

COMPANY 2023
BROCHURE 2023

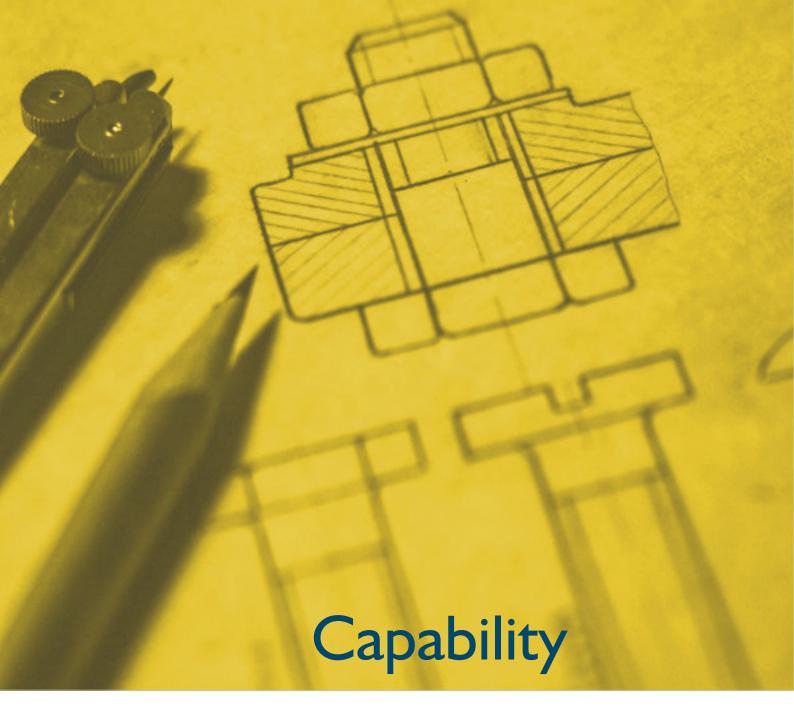


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stec has exceptional strength in the engineering design and development of new innovative systems, with a large team fully equipped with the latest 3D Solid Modelling and Finite Element Analysis (FEA) software. ISTEC adopt a very proactive approach 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.



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

Editorial

fter a successful 2022, ISTEC start the new year, confident of continued growth, with new contracts for Land, Sea and Air weapon systems and ancillaries. The Engineering team's committed design and development of bespoke customer solutions across all domains, continues into 2023 and beyond, along with innovative new product developments.

During October 2022 ISTEC were awarded a significant contract from Babcock for the supply of L69 12.7mm M2HB MG Weapon Mounting Systems for varying Naval Vessels across the UK fleet; a contract that further cements ISTEC as the United Kingdom's principal supplier of high quality, precision engineered small arm and medium calibre gun mounts, weapon stations and ancillaries.

This edition of the brochure includes an in-depth article outlining the Naval capabilities across the fleet of the Royal Navy, Royal Marines and overseas customers; now equipped with a wide range of ISTEC Weapon Systems.

The ISTEC team will once again be on the road in 2023 with attendance at many exhibitions across the world including IAV, IDEX, DSEi (Japan), LAAD, IMDEX, IDEF, DSEi (London), AUSA, Defence & Security and EDEX.

ISTEC will be exhibiting at DSEi September 2023 and preparations are now at an advanced stage; with plans to showcase new product developments across Land, Sea and Air – further details will follow in the next ISTEC brochure.

For additional details, or to request a meeting, please don't hesitate to make contact via the website www.istecservices.com or LinkedIn page.







EXPERIENCE. INNOVATION.

FEATURED ARTICLE

MARITIME BA



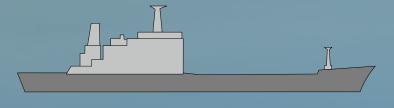
FEATURED ARTICLE





EXPERIENCE AND INNOVA

STEC's extensive and varied portfolio of in-service Naval Systems, including Softmounts, Protected Weapon Stations and Ballistic Shields, can be seen on an equally diverse range of Naval Vessels from small 5,000kg Offshore Raiding Crafts (ORCs) up to the UK's 65,000 tonne Queen Elizabeth Class Aircraft Carriers. Apart from recommending and supplying systems to suit the role of any vessel of any size and capability, ISTEC's team of experienced Engineers can also assist with integration, user training and ongoing support throughout the life of the platform.



SURVEY CLASSES



TRAFALGAR CLASS



RIVER CLASSES



MCMV



LCU MK10



LCAC



LCVP MK5

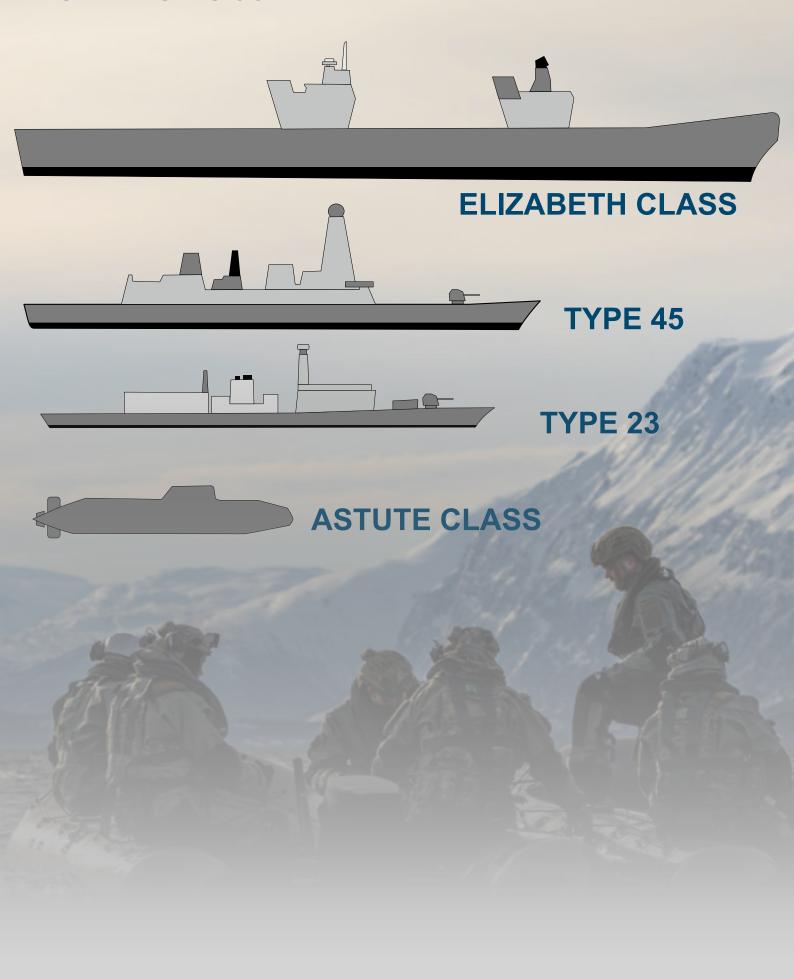


ORC



RPC

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Weapon Stations

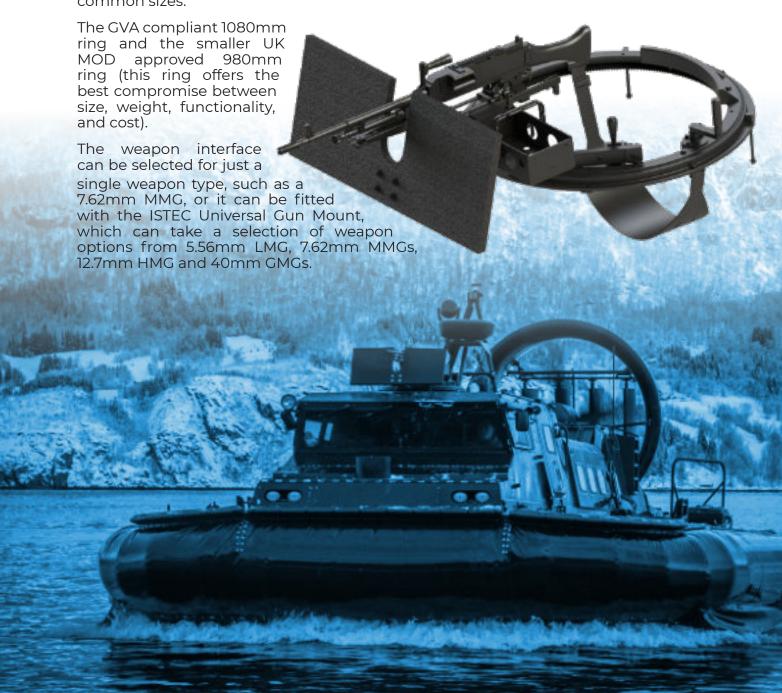
The ISTEC maritime ring mounts are a weapon mounting system designed to offer maximum capability with the minimum of user input.

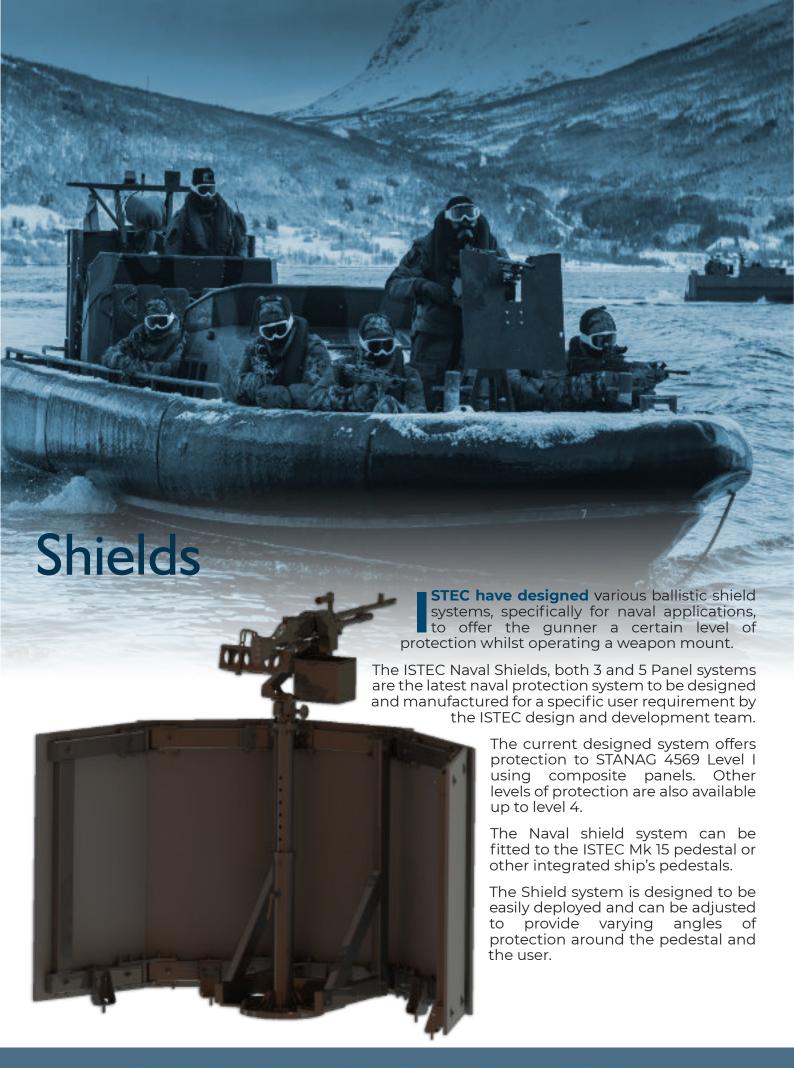
The ISTEC ring mounts allow a single operator to maintain up to 360-degree capability with the weapon always directly to their front, without the need to stretch or strain on extreme arcs.

The system is based upon a metal ring fixed to the platform. Mounted to this fixed ring is a forged traversing ring, which can offer the operator continuous 360 degrees of uninterrupted traverse in either direction unless physical arc stops are required.

The traversing ring provides the mounting platform for a selection of options, usually based upon a baseplate. 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 baseplate is also supplied with a weapon mounting interface.

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







In general the receiver for the softmounts mounts directly onto the platform, a swing arm, or ring mount system and provides crucial safety arc stops needed on maritime platforms.

The ISTEC Universal Gun Mount (UGM) is the largest of the softmount receivers supplied worldwide to the military: offering outstanding capability to the operator. The UGM can be fitted with a front shield and also fitted to folding bulwark mechanisms to bring the weapon system 'in board' when required.



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.

LIGHTWEIGHT GPMG TRIPOD

he 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.

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.



The mount also includes azimuth and elevation locks and stops which can limit movement of the mount in these directions.

The modular design allows for an optional spent case and collection system to be clipped into position if required, as well as a ready round tray.

The mount has been designed using materials and finishes that allows it to be used in either land or naval applications.

The interface for the mount is via the standard G3 cone, but this can be readily replaced with other mounting systems such as NATO 4796 pintles if required.



the widely adopted ISTEC 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.

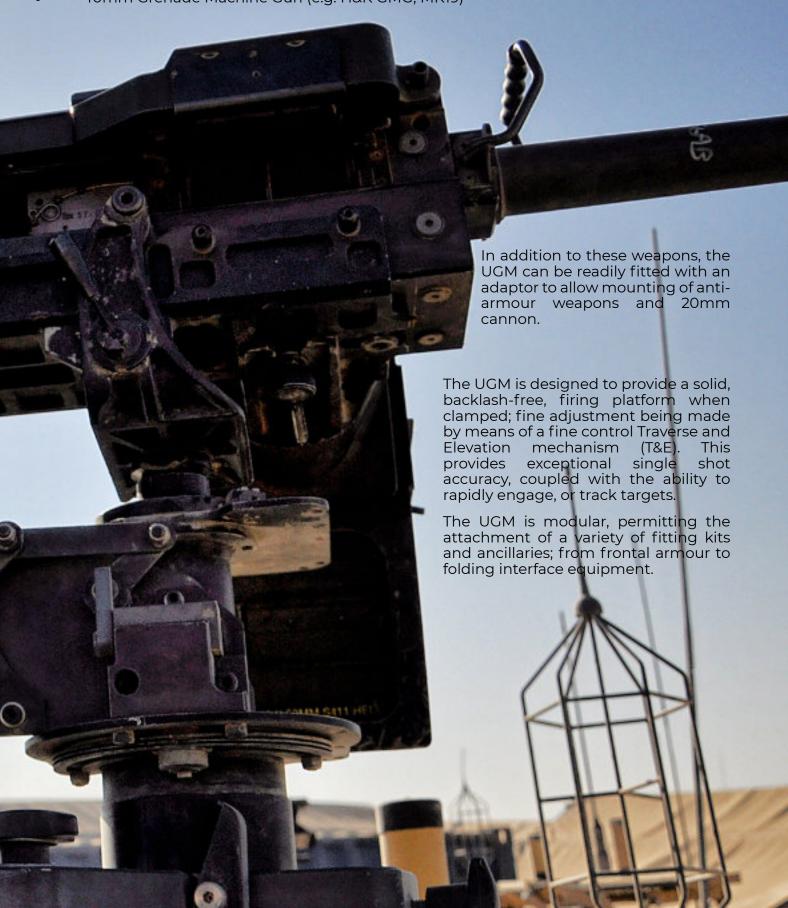
The UGM is capable of accepting the following range of weapons together with their dedicated softmounts (either ISTEC softmounts, or alternative solutions):

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)







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

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

ISTEC have in-service Softmounts designed to interface with the ISTEC 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 ISTEC MMG Softmounts includes the Twin GPMG Mount which is in service on both Land and Naval platforms.

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



The modular design of the mount assembly enables it to be deployed and modified to suit varying roles. The mount system incorporates a proven ISTEC 12.7mm softmount mechanisms.

The softmount can be detached quickly and without tools, and mounted on any other G3 cone mount, such as the UGM: providing capability for the helicopter operating in both Land and Maritime environments.



EXPERIENCE INNOVATION



The range drum is fitted with a quick release clamp that allows fitting to a Mil Std 1913 Picatinny rail.

The rail for attachments of the optical sight and other electro/optical ancillaries is the Mil Std 1913 Picatinny type.

It features a rotary locking device fitted to the range adjusting drum, which, when applied, prevents inadvertent rotation.

There is a high degree of commonality between the various models and with a full range of sub-assemblies and component parts available if required to carry out a repair.

he 40mm L9A1 range drum is optimised for the various natures of 40mm munitions currently available. The sight mounting rail is tilted slightly to the right from the horizontal, to compensate for drift caused by the spin of the projectile. The range scale is graduated from 0 to 2000 m and is fitted with a GTLS on the range and zero lines to aid setting the range under low light levels.

The range drum is fitted with a quick release (QR) female dovetail mounting bracket, commonly referred to as a rail grabber; which allows rapid fitment and adjustment to the Picatinny pattern mounting rail on the bridge of the GMG soft mount.

The range drum is fitted with a top mounted sight rail, with two side mounted rails for auxiliary equipment such as lasers and range finding equipment. All three rails conform to Mil Std 1913.

the rs td

The range adjusting drum can be locked in any elevation, providing exact range targeting and preventing inadvertent movement once the range is selected.



SIGHT Mounts

he L12A1 flipover sight bracket, with its double Picatinny pattern rails, is designed as a direct replacement for the existing IR sight mounting bracket secured to the LH rear side of the GPMG body.

The design of the sight bracket positions the optical axis of the sight directly above the bore, as well as a secondary equipment such as a laser. When loading / unloading or carrying out weapon IA drills the sight can be tilted to the left, allowing the top cover to be opened. The Picatinny pattern mounting rail allows fitting of any optical sight or night vision sights equipment with a Mil Std 1913 interface.

Smoke Grenade Discharger & Local Situational Awareness System

developed in-house. A typical 66mm System consists of banks of Smoke Dischargers (usually two or four banks), Junction Box (if required), Fire Control Unit (FCU) and all interconnecting harnesses. The 76mm system consists of individual dischargers, that can be mounted on a platform, which is then fixed to the vehicle. The banks of dischargers can be configured to suit customer requirements, e.g., two banks of two tubes; four banks of three tubes; four banks of four tubes etc. The FCU is common across both 66mm and 76mm systems and is fully sealed and EMC protected. The FCU has a series of green LED's which denote when each discharger tube is armed and a series of yellow LED's that indicate when the discharger tubes require reloading. It also has a 'blackout' mode for covert operations. As with all the ISTEC products, the 66mm and 76mm Discharger Systems are supported with complete User manuals (Operator Manual, Maintenance Manual and Illustrated Parts Catalogue) and ongoing ISTEC support throughout the life cycle of the systems, with supply of spare parts if required. ISTEC can also supply ancillary items such as Barrel Cleaning Brushes, Circuit Testers and Grenade Stowage Boxes. NB: ISTEC 66mm and 76mm systems are designed to fire current in-service grenades.



Customer Support

he 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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