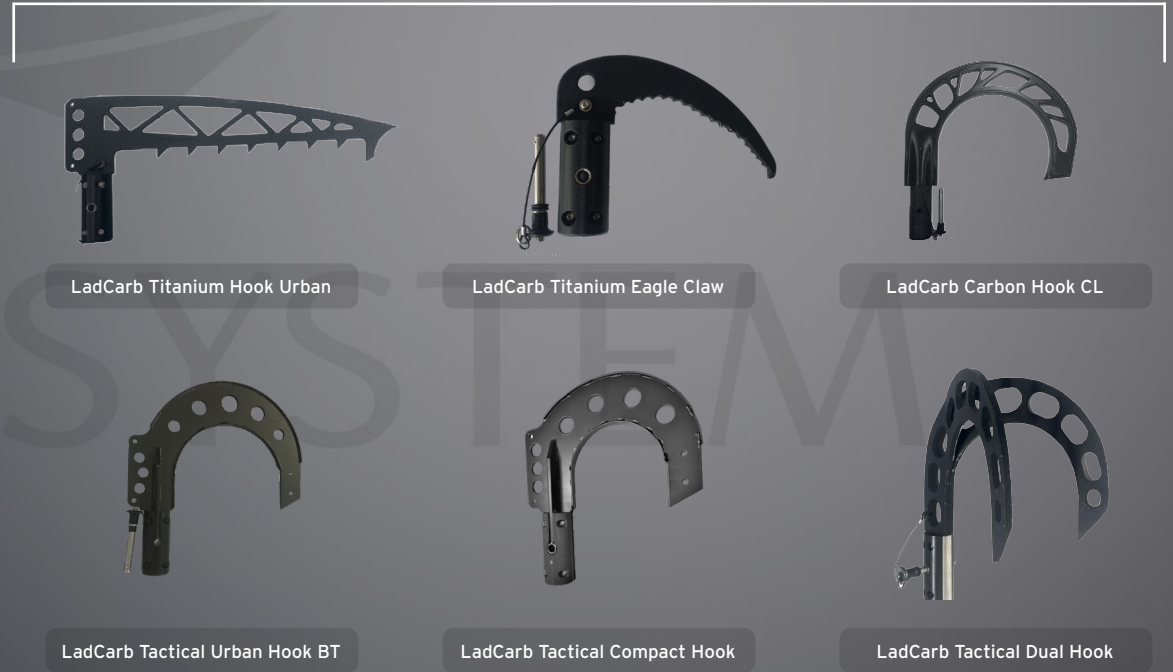
# HQH LadCarb FIX-LITE

Product Description	Construction	Sections	Weight per Section	Length Per Section	Max Reach	Configurations (MBL)*			Further Capabilities				Certification
						Leaning	Hanging	Bridging	Stretcher	Halo	Window Breaking	Assault Platform	
HQH LadCarb FIX-LITE SECLAD*	Carbon Composite, Sectional, Modular, Ladder System	5	1.45kg / 2.2kg	0.7m & 1m	5m	400 kg	300 kg	150 kg	•	•	•	•	Tested to elements of EN 1147
HQH LadCarb FIX-LITE SINLAD*	Carbon Composite, Sectional, Modular, Ladder System	-	Custom Lengths	Custom 1.4 - 5m	5m	400kg	300kg	150kg			•	•	Tested to elements of EN 1147

## Ladder Max Reach



## Hook Compatibility



# FIX-LITE Window Breaker Applications

## Window Breaking Plate

It is often difficult to break through windows covered by the advertising foil or anti-vandal film that is now widely used on buses.

The efficient method is to break the glass using a sharp-tip hammer and then smash it down with the heavy rubber window-breaking plate attached to the upper end of ladder. When the glass is pushed out the plate serves as an anti-slip wall support for the ladder.



## LADCARB® Window breaking head.

Durable and efficient Window-breaking heads with hard-steel tips allow to use FIX-LITE ladders for breaking through windows of buildings, busses, trains and other vehicles.

For entering vehicles perfectly suit shorter versions of the ladders. Using a ladder for breaking through windows directly makes an assault entry much faster.



## LADCARB® Raptor Anti-Slip Adapter.

The Raptor Anti-Slip adapters fit onto the end of a ladder to give a serrated tooth profile that grips on the edge of access points such as train doorways or window sills.



# FIX-LITE Roof Anchor & Lowering Applications

## Roof Anchor / Lowering Point Capability

Extreme strength of carbon composite ladder sections and tactical hooks allows the ladder to be used as an anchoring point for rappelling from flat roofs, windows and similar structures.

From a simple use of a ladder as a door bar to using a hook ladder as a tensioned anchor on a flat roof, these solutions are a great help for many types of tactical operations.



# HQH LADCARB® FIX-LITE Rescue Applications

## Rescue Kit

Rescue kit contains a stretcher cover which can be attached to 2 connected section of LADCARB LDC ladder. Fixing belts with safety buckles allow a victim to be transported at different angles.

It is suitable for any kind of technical rope rescue even in confined spaces.

Evacuation set of 6 loops, 4 carabiners with a rigging plate and a self-breaking descender can be used for evacuation by hand, winch or under a helicopter.



## Evacuation Package

6 certified loops (4x1.5 m, 2x1.2 m)

Rigging plate

3 aluminium carabiners

1 steel carabiner

PETZL descender

## Rescue Package

Stretcher cover with safety straps

Spinal board

Neck fixator

Light bag



# HQH LADCARB® FIX-LITE Ladder Joining

## Dual Ladder Connector B

Dual ladder connector consists of 2 aluminum clamps secured by bolts. Using a set of 2 these connectors allows to connect FIX-LITE ladders together for a fast entry of larger assault teams. Perfect for use in hostage evacuation situations.



# HQH LADCARB® FIX-LITE Accessories

## FIX-LITE Compact Frame Backpack



## FIX LITE Transportation Bag



# 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.

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.

**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.



Masters of Gloves originated in 2017 from the awareness that for many professional users, they face serious threats on a daily basis. With feedback from end users, they have launched the combat gloves for NATO as well as other specialised tactical gloves.



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 Canada 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.

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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