

# ▶ iSTEC



# COMPANY 2024 BROCHURE



EXPERIENCE.INNOVATION.

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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 integrators 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.



# Editorial

**2024 has been** a remarkably busy year for the industry as it navigates an array of urgent operational requirements and continues to advance critical projects. Amidst heightened global tensions and evolving security challenges, ISTEC has been agile in addressing immediate needs while pushing forward with key modernisation initiatives.

One notable area of focus has been ongoing helicopter projects, which are essential for maintaining and enhancing operational capabilities. Among these, the integration of the USAF Grey Wolf (MH-139A) capability stands out. This new platform promises to bolster both strategic and tactical air mobility, offering improved performance, versatility, and resilience in diverse mission scenarios.

ISTEC has been at the forefront of these developments, actively engaging in the defence community's major events and forums. We are excited to announce our attendance at both DVD and Eurosatory this year. These events are pivotal for showcasing cutting-edge technologies and fostering collaboration across the defence sector. We invite you to meet us there to discuss how our solutions can meet your operational needs and contribute to ongoing projects.

Moreover, ISTEC will be presenting at the Global Defence Helicopter conference in Poland in October, a premier event dedicated to the military helicopter community. This platform provides an excellent opportunity to delve into the latest advancements, share insights, and explore future trends in defence aviation.

We look forward to connecting with industry leaders, partners, and clients at these significant gatherings. Your engagement is crucial as we strive to support and enhance defence capabilities globally. Let's meet and discuss how we can collaborate to address current challenges and seize future opportunities in this dynamic year for defence.

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# Capability

**ISTEC** 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.

# Customer Support

The dynamic approach incorporated by ISTEC starts with strong customer liaison to fully understand a customer's requirements. Our customer support team is ex-military and has a strong understanding of requirements and capabilities.

Links forged between ISTEC and the customer at this early stage is strengthened throughout the programme; through delivery. Customers have direct access to a dedicated representative to help support their requirement.

ISTEC technicians deploy globally, into diverse locations; in order to assist its customer base with varied tasks ranging from equipment installation, embodying modifications, to providing advice and training.

It is ISTEC policy that Integrated Logistic Support is applied to all product development and supply. ISTEC use a disciplined approach that influences the product design and develops a sustainable support solution, to reduce Cost Of

Ownership and maintenance burden, whilst optimising supportability.

ISTEC use Supportability Engineering Management tools to produce a product that not only delivers the required capability, but can also be supported and maintained at various levels.

Reliability Centred Maintenance is used to produce equipment and maintenance regimes, which reduce down time, erroneous inspections and ultimately support costs.

Ease of Maintenance Assessments are employed to establish the most efficient engineering support regime.

Training Needs Analysis is conducted to ensure the equipment can be used and maintained, on or off the battlefield, with minimum but effective training, and ISTEC can offer training courses and supporting publications for Users and Maintainers.

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# FEATURED ARTICLE

## 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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# FEATURED ARTICLE

## 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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# FEATURED ARTICLE

## 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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# FEATURED ARTICLE

## MRZR



**It has been** well established that wheeled vehicles offer significant advantages in the modern battlespace due to their versatility, mobility, and cost-effectiveness. These vehicles can traverse diverse terrains efficiently, including rugged landscapes and urban environments, providing rapid deployment of troops, supplies, and equipment. Their speed and agility enable swift manoeuvrability, essential for dynamic warfare scenarios. Additionally, wheeled vehicles are typically cheaper to manufacture, operate, and maintain compared to tracked counterparts, allowing military forces to maximise their budget allocation. Furthermore, their modular design facilitates customisation for various missions, ranging from reconnaissance and surveillance to troop transport and logistics support, enhancing overall operational flexibility and effectiveness on the battlefield.

Post action LFE in asymmetric warfare has taught modern military planners, that every vehicle needs to be a fighting vehicle. With this ethos in mind, ISTECH have equipped our NATO partners' MRZR with mounted MMG capability, in the form of both Commander's swing arms, and ROPS specific centralised mounts.

## SBFA

**Man-on-man blank firing** training holds paramount importance in military and law enforcement contexts as it simulates real-life combat scenarios, providing personnel with invaluable experience and readiness for unpredictable situations. By incorporating blanks, participants experience the sights, sounds, and stress of live engagements without the lethal risks, fostering muscle memory and enhancing tactical proficiency in a controlled environment. This training cultivates essential skills such as communication, decision-making under pressure, and effective teamwork, critical elements for mission success in high-stakes environments. Moreover, it allows individuals to assess and refine their response strategies, adapt to evolving threats, and build confidence in their abilities, ultimately ensuring they are well-prepared to confront the challenges of combat or law enforcement operations with precision and efficiency.

But blank firing does pose risks, and the threat of live rounds contaminating the training area is ever present in operators' minds. The established in-service ISTECH Safe Blank Firing Attachment was developed to provide a device that will work the rifle firing blank ammunition, but will also stop up to 3 live rounds inadvertently loaded and fired. Adding only minimal weight, the muzzle device still offers a battlefield effect, with noise and flash to enhance the operators training and combat inoculation.

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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.



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# SEA

**The maritime battlespace** is one of the harshest environments in which ISTECH equipment operates. Manufactured from marine resilient material and finishes, the range of ISTECH 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. ISTECH also supply naval systems for integration on offshore drilling rigs.

The ISTECH 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 ISTECH look to continuously improve existing solutions or look to develop new concepts to the benefit of the user community.



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