



# ISTEC

EXPERIENCE. INNOVATION.



# LAND PLATFORMS 2025



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# Table of Contents

Capability	4
Background	5
Land	6
MLRS A2	8
VIKING	9
Universal Gun Mount	10
Arm Gun Mounts	12
Protected Weapon Stations	14
Vehicle Sub-systems	15
Smoke Systems	16
Air	18
Sea	19



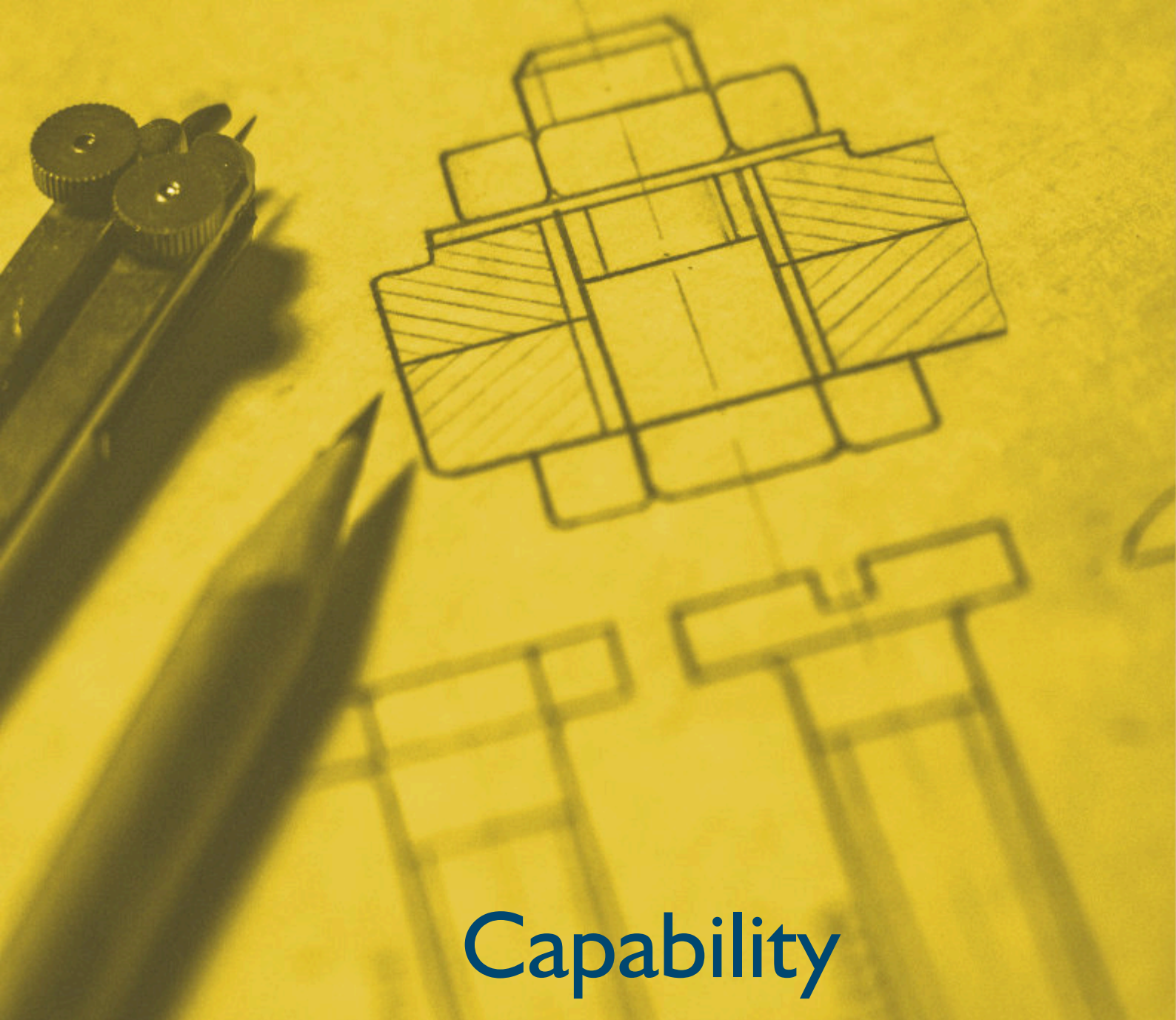
EMPLOYER RECOGNITION SCHEME

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# Capability

**I**STEC has exceptional strength in the engineering design and development of new innovative systems, with a large team fully equipped with the latest 3D solid modelling and Finite Element Analysis (FEA) software. ISTEC adopt a very proactive approach with a strong desire to work as part of the customer's team throughout the design process and beyond.

With many existing products in-service, across Land, Sea and Air domains, the engineering team look to either adapt 'off the shelf' in-service solutions, or establish bespoke solutions to ensure full compliance with customer requirements.

All design work is undertaken in full compliance to the ISTEC design processes and procedures that ensure critical areas are addressed during the design phase, such as: compliance with user requirements; ease of operation and maintenance; ensuring a modular design and obsolescence management.

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# Background

**ISTEC Services Limited**, (ISTEC) is the United Kingdom's principal supplier of high quality, precision engineered small-arm and medium calibre gun mounts, weapon stations and ancillaries.

Formed in 1989, ISTEC continues to be a leading designer and manufacturer of specialist military equipment which supports the modern warfighter worldwide, across Land, Sea and Air platforms.

During that time, ISTEC has developed as a dynamic, customer-focused company; delivering pragmatic advice and high quality products in a timely manner.

ISTEC is an ISO 9001:2015 accredited company with a reputation for providing robust, reliable and effective weapon mounting equipment and ancillaries in support of continuing, domestic and overseas requirements.

ISTEC's mounts and weapon ancillaries are currently supplied to the world's leading defence integrator's and operated by users worldwide, as well as the UK.

ISTEC specialise in fully integrating a customer's inventory of crew-served weapons, either retrospectively onto vehicle platforms or by design at the concept stage.



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# A LONG HISTORY OF SU

For over 35 years, ISTECHAVE stood at the forefront of providing innovative, battle-proven solutions for military land platforms. From protected weapon stations to ancillary equipment, ISTECHAVE bespoke offerings have equipped vehicles to meet the demanding challenges of modern battlefields.

## **Tailored Solutions for Every Mission**

ISTECHAVE expertise spans the design and supply of critical equipment such as Protected Weapon Stations, Swingarms, Buffered softmounts, and Pintle mounts. These systems ensure operators can engage effectively, even under the most challenging conditions. Complementing these core solutions are essential accessories, such as, hot barrel stowage and ammunition storage, which enable sustained operational capability for prolonged engagements. To further enhance survivability, ISTECHAVE provide armoured hatches, ensuring seamless inboard/outboard functionality without compromising the vehicle's overall armour rating.

## **Agnostic Expertise for Seamless Integration**

ISTECHAVE platform and weapon agnostic approach, sets them apart from competitors. ISTECHAVE work closely with customers to develop solutions that fully align with their unique operational requirements, ensuring a seamless fit, regardless of the vehicle type or weapon system. This flexibility not only enhances operational capability, but also delivers significant cost savings. By standardising mounts across multiple vehicle types, customers can dramatically reduce their cost of ownership and minimise the training burden for users and maintainers alike.

## **Proven in the Field**

ISTECHAVE equipment has been rigorously tested and proven in combat, with systems currently deployed on the majority of UK land platforms. Reliability is at the heart of everything we do, ensuring ISTECHAVE customers can depend on our solutions in the most critical moments.

## **Meeting the Needs of Modern Warfare**

In today's evolving battlefield, survivability and adaptability are paramount. ISTECHAVE bespoke solutions are designed with this in mind, providing vehicles with the capabilities they need to excel in modern combat environments. Whether it's enhancing protection, increasing operator efficiency, or ensuring compatibility across diverse platforms, ISTECHAVE deliver systems that make a difference.

## **Trusted by the World's Leading Defence Agencies**

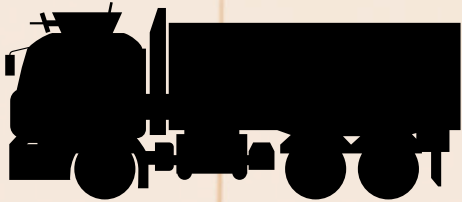
ISTECHAVE's reputation is built on decades of close collaboration with the UK Ministry of Defence, other national defence agencies, vehicle primes, weapon OEMs, and integrators. These partnerships reflect commitment to delivering not only the highest-quality solutions but also the agility and responsiveness ISTECHAVE customers expect.

## **A Legacy of Innovation, Built for the Future**

With over 35 years of experience, ISTECHAVE remain committed to evolving with the needs of customers and the challenges of modern warfare. ISTECHAVE's flexibility, agility, and unwavering focus on survivability have cemented the position as a trusted partner in the defence industry.

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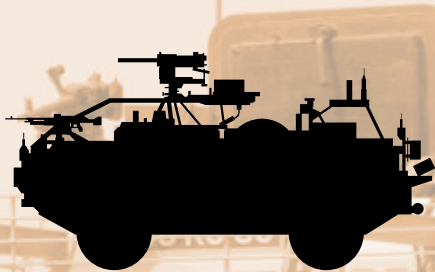
# SUPPORTING PLATFORMS



HX 60

SX60

CST



JACKAL 1

JACKAL 2

JACKAL 3

Land Rover WMIK



DAGOR

MRZR



MASTIFF

HUSKY HEAVY

HUSKY LITE

DCAN / DACU

FOXHOUND



MLRS A1

MLRS A2

VIKING

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# ARMOURED

## MLRS A2

The **Multiple Launch Rocket System (MLRS) A2**, an advanced version of the widely used artillery rocket system, represents a significant enhancement in battlefield firepower and precision. Equipped with an upgraded launcher capable of firing a variety of munitions, including guided rockets and long-range missiles, the MLRS A2 offers increased range, accuracy, and lethality. Its sophisticated targeting and navigation systems ensure high precision, minimising collateral damage, and maximising combat effectiveness. The system's rapid reload capability and improved mobility allow for swift re-positioning, providing critical support in dynamic combat scenarios. Overall, the MLRS A2 stands as a formidable asset, bolstering the firepower and strategic capabilities of modern armed forces.

ISTEC have been contracted to provide the MLRS A2 with both its 66mm Smoke Discharger System (SDS) and 7.62mm Medium Machine Gun capability with the addition of its proven in-service double swing arm gun mount.

The SDS enhances the vehicle's survivability by providing rapid and effective smoke screens that obscure the vehicle from enemy observation and targeting. The smoke can be deployed quickly to create visual and infrared concealment, disrupting enemy line-of-sight and guidance systems. This capability is crucial during manoeuvres, allowing the vehicle to re-position while reducing the risk of being hit.

The MMG system is crucial for enhancing the vehicle's defensive capabilities and overall battlefield resilience. While the primary role of the MLRS is to deliver powerful, long-range rocket artillery, it often operates in environments where it can be exposed to close-range threats from enemy infantry, light vehicles, or drones. A medium machine gun provides a vital layer of self-defence, enabling the MLRS to engage and neutralise these threats without relying solely on external support. This integration ensures the MLRS can maintain its operational effectiveness and continue its primary mission even under hostile conditions. Additionally, the machine gun enhances the crew's ability to protect themselves and the vehicle during reloading or maintenance operations, further increasing the survivability and versatility of the system in diverse combat scenarios.



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# SOLUTIONS

## VIKING

**The British Army's Viking** is a highly versatile and robust all-terrain vehicle (ATV) designed to operate in some of the world's most challenging environments. Developed by the Swedish company Hägglunds (now part of BAE Systems), the Viking has become a cornerstone of the British Army's mobility strategy, particularly in Arctic, mountainous, and amphibious operations. The Viking is a twin-cab, articulated ATV that consists of two tracked units linked by a steering mechanism. This unique design provides exceptional manoeuvrability and traction across various terrains, including snow, mud, sand, and swamps. Each unit has its own track, which can pivot independently, allowing the vehicle to navigate tight turns and traverse steep gradients with ease.

The vehicle is powered by a diesel engine, which provides a balance of power and fuel efficiency, essential for extended operations in remote areas. Its amphibious capability allows it to travel through water with minimal preparation, making it highly suitable for operations in coastal and riverine environments. The Viking can carry up to 12 troops or a combination of personnel and cargo, making it a flexible asset for a range of missions.

Entering service in the late 1980s, the Viking has been vital in diverse theatres, from the Falklands War to Afghanistan, offering unmatched mobility in difficult terrains. Its strategic importance lies in its ability to support various mission roles, including front-line combat, logistics, and humanitarian aid, through modular configurations like ambulance and command units.

Early in 2024, ISTECH received a request from the UK MOD to upgrade the Viking All Terrain Vehicle with a new crew served weapon station.

Having a medium machine gun mounted on the Viking significantly enhances the vehicle's operational effectiveness and tactical flexibility. This armament provides essential firepower, allowing the Viking to offer immediate suppressive fire in combat situations, thereby increasing the safety and defensive capabilities of its occupants. The mounted machine gun extends the vehicle's engagement range, enabling it to support infantry units by delivering sustained, accurate fire against enemy positions, light vehicles, and personnel. This capability is particularly valuable in remote or hostile environments where the Viking operates, ensuring it can protect itself and support broader mission objectives effectively. By integrating a medium machine gun, the Viking not only improves its defensive posture but also contributes to the overall firepower and combat readiness of operations.

Despite the incredibly tight timescale imposed upon the requirement, ISTECH managed to design, produce, deliver and fit the required upgrades in the required 12 weeks.

Flexibility, and a willingness to go the extra mile, ensured the project was a great success.

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# Universal Gun Mount

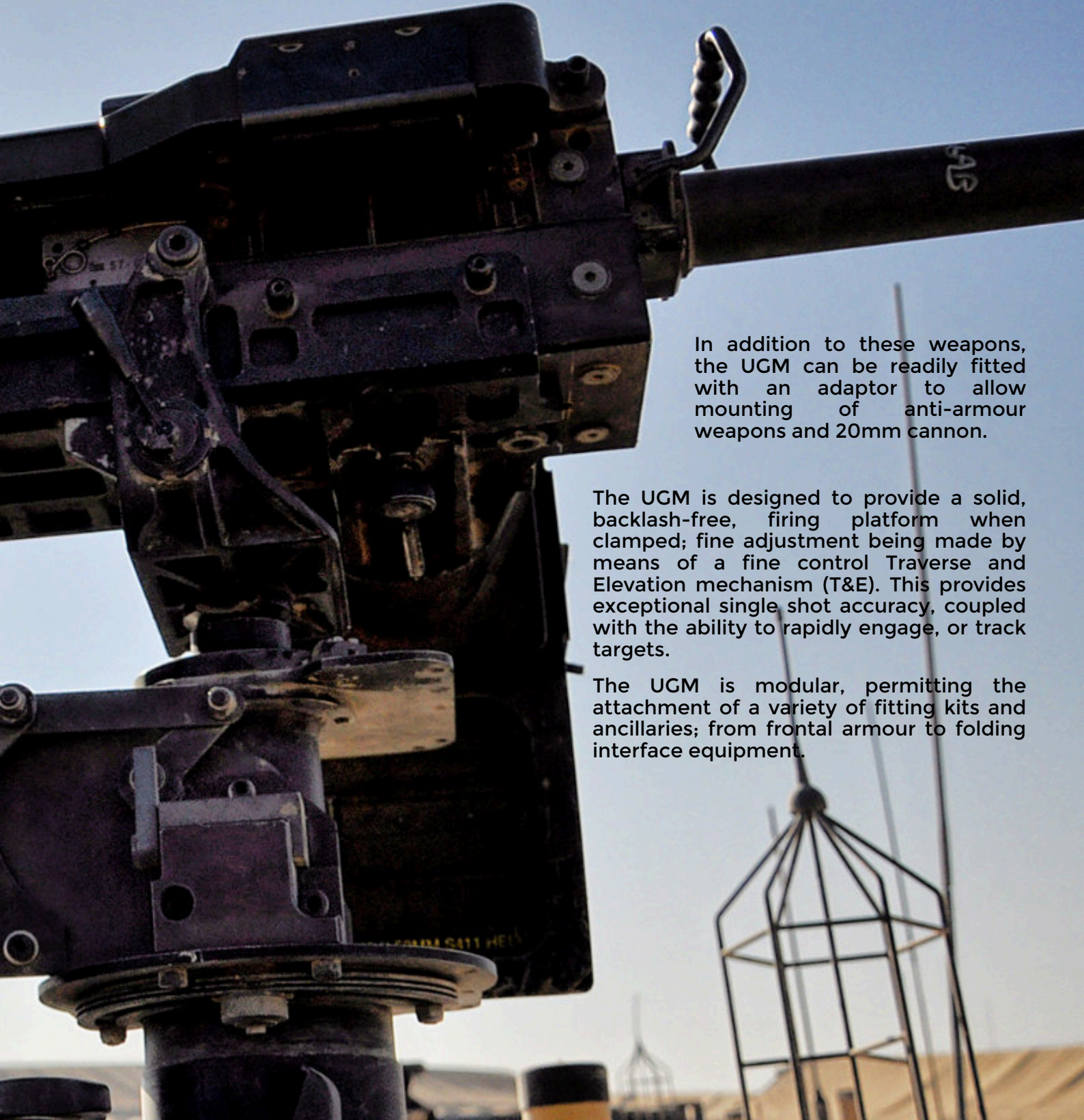
A soldier in full combat gear, including a helmet and camouflage uniform, is shown in profile, operating a machine gun. The gun is mounted on a complex, multi-axis tripod system. The soldier's hands are on the controls of the gun. The background is a bright, hazy sky, suggesting an outdoor, possibly desert, environment. The overall tone is professional and focused.

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**T**he widely adopted ISTEK Universal Gun Mount (UGM) is currently utilised on both land and sea-based platforms, where it is attached directly to a traversing ring of the parent vehicle, or to a re-enforced hard point on the side of a vessel.

The UGM is capable of accepting the following range of weapons together with their dedicated softmounts (either ISTEK softmounts, or alternative solutions):

- Light Machine Guns (e.g. Minimi/M249)
- Machine gun (e.g. L7A2 GPMG/FN MAG 58/M240, M60, MG3, PKM)
- Twin L7A2 GPMG Mount
- 12.7mm HMG (e.g. M2HB, L110A2 QCB, M3D)
- 40mm Grenade Machine Gun (e.g. H&K GMG, MK19)



In addition to these weapons, the UGM can be readily fitted with an adaptor to allow mounting of anti-armour weapons and 20mm cannon.

The UGM is designed to provide a solid, backlash-free, firing platform when clamped; fine adjustment being made by means of a fine control Traverse and Elevation mechanism (T&E). This provides exceptional single shot accuracy, coupled with the ability to rapidly engage, or track targets.

The UGM is modular, permitting the attachment of a variety of fitting kits and ancillaries; from frontal armour to folding interface equipment.

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# ARM

## Gun mounts



**T**he **ISTEC arm** mounts provide the operator with an extended stable platform to fire an LMG/MMG from.

Often fitted to commanders or sentry positions, the swing arms offer an increased range of arcs, to the operator, than is provided from just a fixed pintle.

Each arm is fitted with the appropriate spigot receiver, which is able to mount the correct softmount, normally either the G3 or NATO tapered cone.

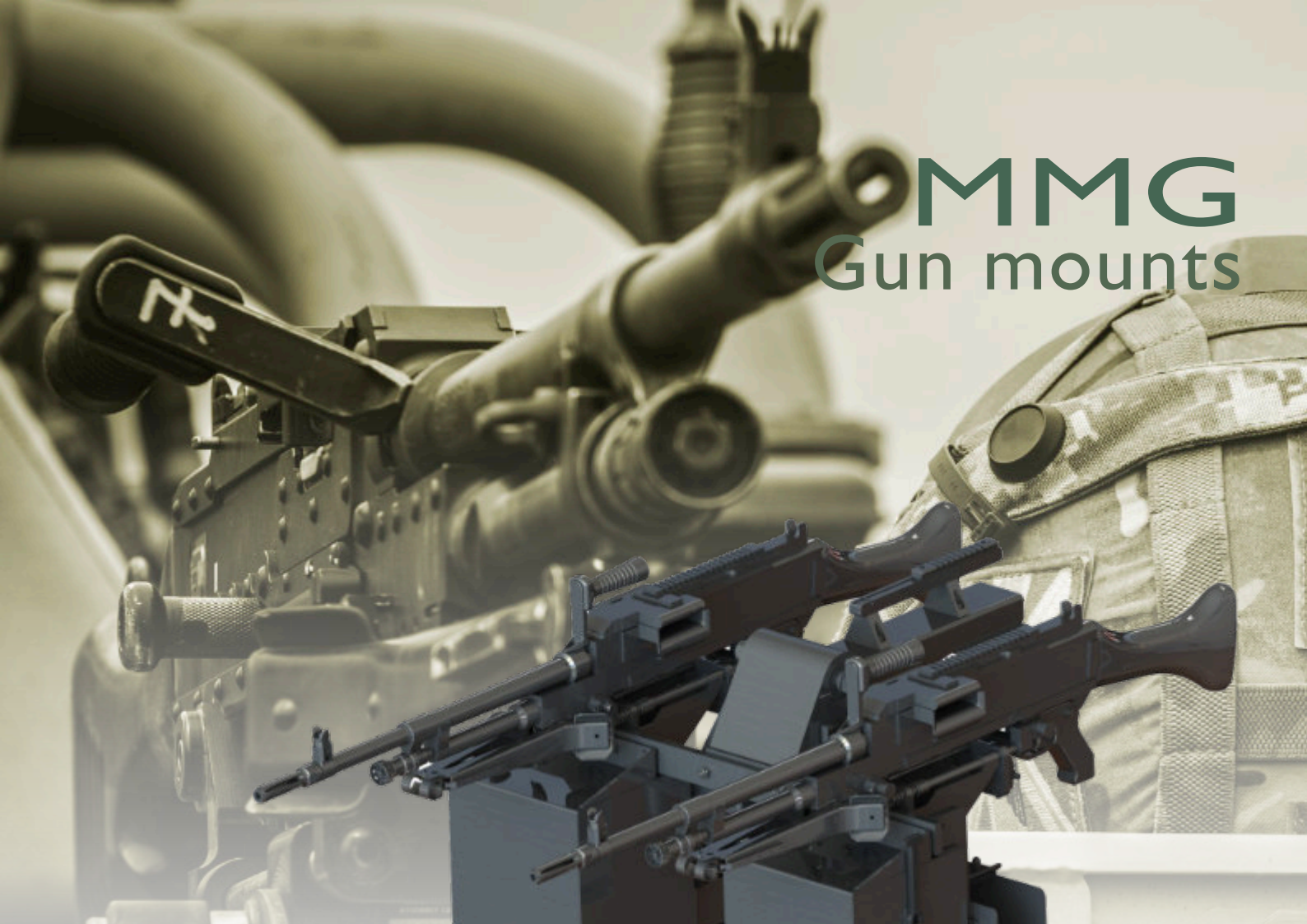
For extra arc capability, double swing arms are available.

Lightweight 'bespoke' single/double swing arms can also be designed and supplied.

The swing arm solution offers a capability multiplier for a relatively small cost and minimal footprint. The swing arm needs less than 150mm square real estate on the vehicle to mount.

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# MMG Gun mounts



**A**s with the ISTECHMG range of weapon mounts, ISTECHMG have designed numerous MMG softmounts over the years for applications across Land, Sea and Air domains.

The ISTECHMG range covers most variants of 7.62mm and 5.56mm weapons.

The ISTECHMG range of MMG mounts includes compact, capable and easy to use Softmounts, designed to interface with existing pintle sockets or ISTECHMG designed and supplied interfaces, such as the G3 Cone or NATO Spigot to name but two.

ISTECHMG have in-service Softmounts designed to interface with the ISTECHMG Universal Gun Mount (UGM) with built in T&E Mechanism and mounts that include an array of additional (and optional) features to enhance capability, such as:

- Ready Round Stowage (200-400 rounds)
- Spent Case and Clip Collection Systems
- Traverse and Elevation Locking Clamps
- Adjustable Traverse and Elevation Stops
- Mounting points for Frontal Ballistic Shield (steel or composite material)

Other unique designs of ISTECHMG MMG Softmounts includes the Twin GPMG Mount which is in service on both Land and Naval platforms.

The existing range of ISTECHMG MMG Softmounts will meet almost all User requirements. However, with the vast engineering knowledge and experience in weapon system design within the ISTECHMG team, overcoming problems, advising on solutions, and meeting stringent user requirements is the ISTECHMG speciality.

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# PROTECTED Weapon Stations

**T**he **ISTEC ring** mounts/PWS product range are weapon mounting systems designed to offer maximum capability with the minimum of user input.

The ISTEC ring mounts allow a single operator to maintain 360-degree capability with the weapon always directly to their front, without the need to stretch or strain on extreme arcs.

The system is based upon a metal ring fixed to the platform roof or support cage. Mounted to this fixed ring is a forged traversing ring, which can offer the operator continuous 360 degrees of uninterrupted traverse in either direction.

The traversing ring provides the mounting platform for a selection of options, usually based upon a base-plate. These include armour panels to defeat threat levels from STANAG 4569 Level 1 up to Level 4, hatches, spare barrel holders, personal weapon holders, spare ammunition box holders, and other operator required ancillaries. The traversing ring or base-plate is also supplied with a weapon mounting interface.

The ISTEC rings are available in a variety of sizes, but normally are restricted to the two most common sizes:

The GVA compliant 1080mm ring and the smaller UK MOD approved 980mm ring (this ring offers the best compromise between size, weight, functionality, and cost).

The weapon interface can be selected for just a single weapon type, such as a 7.62mm MMG, or it can be fitted with the ISTEC Universal Gun Mount, which can take a selection of weapon options from 5.56mm LMG, 7.62mm MMGs, 12.7mm HMG and 40mm GMGs.

As well as designing, manufacturing and supplying complete weapon systems such as the various in-service PWS' and Ringmounts, ISTEC also design sub-systems for military platforms. These include bespoke armoured solutions, steel or composite, such as ingress/egress hatches and shields (either forward facing or designed to give 360deg protection to the User). Many of the sub-systems used on ISTEC weapon stations can also be supplied as standalone sub-systems to third parties (either proven off the shelf designs or adapted accordingly), such as stowage solutions for ammunition, personal weapons and spare barrels; and innovative weapon mounting platforms such as folding 'A' frame assemblies and assisted mechanical handling systems using hydraulics or geared solutions, to offer the weapon system improved elevation and depression angles. ISTEC can also design and supply mounting configurations such as the G3 Cone and NATO Spigots, or other pintle and socket designs.

Whatever the system or sub-system requirement for a weapon platform, ISTEC can provide the solution.

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# Vehicle

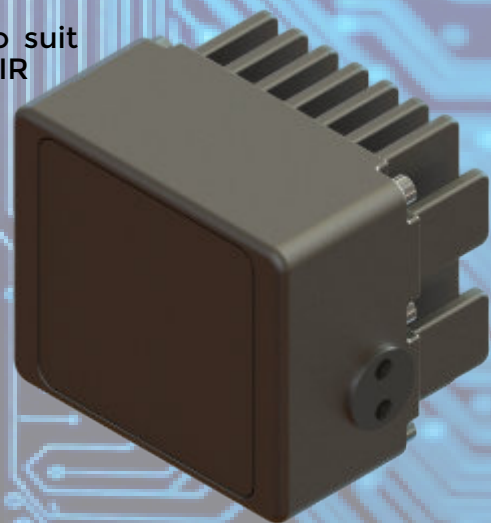
## Sub-systems

ISTEC's continued growth and investment into new systems for AFV's has led to the following additions to the portfolio: of 76mm and 66mm smoke grenade discharger systems and more recently the standalone Laser Warning System (LWS) and the IR lighting system designed for a specific overseas customer. The ISTEC designed 66mm smoke grenade discharger system has been adopted on UK vehicles and includes varying quantities of dischargers, the Fire Control Unit (FCU) and all interconnecting harnesses, plus accessories such as cleaning brushes and circuit testers.



ISTEC has designed and developed a low cost LWS, ideally suited as an upgrade to legacy platforms. The system is designed as either standalone or mounted directly to the ISTEC FCU and used in conjunction with the 66mm or 76mm smoke grenade dischargers, as part of a defensive aid suit. The original ISTEC design consisted of one circular array of detectors but has now been enhanced by the latest configuration of semi-circular arrays, allowing a number of units to be installed on larger vehicles.

The compact IR Illuminator unit can be configured to suit varying tactical requirements, with 850 or 940nm IR emitters and a variety of optics ranging from a 9° FOV 'spot' to a >100° FOV 'flood' using custom lenses. Two banks of two emitters, controlled by individual isolated enable lines, allow for mixed configurations and the inclusion of more traditional visible spectrum LEDs. The simple interface allows for mounting to any vehicle and the inbuilt filtering means the unit can operate off a variety of power supplies, while remaining EMC compliant.



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# Smoke Systems



**T**he ISTEK 66mm grenade discharger system is the latest configuration specifically designed for installation onto the future UK MLRS platforms and other combat vehicles.

The ISTEK 66mm system is already in-service in the UK and has achieved full ordnance board approval. Operation of the system is via the ISTEK designed Fire Control Unit (FCU) which facilitates the grenade discharger selection, firing and circuit testing as well as enabling the user to see which discharger tubes need replenishing. The FCU is fully EMC tested and qualified.

Along with the ISTEK 76mm larger calibre system, the 66mm grenade discharger can be adapted to suit the specific platform requirements. This includes differing numbers of dischargers, angles between discharger banks and any subsequent configuration changes to the FCU.

Each grenade discharger (singular or banks thereof) is manufactured from aluminium and have the firing pin mounted in the base of the tube allowing firing of current in-service grenades. Each tube has the appropriate protective finish and is fitted with a rubber cap.

Depending on the system configuration and grenade type, the deployment range is nominally between 20-90m.

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# LIGHTWEIGHT GPMG TRIPOD

The **ISTEC 7.62mm L4 Tripod**, and the relevant Softmount, have been part of the portfolio of ISTEC products for many years. In 2021 ISTEC launched an upgrade development programme whereby the existing Tripod underwent significant redesign to establish an enhanced variant that would accept different MMG's and LMG's.

The primary aim of the redesign process was to significantly reduce the weight without compromising the operability of the Lightweight Tripod, when compared with the current in-service, steel L4 Tripod.

The not to exceed target weight of 10kg (excluding weapon and ammunition) was met successfully without any degradation in performance. NB: Standard L4 Tripod weighs 13.62kg

The programme included the manufacture of prototype, pre-production and now production units that have been subjected to significant in-house testing, including live firing, with successful results.

The new design includes a lighter frame along with a new ISTEC Softmount designed specifically for the Tripod application.

The Softmount, modelled on in-service ISTEC mounts, will accept the following weapons:

- **7.62mm GPMG, Mag58, M240**
- **7.62mm Minimi**
- **5.56mm Minimi**
- **.338" Sig MMG**

Key features of the new ISTEC Lightweight Tripod include the following:

- **Full 360-degree traverse**
- **Adjustable elevation controls (T&E Mechanism)**
- **Covers 200 mils of traverse and 100 mils of elevation and depression**
- **Adjustable legs.**

The adjustable design of the Tripod provides a line of sight ranging between 330mm to 675mm above ground level when used with a 7.62mm GPMG.

As with all the ISTEC products, the new Lightweight Tripod is supported with complete User manuals (Operator Manual, Maintenance Manual and Illustrated Parts Catalogue) and ongoing ISTEC support throughout the life cycle of the Tripod, with supply of spare parts if required.

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# AIR

**ISTEC continue to** innovate and support the rotary wing element of the battlespace.

With a large range of certified in-service MMG and HMG mounts fitted to helicopters worldwide, ISTEC continue to develop to meet the ever changing demands of the modern battlespace.

Mount types range from external frames and MMG mounts, as fitted to the USAF Grey Wolf MH139 helicopters, to the in-cab pedestal MMG mount fitted to the UK MODs PUMA2.



Photo credit: Samuel King Jr.

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# SEA

**The maritime battlespace** is one of the harshest environments in which ISTECS equipment operates. Manufactured from marine resilient material and finishes, the range of ISTECS naval equipment can be seen across the entire maritime domain on submarines, capital, littoral and merchant ships, as well as in-shore and river crafts. ISTECS also supply naval systems for integration on offshore drilling rigs.

The ISTECS range of naval products is extensive, with modern solutions being added on a regular basis. New product design may be as a result of a specific customer requirement, or as part of an internally funded programme where ISTECS look to continuously improve existing solutions or look to develop new concepts to the benefit of the user community.



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