



The Ballistic ToolKit

A History – An Assurance



**10th Anniversary Souvenir Members Brochure
Including BTK Live-Fire and 2017 Companies
Directory**



The Ballistic ToolKit for all your professional needs, from testing to in-theatre reliability

The Ballistic ToolKit

A History – An Assurance

‘Working effectively with Her Majesty’s Government and Her Allies for Ten Years’





The Ballistic ToolKit: UK industry working together cohesively for over ten years

Ballistic ToolKit Live-Fire Events:

First: London, April 2006

Second: Tunbridge Wells, April 2007

Third: Bisley/Pirbright, 7 April 2008

Fourth: Larkhill, 7 May 2009

Fifth: Larkhill, 7 October 2010

Sixth: Larkhill, 27 September 2012

Seventh: Devizes, 12 April 2016

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Introduction

Welcome to the Tenth Anniversary guide to the Ballistic ToolKit. As well as a full list of member companies, their main equipment and contact details, you will find additional features detailing the prestigious history of the group from its humble beginnings in the Defence Exports Services Organisation (DESO) in 2005, through to its formation as an industry-led group in 2006 and onwards to where we are today, at the cutting edge of SME delivery here in the UK.



The first member's brochure was produced in 2009 to coincide with the Live-Fire Event the group held at Larkhill, supervised by the British Army and supported by the Defence Security Organisation (DSO). It is now time to update that brochure to invigorate the relationship the Ballistic ToolKit has with Her Majesty's Government and the official delegates they reach out to around the world.

The Ballistic ToolKit is a focused interest group who, as former Head of DSO Richard Paniguan stated, 'has got to know each other pretty well'. There is 'cohesiveness' within the group and a level of professionalism and experience that enhances the level of comfort customers have for them. This is what has made the Ballistic ToolKit go from strength-to-strength.

In 2016 alone, members of the Ballistic ToolKit have come together to provide goods and services to the US, India and various parts of Europe, either working directly to government offices, or working through Primes to satisfy the requirement for bespoke equipment for new or on-going contracts.

Through austerity and recession, the Ballistic ToolKit has provided a 100% reliable service as a highly professional and motivated UK industry group. They are looking forward to the next ten years to enhance their reputation and world-wide footprint.

Paul Everington
Chairman
Ballistic Toolkit

The Ballistic ToolKit 2016 Mission Statement:

To provide specialist equipment, training and support to Security, Military and Law Enforcement customers anywhere in the world.



The Ballistic ToolKit Industry Members 2016

In Brief: What is the Ballistic ToolKit?

The Ballistic ToolKit is a group of small and medium-sized UK companies brought together to network their skills and pool their resources in order to provide the best, and most cost-effective, solution for the customer.

The strength of this cooperative is that they can provide turn-key and highly specific solutions to their clients.

Small companies are known for their expertise in research and development, thus creating bespoke products. To ensure maximum customer convenience, one member company acts as a single contracting point, while others act as subcontractors, keeping the whole process simple and tailored to customer requirements and satisfaction.



Peli-Hardigg military cases are an integral part of the Ballistic ToolKit; as are some of the contents!



It's a relationship that works extremely well and has the benefit of HMG support. But what does HMG support actually mean? Clearly, like all other companies and interest groups, Ballistic ToolKit companies apply for their F680s/Export Licenses and Exhibition Clearances like anyone else; but ensuring that HMG has a clear understanding of the current make-up and equipment the Ballistic ToolKit has, is key to our communicating that value overseas. There are many ways we talk to HMG and these key engagements are called BTK Desk.

BTK Desk is where member-companies visit the Ministry of Defence in Bristol, MoD and DSO in London and the Export Support Team (British Army specialists) in

Larkhill, to educate them about their goods and services.

BTK Desk has even been completed overseas, namely in the United States, where the group visited the US Army exhibition and Conference (AUSA) in Washington DC to present to them (2011) and the Foreign Comparative Test (FCT) specialists across the US Armed Forces.

The Ballistic ToolKit has the ability to stretch far and wide because not all of their companies need to participate.

Because we know each other very well, several companies can speak on behalf of the collective, while the collective shares the cost, thus creating incredible value for money opportunities for all members.

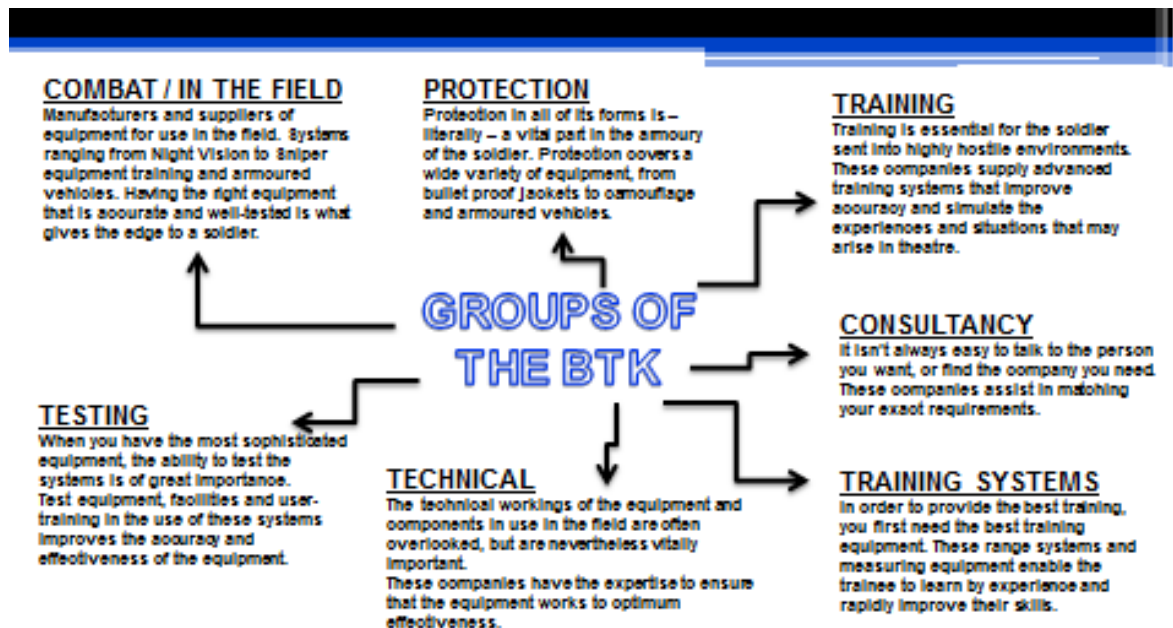
By quality partnering, the Ballistic ToolKit goes from strength to strength, something we call Really Smart Procurement!



For information about BTK Specialist, please see our next chapter concerning Company Diagnostics and Capability Clusters, which is a real in-depth and specific service offered by the Ballistic ToolKit through official request only.

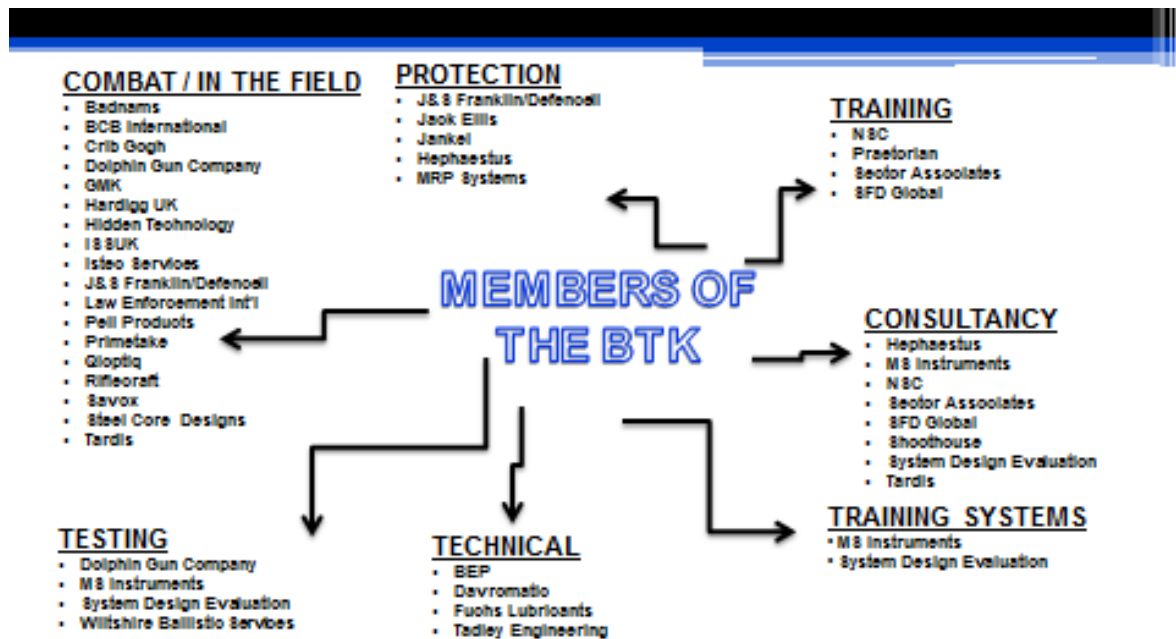
Company Diagnostics

So how do the Ballistic ToolKit rationalise synergies between companies?
Simply by placing companies into the seven disciplines detailed in the Diagnostic chart below:



These disciplines are quite generic, but give companies the flexibility of pushing the boundaries of each sector. Indeed, some companies will fall into more than one sector with their cutting edge technology, because they have more than one product to sell or, their equipment can help in multi-disciplines. It's this flexibility, or integration, that makes the Ballistic ToolKit unique, because the compatibility between say, rifle, ammunition, training, targets/training aids, cleaning kits, is strong because the companies have used each other's kit for many years and, at times, refined that equipment to 'match' other equipment within the group, thus enhancing productivity.

Below the seven capability areas diagnostic, the companies' diagnostic sits, and allows us, at a glance, to see what companies can be selected from each capability area and identify synergies between them:



Now we can see the individual company within each sector, let us break a specific companies sector down to show the different product options available. We call this Capability Clusters. With the first sector, Combat/In the Field, there are three different clusters, which, crucially, can be further shaped to your specific requirements:

Combat/In the Field

Capability Cluster One A: Range Training – rifle, Sights, match ammunition, cleaning kits, rugged hard case, portable targets and range analysis software, classroom and on-range training aids.

Capability Cluster One B: Live-Fire Shoothouse – a two floor prefab live-fire building, modular walls and boundaries, weapons, sights, ammunition, training.

Capability Cluster One C: Field – quiet field generator, integrated defence/security communications, modular field HQ, weapons, sights, ammunition, barriers, thermal imaging, ration packs, heating, body armour, armoured vehicles, tracking solutions, car-protection systems, soldier accessories, ruggedized cases.

Note: As you can see within Capability Cluster One, we go from basic training, through complex live-fire training and analysis, to real life battle scenarios. The equipment highlighted is that found within the company clusters in the second Diagnostic. And you can clearly see that there is cross pollination between the sectors in order to provide a more complete solution to each; but the examples given are constructed on the basis that the work is being done from scratch.

Of course, much more equipment is available, as highlighted within the companies Directory in the second part of this brochure; but we provide a set of clusters as a starting block, allowing you to pick a basic requirement and then have the option to shape it by having a conversation with us about your requirements (or simply adding equipment highlighted in the Companies Directory in the second part of this brochure).




Nimbus deployed

There are certain stand-alone products that don't sit neatly in any cluster. One being the Nimbus Car Protection System. One could argue that this fits nicely within protection, but if it does, it doesn't naturally dovetail into other products.

Nimbus is a set of pyrotechnics that are activated in a vehicle if it comes under ambush. Flash-bangs and smoke are fired from the car (together or individually), to distract and disorientate the aggressor and transfer the balance of power back to the victim's car, allowing it the opportunity to escape under a cloud of smoke.




Nimbus is a very good example of some of the bespoke equipment Ballistic ToolKit companies have in their canon. So it really pays to make an enquiry if one doesn't see exactly what they want within a Capability Cluster.

If an official request is made to the Ballistic ToolKit to see different clusters from different Diagnostic sectors the Ballistic ToolKit will consider putting on a tailor-made one day event, built up of three or four scenarios, with appropriate companies from the group, selected specifically for their product capabilities. These events are very expensive to put on and therefore only conducted through official request through an Embassy/High Commission or Minister level and upwards. This event is called BTK Specialist and one-such event was commissioned for the spring of 2017. All BTK Specialist events are listed as at least Confidential by group members and, are not publicised or used in any marketing activity, primarily because they dovetail into UK government relationships and operational requirements that hold their own specific classifications or sensitivities.



MS INSTRUMENTS Range Consultancy
Precision, Expertise, Quality

- Professional Bespoke Range Designs
- State-of-the-Art Product Rendering
- Only the Latest Standards



No requirement is too complex with the right group of professionals involved

IN HISTORICAL PERSPECTIVE:

The Ballistic ToolKit has come a long way since its last members' brochure back in 2009. Its remit is now the wider security sector as well as the traditional defence clients.



Extreme Performance is one of the longer-term members of the Ballistic ToolKit

Introduction to the 2009 Brochure

The Ballistic ToolKit, chaired by MS Instruments' Managing Director, Paul Everington, was formed in 2006 to assist Small and Medium-sized UK businesses in the defence sector to maximise their export potential. The primary purpose was to network their skills and pool their resources to appeal to the wider and more demanding requirements of potential customers.

Starting out with no more than a dozen members, the BTK Group has grown to 40 companies within it, who have the skill to make the most sophisticated firing range in the most rugged terrain and yet make it fully functional and self-sufficient. They also provide training and specialist equipment for professional needs. This means that companies within the BTK can come together and provide flexible solutions that harness BTK's skills to meet individual requirements without compromise.



MS Instruments' Flight Follower is a system that allows the user to analyse a projectile in flight in order to improve its accuracy

To ensure maximum convenience for the customer, once the requirement has been clearly identified and the key team members selected, the BTK works through one prime contractor within the group for any given contract, no matter how complex that contract is. The customer will have a single point of contact and a single contract for their BTK requirements.

The success and growth of the BTK, since its inception, has shown that small UK companies have the skill and marketing potential to have as great an impact, if not greater, than larger companies in the highly competitive world of defence sales.



An Historical Perspective: DESO Web Profile 2008: Praetorian International

The following article was first published on the DESO website in 2008 as a good example of a UK Defence company seeking legitimate work as a Special Operations trainer in UK-friendly countries. We are proud to say that Praetorian International is still an active member of the Ballistic ToolKit.

Praetorian – Together We're Strong

Seeking out business in non-traditional markets is not a typical marketing strategy; but for Praetorian International it has certainly paid off.

It takes time to build a business in the international defence industry. Diplomacy, trust and personality are critical. This is particularly true when your clients are markets such as the Middle East and the Caribbean; they need to feel confident that you are looking out for their best interests.

Praetorian International, a UK-based company, is a market leader in military doctrine and counter-terrorism training for military, law-enforcement and security organisations. It has conducted training on four continents and mentored security forces for high-profile international events, such as Fifth Summit of the Americas, the Pope's visit to Jordan, the Noble Peace Prize and the World Economic Forum. Established in 2006, Praetorian recruits Special Forces soldiers to train specialist units in the Middle East, Northern Europe, the Caribbean and the US.

'Our business naturally takes us abroad and I knew where I had to go to build it,' says Philip Greatrix, co-founder of Praetorian International. 'However, from the beginning, we knew it was important to register the company in the UK and conform to UK rules and regulations. This gives us long-term sustainability that we might not have if we were based in some of the countries in which we do business, and hopefully it makes us more valuable in the longer term.'

Making Good Contacts

Philip and his partner David Heeley set up Praetorian when they saw an opportunity while working in the Middle East. From the start, they established very specific criteria for the type of client-countries they were looking for, focussing on second or third world countries with emerging markets that were UK-friendly and hosting high-profile international events. It wasn't important whether the countries had slow growth, just as long as they didn't have extreme ups and downs, which could cause concerns for the UK Foreign and Commonwealth Office (FCO)



An Historical Perspective: DESO Small Business Unit Company Mail Shot: Badnams/Fuchs Partnership

The partnership that became the original blue-print of the Ballistic ToolKit's ability to work together and partner under a single contract was the Badnams/Fuchs Partnership, which was put together by the Small Arms Desk Officer in the DESO Small Business Unit (SBU) in 2005. The following mail shot was aimed at the Indian market and drawn up by the companies in consultation with the DESO SBU, which resulted in a six figure contract win to supply the Indian Army.

The Badnams/Fuchs Partnership – Increasing the Operational Envelope of Military Generators

Badnams Ltd manufacture the Whisperlite® range of ultra-quiet, lightweight portable generators originally developed to satisfy the rigorous front-line power supply requirements of the British Armed Forces. Tested in extreme conditions, the B22 generator successfully provided power in searing 55 degrees heat, arctic conditions of minus 32 degrees at altitudes of 5000 metres. The low profile of the 1KVA B21 and 2KVA B22 means they are visibly discrete in addition to their outstandingly low acoustic signature. Both generators have long run times e.g, B21 48 hours and B22 24 hours on a 20L Jerrycan, which can be changed while the generator is running.

Badnams generators can power a wide range of AC based equipment. The generators charge batteries and directly power other equipment e.g. laptop computers, communication sets, battlefield systems, artillery systems surveillance and field equipment. The casing remains cool during operation, which facilitates rapid shutdown and redeployment if required. When Badnams required a lubricant for their generators operating in extreme hot and extreme cold conditions, without changing the oil, they turned to Fuchs Lubricants (UK) Plc. This was the start of a successful cooperation between the two companies and Fuchs Lubricants (UK) Plc is the preferred lubricant supplier to Badnams Ltd.

Mike Pearson, the Managing Director of Badnams Ltd, commented: 'Using high quality synthetic oil from Fuchs gives our generators excellent performance, in demanding battlefield environments.'

Fuchs Lubricants (UK) Plc

Fuchs won the major part of the last British MoD Lubricants tender. The business was awarded on the basis of reliability, responsiveness, quality of product and technical expertise. These factors combined with a modern production facility equipped with the latest Siemens Process Control system for blending operations made Fuchs an excellent choice as a lubricants partner. Chris Tarling, Technical Director of Badnams, said: 'Fuchs are easy to reach, they listened and talked to us and this approach put Fuchs in a unique position to propose their lubricant solution for our generators.'

The Lubricant Solution

The Fuchs brand Silkolene has been a world leader for decades in the motorcycle world and it was this experience that proved to be crucial in the selection of the optimum engine oil for the Badnams generators i.e. one grade that could cover the temperature range -32C to +55C, without requiring an oil change and extend the service interval from 100 to 300 hours. Mineral oil based products were ruled out immediately as their Pour Point (minimum temperature below which the oil ceases to flow) is typically around -30C for a 15W/40 and -32C for a 10W/30 engine oil.

The search for the optimum base oil combination to achieve the low temperature performance requirement turned to synthetic oils. However, not all synthetics are equal in this respect. Base oils derived from the process of highly refining a petroleum base oil, called hydrocracking, are included in the definition of a synthetic oil. However, even a 5W/40 engine oil based on hydrocracked mineral oils only has a Pour Point of around -39C. In addition to base oil selection the additive chemistry also needs to be right at low temperatures to avoid additive dropout.

The lubricant solution finally chosen by Fuchs for the Badnams generators was a 5W/40 fully synthetic PAO/Ester based engine oil having a Pour Point of -51C.

Excellent CCS test results (cold-cracking simulator test is a method of determining the low temperature performance of lubricants). This lubricant solution allowed the generators to cope with a normal start up temperature of -30C, an emergency start up temperature of -41C and still work happily at +55C in the desert.

The History of the Ballistic ToolKit

In 2005 an operational requirement was created for a sophisticated 50 Cal rifles package, to include: rifles, match ammunition and in-theatre bespoke training to a specific user-group. This was required within a very short timeframe and needed to be totally secure and able to withstand the rigors of strict export control regulations.

In order to achieve this, the Small Arms Desk Officer in the Defence Exports Services Organisation (DESO), created the ‘Sniper Pyramid’, comprising of three UK SME’s with a wealth of Special Forces experience, whose equipment and doctrine complimented each other. The solution was successful and in a strange way mirrored a partnership the same Desk Officer had put together before, which made a highly competitive generator/fuel/lubricant package created by specialists from two different parts of industry: Engineering and Etymology (the Badnams/Fuchs Partnership). The resulting quiet generator out-performed all competition at both high and low temperatures and was also significantly more quiet and portable too, thus fulfilling a large requirement for the Indian Army.



The original industry member companies of the Ballistic ToolKit in 2006

To bring together a wider group of companies, with additional skills, was the next aim, and so the Ballistic ToolKit was formed. The original Mission Statement for the group, which was still an umbrella interest group under DESO's guidance, was: *to be able to design, build, equip and maintain a sophisticated firing range anywhere in the world and make it self-sufficient.*

Like the Sniper Pyramid or the earlier 'partnership' (all of whom joined the Ballistic ToolKit), the group could tailor any small arms requirement under one contract. One company would prime, while the other companies, selected from the wider kit of companies, would sub-contract to that 'prime'. The group still had to adhere to the wider restrictions imposed upon them by HMG for more sophisticated export offers; but their tailored solutions fully met those stringent asks and got much attention from worldwide governments, as well as getting more bespoke support from its own, namely the MoD and FCO.

As their reputation continued to grow, Trade organisations offered the Ballistic ToolKit various packages to be part of their empire – for a cost – but the group soon found that they were beginning to be spoken about in the same breath as large prime defence contractors and didn't need any more support or assistance, other than what they had already in place free of charge from DESO, MoD and the wider British Armed Forces.

The first Live-Fire Event took place in 2006 at City of London Police and included members of the Armed Forces as well as police officers and members of the MoD. This proved to be very successful.



A former railway tunnel in Devizes provides BTK with its own testing range

Within the first year, companies within the Ballistic ToolKit won some sizable orders because they could suddenly act like a larger company and provide a more complete solution than their competitors. Within no time at all their order book was in the multi-millions of pounds.

At the same time, and quite interestingly from Her Majesty's Government's point of view, the Ballistic ToolKit black-balled certain companies and individuals from being part of their trusted family. This did two things:

- One, give DESO the confidence to release the group and make it totally industry-led, and
- Two, identify companies not supported by the Ballistic ToolKit for various reasons and monitor and support their legitimate trade

In 2007, with the Ballistic ToolKit now an industry-led entity with its own Chairman and committee (which DESO still had a seat on), the second Live-

Fire Event took place in Tunbridge Wells and was the first time overseas dignitaries took part, including India and the USA.

In 2008 the Live-Fire Event became even more ambitious and moved to Bisley and Pirbright, for a show-and-tell from 30-plus companies and a range afternoon run by the British Army. Over 30 defence and Embassy staff attended the event, which was bettered the following year when Larkhill became the venue for the annual Live-Fire Event, and Paul Everington took over as Chairman. This success was repeated in 2010 and 2012.



Even a lunch break is a working lunch at BTK Live-Fire events



A well-attended presentation at BTK Live-Fire 2016

Over the past ten years, since the Ballistic ToolKit has been an industry-led entity, it has continued to work closely with HMG and the Armed Forces; but has now reached out into the wider Security sector, where they have much influence.

The membership has changed slightly to reflect its new position and this is clearly shown in its revised Mission Statement:

The Ballistic ToolKit's mission is to provide specialist equipment, training and support to Security, Military and Law Enforcement customers anywhere in the world.

In an ever-changing world, the Ballistic ToolKit has continued to evolve and offer flexibility and niche solutions to resolve some of the most sophisticated of challenges.



Weapons and match ammunition trialled on the range

Crucial to the Ballistic ToolKit's ongoing success is its remit to reach into the Security sector, working with law enforcement and security forces around the world. They still work with the Defence Security Organisation (former DESO) and showcase their goods and services at annual events such as DSEi and the Home Office led Security and Policing exhibition (S&P), where they receive many delegations as individual companies and, as part of the Ballistic ToolKit Showcase presentation.

Ballistic ToolKit companies usually have branding on their stands at major exhibitions, such as DSEi and S&P, to show that they are a member of the group and therefore show some familiarity with the potential customer.



Ballistic ToolKit branding

In order to keep their internal relationships fresh, the Ballistic ToolKit meet once a year for their annual conference and show-and-tell, where they discuss their latest products and possible synergies. Traditionally after this they work with DSO in order to provide a Live-Fire demonstration to Defence Attachés and other foreign dignitaries, so the potential user can see and understand the advantages of the UK equipment the Ballistic ToolKit has on offer and the synergies formed.



The Nimbus Car Protection system in action, which has been sold to VIPs across the world

With the seventh Live-Fire Event, 12 April 2016, the format was changed, because it didn't have an external facility for potential users to fire the weapons available, mainly because the Ballistic ToolKit were running a string of specific presentations to show the vast levels of expertise and professionalism available through any order placed with them. There was a real desire from the group to clearly explain to potential customer, the level of engagement and professionalism that is in each Ballistic ToolKit order.



Primetake's door-breaching rounds as demonstrated in Larkhill 2009

There is highly innovative science and engineering skills behind the cutting-edge technology on display at any Ballistic ToolKit event, and it was the aim of the group to explain some of the nuances of that expertise as part of their 10th Anniversary Live-Fire Event and encourage greater interaction with potential customers.



Internal exhibition of Ballistic ToolKit companies at Larkhill 2010

The 2016 event was followed up with a specific country with a niche event in the Spring of 2017, and this constant level of official engagement is crucial to in stimulating ongoing interest in the Ballistic ToolKit's capabilities.

2016 Live-Fire Event



A delegate gets to grips with a BTK solution in the tunnel

BTK Live-Fire 2016 took place on Tuesday 12 April 2016 at Wiltshire Ballistic Services. Like all Ballistic ToolKit events, there was the opportunity for official delegates to shoot our weapons and really get to grips with our products, which are some of the best in the world. It's not just the gun, it's the match ammunition, cleaning kits and additional accessories and training that make it the complete, tailored solution, to a professional's needs.

Working alongside UKTI DSO, we encouraged official delegations from over 15 countries to visit us at our testing tunnel in Devizes, Wiltshire, taking them down by coach, with their corresponding DSO Desk Officer, providing them with detailed fact sheets and brochures, as well as practical demonstrations,

presentations and Meet the Ballistic ToolKit stand-call opportunities. This really was a fantastic opportunity to show our VIPs the depth of knowledge and professionalism in each order we process.



BTK meet the delegates and the British Army at BTK Live-Fire 2016

As ever, members of the British Army came along to see and understand more about the new products we had on offer. This being our 10th Anniversary year, there were special presentations from the current Chairman Paul Everington and the man who constructed the Ballistic ToolKit in the very beginning, Craig Cabell (DSO), who, as founder, was keen to show how we now work with the Rapid Response Unit (RRU) in the Disaster Relief and Humanitarian Aid (DRHA) sector.

The Ballistic ToolKit has come a long way over the past ten years. It no longer looks at the Defence sector, it now reaches deep into the Security sector and has found a niche in DRHA too.

The 10th Anniversary event was a resounding success; but as long-standing professional companies, we are aware that like any exhibition of marketing opportunity – of which BTK Live is a sophisticated one – there needs to be quality follow-up.

To follow-up such an event, especially with Embassies and High Commissions, we try and use the relevant UKTI DSO Desk Officers. Sometimes this is either impractical or we have been invited to talk to the dignitary directly. But the crucial thing we are trying to show here is professionalism. We believe we can improve a friendly country's capabilities and we need to ensure that they have all the necessary information from us in order to achieve that the way they want it. It is the main reason why we produce an in-depth brochure, so gentle reminders of our unique way of doing business is there for perfect understanding; especially when it comes to the Company Diagnostics.



Up close ballistic analysis at BTK Live-Fire 2016

Case Studies

This next section looks at several case studies, where company-members of the Ballistic ToolKit have worked together to achieve success in marketing their wares around the world.

This isn't unusual practice, it's *regular* practice. In the past, Fuchs Oils and Lubricants has worked with Riflecraft to provide cleaning kits for their rifles, Defencell has worked with MSI and WBS to offer trials and support to create better value for money solutions, Tadley made parts for a £0.75m contract primed by another Ballistic ToolKit member. WBS supported trials for Tadley's bid to the Home Office here in the UK.

What's key here is: how lateral thought and innovation *create* better working practices and more robust and tailored solutions:

Showcase One:

Riflecraft

UKTI DSO Requirement

We were contracted by DSO to provide an optics suite and equipment training package for 1000 x 50cal sniper weapon systems to the Pakistan armed forces. The optics selected met the exterior ballistic requirements of the round and the spotting scope and rifle sight reticule was designed, by Riflecraft, to meet the customer's specific needs. The training was provided "in-country" prior to the adoption of the equipment into service. These systems have been used extensively on the Pakistan/Afghanistan border! Contract value over £1million.



UK MoD SA80 Mid-life Improvement

We entered into a competition, and were awarded a contract to supply the UK mod a rail system for the current service rifle sa80/185a2. We co-designed and oversaw the manufacture of the solution at a CNC manufacturer in the USA and supplied over 120,000 rails on time, on budget to meet an urgent operational requirement. We received a letter of commendation from UK mod for our problem free execution of said contract. Contract value £24 million.



NATO Member HMG MLI

We designed a replacement barrel support for the Browning M2 .50cal HMG to accommodate the in-line mounting of high powered IR lamps and lasers without any other functionality changes to the weapon. We manufacture the retro fit part in the UK to our ISO 9001/2008 standards and it enables most models of M2 HMG to immediately be compatible with all emerging light, laser and NV/TI technology. Bringing a 1920's designed weapon firmly into the 21st century! Under the customer's evolving mid-life improvement programme we delivered over 3000 systems on time, on budget! Contract value over £5million.



Showcase Two:

Panel Partition Systems

Having just got back from an eventful Shot Show in the US, it was noticeable that the market is 'buzzing' with interest from Special Forces (SF) Units both State side and here in Europe about Panel Partition System's ballistic and non-ballistic training panels (Lite). The ability to quickly and effortlessly reconfigure CQB scenarios for 'Live' and 'dry training' is a must and is the direction all serious SF and Law Enforcement Agencies are going.

Habitually, CT Teams and CAT, Direct Action Teams, call them what you will, train for OPS in isolated kill houses, which in most cases they inherently know the layout of the houses and the rooms, advantage of training is lost rapidly. During an operatives tour on the 'Team' this can render both individual and team ineffective.

When considering the Emergency Response, the ability to rapidly deliver orders and execute an ER is a skill in itself because most of the time the Operatives do not have accurate plan of the rooms or knowledge of scenarios. Basic things such as: not knowing the room layout, position of hinges on doors, lighting and furniture placement will throw a team's scheme and manoeuvre out. This is a



skill that PP-Systems' reconfigurable partition system can help them prepare for.

A former CT Instructor from Hereford said:

"For me during my delivery of CT Training we had to change rooms with ply wood and improvised barriers and the planning and execution of training had to be really well thought out. Having teams go through multi room scenarios is immense in the development of team cohesion, TTPs and developing flexibility while working within SOPs. The results I had at Hereford by changing the room configurations were unbelievable and highlighted

weaknesses is our own training delivery. If I had a system like yours I am telling you now I could have reduced an eight week operative's course to four weeks and they would have had far more challenging scenarios running through

the full spectral of arrival, planning, execution and debrief. On top of that I would have been able to take them through the advanced levels of CT far quicker and in a far more effective way”.

Being able to change rooms with a 360 view point, that is visually and ballistically covered, is so beneficial to Instructors when setting up scenarios. The ability to rapidly change rooms has a cost effect that should never be underestimated.

So where’s the partnering here in this case study? PPS make the panel systems, Praetorian assist them with providing SF training, military doctrine training manuals and front of house marketing assistance. So communication and clarity of product is key in this Showcase.



Showcase Three:



It is always a challenge to convince clients why they should pay for training when they can get it, potentially, for free. Clients who are serious about investing in their Forces know that getting ‘free’ training is a very hit and miss affair. They also know that the standards of the training provided and the long term benefits to their personnel can usually fall well below that which can be offered by a dedicated training organisation such as Praetorian International.

Cost is relative to value, so yes, we are not the cheapest but what we offer and provide is incredible value for money.

Below are a few of our repeat clients, most of them can get free training but have identified the ‘value added’ of employing us:

His Majesty, King Abdullah II of Jordan. Commander in Chief and Head of Jordan’s SOCOM.

Government of Norway – HSK/FSK Special Operations

Government of Holland – Brigade Special Operations, Royal Marechaussee

Government of Trinidad and Tobago – SAUTT and MOD

Government of Bahrain – Bahrain Defence Force

Government of Pakistan – School of Infantry, Quetta and Special Forces

Lockheed Martin – STS TVRTP

We are the only company that offers a full guarantee. Our training will match and exceed the client's expectations; an example is our past performance in Jordan which is widely recognised to be the 'region's' most successful example of equipment procurement, integration and training in the last few decades. We trained, advised and mentored over 465 SF snipers during an intensive 28 month training period. We saved our clients \$5.8mUSD over a \$23.6mUSD budget (almost 25% of project value) and enhanced their sniping capabilities and Force Multiplier effect for the next 20 years. I can send further details including case study and references.

Showcase Four:

Badnams

The opportunity created by forming of the BTK group enabled Badnams Ltd to collaborate with the Fuchs Oil company to produce the MOD's first lightweight, near-silent generator which could operate over the extreme operating ranges of -32°C to $+55^{\circ}\text{C}$, using a single oil, as requested by the MOD.

The continued collaboration with Fuchs Oil has enabled Badnams Ltd to win a development contract with a UK Prime, whilst developing our new generation of near-silent generators which can run on NATO F-35 and NATO F-44 aviation fuels, as being the major aviation fuels used in theatre by the MOD.

A further successful collaboration has been with iSSUK. Badnams Ltd were



iSSUK's imaging equipment being powered directly by Badnams BP1600 generator

able to rapidly modify the output voltages and current of the generator to match the requirement of iSSUK's imaging equipment -as used in their rapid response unit. This enabled the equipment to operate for an indefinite period, operating beyond the initial 12 hours of battery use. The imaging equipment was thereby enabled to run either continuously from the generator, or for the generator to recharge the imaging equipment's batteries.

Had the BTK group not existed, this degree of collaboration would have been very difficult to achieve.

Companies Directory

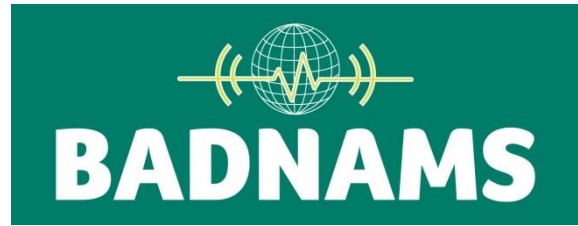
The rest of this brochure is dedicated to the companies that make up the core of the Ballistic ToolKit, alongside some of the specific equipment they are currently marketing. Please be aware that this is just a snap shot of the equipment and professional services that they have on offer, so I urge you to log onto their websites or drop them an email if you have any queries about your requirements. Please remember, if they don't have the solution, they may well know a company within the group who does!



*The BTK have received many awards across their broad section of companies including
Investors in People*

Badnams
Chris Tarling
Technical Director
Badnams Ltd.

01380 830 468
07960 047 827



Badnams Wisperlite[®] Generators

Badnams Ltd are one of the world's leading UK-based, specialist suppliers of customised generators and have designed and manufactured the world's only quiet, lightweight generator that has low emissions.

Starting with a request to satisfy the rigorous front-line power supply requirements of the British Armed Forces, Badnams Ltd developed the Wisperlite[®] range of generators, resulting in successful deployment in Afghanistan. These generators are now in everyday use by British forces around the world.

Current products:

BA1600 Aviation fuelled generator

BP 1600 and BP 900 Gasoline fuelled generators



The BA1600 Aviation fuelled generator in its winter colours



AT YOUR SERVICE

Davromatic manufacture components for the Defence and Aerospace industries, but specialise in the manufacture of ammunition components, including the following products and services;

- Precision Sniper Projectiles in all calibres.
- Steel Cores for Armour Piercing, Ball, Tracer and Target Practice rounds,
- Fragment Simulation Projectiles used for testing bullet proof vests,
- Armour Piercing Shells used for testing armour,
- Primer components used in artillery rounds,
- Grenade components,
- Design and development of ammunition components under AS 9100 Quality System
- Components used in the manufacture of weapons,

The precision of the components produced insures that extreme accuracy can be achieved by the final product.

Investment in state of the art CNC machines and the applications of this new technology with specially developed machining processes have enabled Davromatic to provide the capability of machining ultra high precision components in a variety of difficult to machine materials.

In process gauging of 100% of critical dimensions has given Davromatic the ability to offer its customers a unique quality service.

Integral to the manufacturing process, the quality of all products and services is maintained at the highest possible standard and conform to AS 9100 and ISO 9001.

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www.davromatic.co.uk



Non-lethal Boat Stopping Systems

Provided in boat-mounted and handheld formats.

Designed to help Law Enforcement operatives to quickly stop non-compliant boats used in narcotics trafficking, piracy or terrorist acts in our ports, docks or rivers without harming the boat or occupants.



Floating Body Armour



BCB's self-inflating body Armour. It is the only system available worldwide with a massive 275 Newtons of buoyancy.

BCB's Self-Inflating Body Armour inflates within seconds of coming into contact with water. Ideal if the wearer was to be shot or injured in the line of duty in a maritime environment. It is the only system available worldwide with a massive 275 Newtons of buoyancy. The system is self-righting, which means that it will keep the wearer's airways clear from the water.

Contact:

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SURVIVAL GEAR VISIONARIES AIM HIGH BY GOING TO EXTREMES

Named after an Arête in Snowdonia, with its products tested in the jungles of the Far East – there’s no doubt Crib Gogh is a company that is going places.

The up-and-coming supplier of extreme survival kit for sports and soldiers, which works closely with a Government laboratory supplying the Ministry of Defence, goes to extreme lengths to succeed.

When it comes to testing its tactical vests and rucksacks for use by the military, Technical Director Steve Heaward and his Crib Gogh team hot-tail it to the steamy forests of North Malaysia.

It’s there – and on the mountain slopes of Snowdonia - that they give their products the ultimate work-out, making sure that their ground-breaking designs can withstand the worst that can be thrown at them.

Given Steve’s survival skills – he’s a former serviceman – it’s no surprise that the original idea for the company came to him when he was roped to the Crib Gogh arête in 2006.

He quickly surrounded himself with a crack design and test team, based in Burslem, Stoke-on-Trent, and set about developing multi-functional rucksacks that are ultra-durable.

“We took a requirement by a user, looked into it closely, postulated a worst-case scenario, and then worked backwards to design the item,” he said.

“We have designed products which have more than one capability,” said Steve. “There’s multi-function with the add-ons that can be attached to the rucksacks, and the integrated systems are cross-disciplinary, with various uses across different areas of the military.”

Working as a team, the colleagues in the Stoke nerve centre – including an IT specialist, three ex-defence industry personnel and another ex—military man – soon developed a unique product range.

Just-launched is the Constrictor Module, which revolutionises military applications, while other products in the portfolio are a Spartan Light Combat Rucksack and – for climbers and outdoor enthusiasts – Mountain Raptor and Alpine Raptor designs.

Key to the success of the company, which has already notched up sales to military suppliers in France, Malaysia, Colombia and South Africa, is partnership working.

“Our complete soldier platform with next-generation features has been tested by both the Defence Scientific and Technology Laboratory (DSTL) and the Forensic Ballistic Laboratory at Helston,” said Steve.

“We have a close relationship with the DSTL, who are outstanding in their field, and we also work with the Royal College of Physicians, the Royal Society, Staffordshire University and Keele University, and North Staffordshire Chamber of Commerce.”

With kit being supplied to the British Antarctic Survey as well as specialist mountain cadre warfare units, special forces and air- and sea-borne commandos, the products need to be certified on a health and safety basis as well as survivability.

The combat versions of the rucksacks are biometrically tested and Crib Gogh is a certified member of the BSI ISO9001 quality scheme.

The company is currently working with aerospace and communications companies Astrium and Iridium to develop a tracking system that will cope with the signal fragmentation in high tree canopies.

DEFENCELL



J&S Franklin have over 70 years' experience in the manufacture and supply of defence and security equipment to governments, security services and NGOs around the world.

DefenCell is a range of lightweight protection Barriers that have been extensively tested and deployed operationally for blast mitigation, ballistic protection, HVM & ECP barriers and UXO containment. DefenCell is non metallic and ideal for ranges and shoothouses/CQB.

DefenCell MAC is our new range of lined weldmesh metal gabions supplied in several standard sizes and fully compatible with current systems.

DefenCell Barrier and MAC systems have both been fully flood tested in the US by the Army Corps of Engineers.

DefenCell Barriers is a construction system, filled with earth, sand or aggregate and designed for a wide range of protection applications. The well-proven cellular structure combined with the strong durable geotextile material makes DefenCell a versatile but lightweight and compact solution that is easily installed to provide protection to personnel and infrastructure from a variety of ballistic threats.

DefenCell units are non-metallic and therefore produce no secondary shrapnel. The modular sections are ideal for ranges, either for back stops or dividing walls and the multi shot capability makes them very durable. Installations in the UK and US have been tested against a wide range of weapons and approved by NRA and other authorities.

DefenCell is environmentally neutral and the cellular nature of the design allows for the easy collection of used rounds. Successful testing as a UXO containment system has led to approval by US DDESB for clearance of mortar and artillery ammunition and unexploded ordnance up to 100lb NEQ.

DefenCell is used to build realistic and safe shoothouses and CQB structures. Easily deployed and filled with sand, the DefenCell structures can be used for live fire and EMOE training. Removal and disposal is also a simple process.



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www.defencell.com



Dolphin Gun Company was formed to initially assist Mik Maksimovic and Peter Hobson with their long-range firearms development for their chosen sport of Long range International Rifle Shooting.

Dolphin has evolved and is now a subdivision of Hobson Industries with world class facilities. These include a state of the art ballistics testing range and laboratory, where it can test and certify materials to STANAG level 3 and above. Dolphin holds an extensive list of munitions available for testing and pridfes itself on having available in-theatre firearms and munitions for realistic materials testing. It also stocks many thousands of rounds of ammunition from around the world which can be used for ballistic testing of Reloading and Ammunition Development Area materials. Dolphin's firearms manufacturing facility is equipped with state of the art equipment which allows it to produce long-range firearms of unequalled reputation from the finest materials.

Dolphin export to many nations producing bespoke/custom firearms for many international teams and well known international competitors. Using State of the Art CNC manufacturing it can produce short runs of Firearms components and can generally undertake any Firearms specific machining and manufacture.

Please contact us to discuss your needs or for assistance.

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Email: Mik@mikdolphin.demon.co.uk
www.dolphinguncompany.co.uk



PRECISION ENGINEERING AND SURFACE TECHNOLOGY ON AN IMPRESSIVE SCALE

BEP Surface Technologies possess engineering skills, experience, manufacturing plant and environmentally accredited processes that enable us to create and deliver truly unique engineering products and services that will exceed your expectations.

We design, manufacture and refurbish chill rolls for world leading laminators and cast film producers in the packaging and plastics industries as well as for high quality textured paper manufacturers.

Our ground breaking copper shell chill roll technology offers faster line speeds, 10 times the thermal efficiency of steel rolls, reduced cooling costs, lower energy consumption and premium quality end products.

We also have the capability to undertake chill roll auditing analyses covering surface quality, cooling efficiency, temperature distribution and condition of journals.

Services Include: Copper and steel shelled chill roll design, manufacture and refurbishment; Superfinish technology, textured and specialist finishes; Heavy deposit nickel and copper electroplating; High specification electroplating for precision industries; Large capability machine shop services; Turning, grinding, polishing, grit and shot blasting.

BEP Surface Technologies Limited

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Telephone +44(0)161-724 9090

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EPA Manufacturing Ltd is a prominent UK Defence Company delivering a diverse range of bespoke defence projects from concept to completion.

We have quickly established a good reputation for innovative products and solutions for the UK MoD, CAST and Private Companies, with many completed projects to our credit.

Continuously forward thinking we are always striving to improve and think of better ways to bring existing products into the 21st Century.

Operating from a purpose built manufacturing facility at Faldingworth in Lincolnshire and recently Pennsylvania in USA , with large energetic storage capability including high explosives and production facilities capable of producing over 2 million rounds of Sniper ammunition per year.

We have a dedicated trained and skilled workforce used to dealing with complex energetic products. We are licenced for all types of energetics and pyrotechnics, Home Office approved for all types of weapons and ammunition.

We are homologated to CIP through the London Proof House, which means all our ammunition is tested to CIP standards and approved by CIP. In addition we are able to test to NATO EPVAT and SAAMI standards. We are also ISO 9001 registered company.





To support our manufacturing we have a dedicated R&D facility with a full ballistic test suite. Our knowledgeable trained staff is able to conduct R&D projects and testing to all International Standards.

We have our own 25 meter Fully instrumented ballistic test range, a 10 meter fully instrumented -CIED test range, licenced areas for load development and testing to NATO, CIP and SAAMI standards

In addition we have High Speed Video, standard video capture, Velocity and Pressure equipment for, CIP, SAAMI and EPVAT standards, Muzzle Flash and sound recording, Target impact analysis and and Dust Ingression testing.

In addition we are able to conduct accuracy and armour firings on our Outdoor 100 meter range.



We manufacture a wide range of products, specialist ammunition, Sniper Extreme, designed for Police and Military use, offering many advantages over conventional ammunition. Calibers from 5.56 up to 12.7mm, in all natures, expanding, lead free, Armour Piercing and Armour Piercing Incendiary.

For CIED we manufacture a wide range of disruptor cartridges in 12 gauge and 12.7 (50BMG and a unique IED clearance device, TLOCs which can safely clear a lane 50 meters long and 300mm wide.

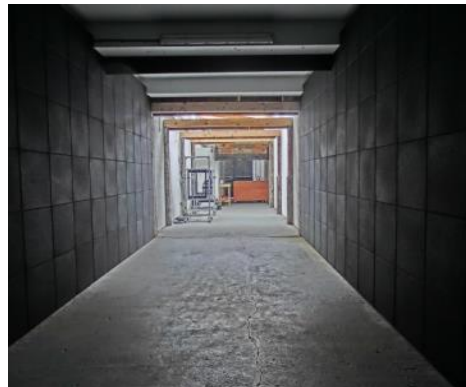


Manufacturing
Facility

R&D Facility



Indoor Range



SALES-Head Office: 0044 (0)1777 871310
SALES –Direct Contact: 0044(0)7803 591756
Manufacturing: 0044 (0)1673 866200
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Foxton brand is a global solution for audio video specialist equipment systems and solutions for Defence, Homeland Security and Humanitarian applications from Intelligent Monitoring Systems a division of STS Defence Ltd. A UK design and manufacturer with dedicated project management and service team, application support with international sales and distribution.

The Foxton DVR Multi-function High Luminance LED Torch enhances DSS capability with an innovative design to compliment the capability and survivability of today's modern soldier. The unit provides a white light 1000 Lm (visual distance 300m) torch with 1080P DVR with Auto Digital IR-Cut Shift Module (6EA 850nm IR LED) night illumination (15m) in a hand held device waterproof to 100m with GPS metadata. The Foxton Defence Operational Kit features a rugged and waterproof STORM case with Two Padlockable Hasps. Sensor Identification Label with Model, Serial Number and NSN to match the enclosed lazer etched Torch.



The Foxton range includes Body Worn Video. Our G1 unit providing an evidence gathering capability featuring a lightweight, compact 1080P DVR with Infra-Red (IR) Night Vision > = 8 m, GPS and optional connection with a two way radio for Remote Speaker Microphone (RSM) feature. The unit is approved for the procurement to UK Police Forces and includes the option of Klickfast mounting.

Next generation - G2 BWV features the most advanced world class, robust, lightweight, waterproof (IP68) Body Worn Video (BWV) with SD, HD & UH (Ultra High) resolution up to 2160p (4K) colour capability with GPS time, date, position, device ID stamping and user-authentication with integrated bi-directional 4G/LTE live streaming & GPS Track. Suitable for evidence gathering, command, control and monitoring requirements for Bluelight, Homeland security, Loan workers, Integrated crisis response and humanitarian multi-agency roles. The unit is designed for the harshest of operating conditions to include a special variant for the Fire Service.

Contact details:

Robert Matthews – Business Development Manager
Direct Mobile: +44 (0) 7826 912283

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Tele: +44 (0) 1202 950270 or (0) 2392 584222

web: www.foxton.uk.com



Fuchs Lubricants (UK) plc

Military Lubricants

The reliability and performance of lubricants used in the defence sector is of utmost importance.

Fuchs is a major supplier of military grade lubricants to the British Armed Forces due to our reliability, responsiveness, quality of product and technical expertise.

Our comprehensive portfolio includes many products which conform to Nato specifications.



Fuchs expertise, creativity and competence is proven not only in the supply of current Military specification Lubricants, but also by working closely with Original Equipment manufacturers (OEM's) to provide specialist lubricant solutions to optimise equipment performance.



Badnams : Fuchs UK worked closely with Badnams on the lubricant used in the silent running Badnams generators currently in use with the British Armed forces. This close cooperation continued in work on lubricant and lubricant/fuel mixtures for the new Badnams JP8 fuelled generators.

The lubricant is a key component and attention to detail in this area provides enhanced equipment performance.

Fuchs UK continues to support Badnams by providing the optimum engine oil solution for their innovative new engine and in their current work on projects with a major international defence company.



John Holdcroft CEng.

Trade & Export Manager

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Hephaestus Consulting provides specialist design, test & evaluation services to military and civilian customers. In addition to a unique range of real, practical experience including the design and testing of lightweight vehicle and aerospace armour, IED, RPG, blast and Anti-tank munitions, Hephaestus are also experts in the design testing and integration of composite armour. In addition to this Hephaestus can also supply advice and threat analysis based on detailed experience of real-world scenarios for vehicle and civilian security and infrastructure solutions.

Past clients include UK and European Police forces, MoD's , Armoured vehicle manufacturers and covert protected security vehicle builders.

Hephaestus has more than 15 years experience in ballistic testing and has experienced the frustrations of ballistics many times. Failure of an armour during qualification having previously passed during development is not acceptable but happens and often cannot be explained.

In order to remove this variability in ballistic testing Hephaestus produces a range of highly engineered, high quality test surrogates. Conforming to the dimensional and performance specifications set out in major testing standards, Hephaestus surrogates have full traceability, including independent metallurgical reports relating to *every item* ensuring the ultimate in consistency and repeatability.

Hephaestus surrogates include hard to obtain / unavailable projectiles such as those for STANAG 4569 / AEP-55 levels 5 and 6. Due to the mass production techniques employed these surrogates represent a significant cost saving over OEM items making them ideal for development testing.

Surrogates available include:

- KE Projectiles
 - STANAG 4569 Level 6 projectile(s) (30x165mm AP-T & 30x173mm APFSDS)

- STANAG 4569 Level 5 projectile(s) (25x137mm APDS-T & APFSDS)
- .50” SLAP
- STANAG 2920 Fragments

- Fragmenting Grenades / Blast
 - STANAG 4569 Level 1 DM31
 - STANAG 4569 Level 2> AT Mine containers
 - VPAM BRV 2009 DM51
 - PAS 300 DTG5 MON 50/100/200 DFFC

Dr Paul Bourke

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HTSI Ltd. is a specialist developer and manufacturer of a comprehensive, secure standalone tracking solution.

All our products, including all software platforms, are designed, manufactured and written in house by our specialist research and development team.



Using the HTSI tracking platform it is possible to securely track vehicles, people and a variety of assets, either overtly or covertly.

HTSI Ltd. is a Queens's award winning company.

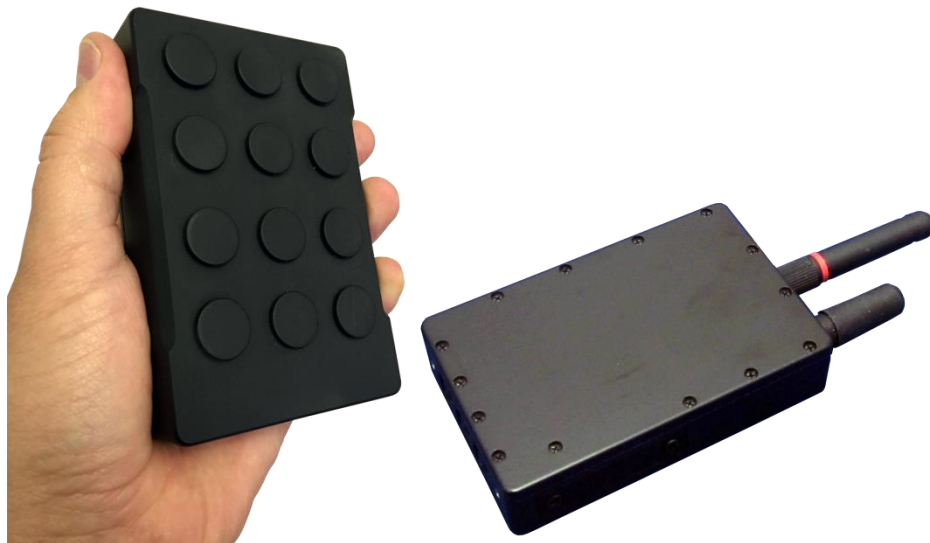
This award is a tremendous accolade and demonstrates our wholehearted commitment to quality, innovation and growing the business internationally.

Winning this prestigious award means international businesses will be able to recognise immediately that both our products and business have been given the Royal stamp of approval from Her Majesty The Queen, and that we are recognised as a company of excellence.

Our portfolio of branded products will proudly display the Queen's Award Emblem, signifying our commitment to maintaining a standard and quality that the UK is recognised for.

Our customer database encompasses Government departments, Police and blue chip corporate companies globally.

With offices in the UK, Holland and the USA we offer our customers unrivalled support whenever required.



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www.hiddentec.com

ISTEC



ISTEC Services Ltd is the United Kingdom's principle supplier of high quality, precision engineered small-arm gun mounts and weapon ancillaries for the air, sea and land battlespace.

Formed in 1985, ISTEC Services Ltd continues to be a leading designer and manufacturer of specialist military equipment, which supports the modern war fighter worldwide. During that time, ISTEC Services Ltd has developed a reputation as a dynamic, customer-focused company; delivering pragmatic advice and high quality products in a timely manner.

ISTEC is ISO 9001:2008 accredited company with a reputation for providing robust, reliable and effective weapon mounting equipment and ancillaries in support of continuing overseas operations.

ISTEC's boat, helicopter and land vehicle mounts are currently operated by users in the UK, USA, UAE, France, Italy, New Zealand, Canada, The Philippines and Saudi Arabia; as well as being supplied to some of the world's leading defence contractors.

Specialising in fully integrating a customer's current inventory of crew-served weapons, either retrospectively onto vehicle platforms or by design at the concept stage, ISTEC's diligent work ethic ensures the requirement is always fully met.

Istec Services Ltd. www.istecservices.com, Tel: +44(0)1992 517000, Fax: +44(0)1992 538535, PO Box 36, 7Hertford SG13 9HN

iSSUK

iSSUK Limited

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Email: sales@iss-thermal.com

www.iss-thermal.com



iSSUK is a UK company that specialises in designing and manufacturing uncooled thermal imaging cameras and systems based on the latest European technology.

iSSUK believes that Innovation comes through listening to and solving the problems and requirements of the end user. To this end iSSUK are investing heavily in R&D and working with some of the world's foremost Thermal, Software and Optical engineers.

Our products provide an unrivalled performance and capability and we are consistently setting new standards for equipment by introducing new features and facilities not found on other equipment.

- AiV75 & AiV100 – industry leading handheld cameras designed for Police, Border Security, VIP Protection and Military users.
- CrosswIR640 – thermal weapon sight, featuring iSSUK “SmartCal” technology and smooth digital zoom with no loss of boresight.
- TapIR 640 OEM Engine Core – compact lightweight shutterless design with a rugged machined aluminium chassis. High shock resistance makes the unit suitable for handheld security and TWS applications.
- Night Vision & Red Dot Sights – iSSUK offers a wide range used for general situational awareness or covert surveillance, robust proven technology that provides you with an edge in the fight against terrorism and crime.

For further information please contact

Julie Haslam – julie.haslam@iss-thermal.com Mob: 07809 351619

Jack Ellis BODY PROTECTION



Made in Great Britain, Jack Ellis has been manufacturing and supplying body protection systems to the defence and security market for many years, delivering the latest lightweight protection to Governments and NGOs around the world. In partnership with our customers, Jack Ellis works to understand operational requirements to recommend and develop solutions to meet individual specifications. Offering reliable advice, we provide a rapid and comprehensive service.

Our strengths, from being Home Office Certified, to an ISO9001:2008 accredited manufacturer of high quality body armour, plates and helmets, have been recognised internationally by some of our 5000 strong customer base which includes NATO, United Nations, and the UK MOD, a great success for Jack Ellis and for British manufacturing.

Established over 10 years ago by its parent company, J.D.Wilkie Ltd. a global textile manufacturer with over 140 years of experience, Jack Ellis was born through demand from the defence and security sector for high quality British

made uniforms, personal protection and equipment. Jack Ellis boldly continues to establish long term relationships within this industry as a leading British manufacturer.

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Sales Manager

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JANKEL

PROTECTION IS EVERYTHING



Founded in 1955, Jankel is a family owned business that specialises in protection solutions for military, government, aid agencies and NGOs throughout the world.

Headquartered in the UK, we undertake design, development, prototyping and production at our secure site in Surrey. In addition to our UK facilities, high volume production is also carried out from our purpose built sites in Jordan and South Carolina USA. A partnership approach to every solution ensures a smooth journey from idea to delivery.

Jankel's proven product areas include, armoured light tactical and counter terrorism vehicles, security systems and customised occupant survivability solutions.

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DDI: +44 (0) 1932 834420

Email: julie.taylor@jankel.com

Website: www.jankel.com

PO Box 1, Weybridge, Surrey, KT13 8XR, United Kingdom

LEI

The company is a NATO codified manufacturer of small arms, special purpose weapon systems and suppressors (silencers). Our products have been supplied to over 40 countries.

Law Enforcement International (LEI) is a private company with over 20 years' experience specialising in design and supply of small arms, ammunition and military & police products. The company has built up a worldwide reputation for quality and reliability.

We manufacture suppressors for most pistols, rifles and sub-machine guns and also manufacture small arm weapon systems to clients' specifications. We have the facilities to refurbish and overhaul small arms, including the manufacture of weapon parts and components using modern CNC machines.

Our products are supplied to the UK police and military and were used by Allied forces in both the Gulf wars. We are an ammunition and firearm supplier to the Police, and MOD. Specialised products and services are also supplied to the MOD and other government agencies.

We are also involved in the manufacture and distribution of small arms and in 2009, after competitive trials, were awarded the prestigious contract to supply the L129A1 7.62mm "Sharpshooter" rifle to the British Army.

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Email: lei@lei.co.uk
www.L129A1.com



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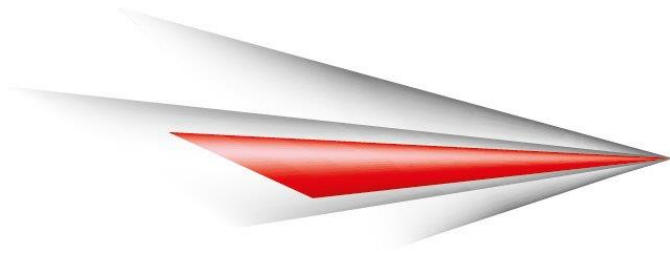
MRP Barriers

The MRP Modular Reusable Protection system consists of hollow, interlocking blocks which can be filled with water or sand to provide ballistic protection from fragments and/or small arms fire.

These units have been in use around the world since 2001.

There are 6 basic shapes, which can be used to construct protective walls up to 6 metres high and to suit the shapes and lengths required. The blocks are generally filled with water, as this is easy to fill and empty if the blocks need to be relocated or replaced.

The walls can be constructed with a minimum of labour and with minimal support services. Providing a clean and technically resilient protective wall.

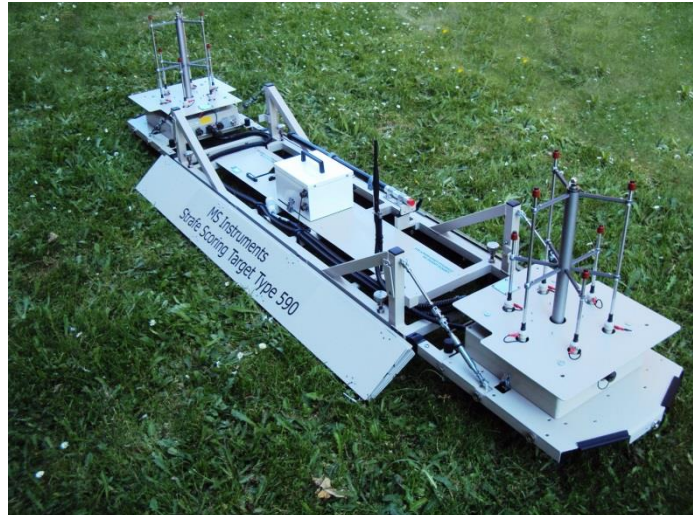


MS Instruments

Established in 1972, MS Instruments specialise in the design and manufacture of live-fire training systems and ballistic instrumentation.

We design and manufacture flexible, easy to use and easy to configure live-fire training systems to meet the needs of the military and police forces around the world. Our wealth of experience and expertise in the ballistics field means that we can design and fully equip your range, whether indoor or outdoor, from scratch or simply upgrading your current facilities. Our ballistic instrumentation includes the Flight Follower family of instruments. These are systems, designed for use by ammunition manufacturers and proof/test houses that film projectiles in flight for fault finding and viewing ballistic capabilities of projectiles. In addition to our ballistic instrumentation and training systems, we also offer the NIMBUS Non-Lethal Vehicle Protection System, which comprises a series of covertly fitted pyrotechnics that can be activated from within the vehicle to protect the occupants from hostile situations.





We also conduct ammunition, weapon and ballistic material testing at our dedicated, secure range and test facility in Devizes. For more details please see the Wiltshire Ballistic Services page.

We place great emphasis on meeting our clients' needs and providing complete solutions, supporting our equipment throughout its service life and beyond.

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BR5 4BQ
Tel: 01689 883020
Fax: 01689 871392
Email: sales@msinstruments.co.uk
www.msinstruments.co.uk

NSC

NSC is a world-class provider of cutting-edge training, simulation and consultancy services.

Since our formation in 1991, we have been at the forefront of our field – developing and delivering innovative solutions for military and civilian customers around the globe.

We are adept at educating senior commanders and young soldiers individually and collectively, and can boast an impressive record of providing training, simulation and consultancy services tailored to our clients' requirements for more than two decades.

Our precision gunnery and decision support tools help those in defence prepare for an ever-evolving operational landscape.

We pride ourselves on the fast, flexible services we deliver and our ability to know what challenges are on the horizon, ensuring that our clients stay ahead of the game.

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Peli-Hardigg brings to the market a solid experience to protect the most valuable gear on the field

Peli-Hardigg™ is the largest manufacturer of military and aerospace approved reusable, recyclable, plastic ATA 300 CAT 1, LRU, AGE, WSTAGE, logistic containers and cases. For over 60 years, Peli-Hardigg™ engineers have developed custom solutions for the transport and packaging needs of the military sector.



The Peli-Hardigg cases are rugged, watertight, airtight, chemical-resistant, lightweight, durable, impact-resistant and reusable. They are designed to efficiently keep the sensitive and vital equipment safe from moisture, dust, sand, salt and impact. Safe inside, the equipment is protected against drop damage, while the rib design maximises stacking and stability en route.



The Peli-Hardigg cases have been tested in the field as well as in combat situations. They are used to protect and transport aircraft pieces and engines, military diving scooters, all types of drones/UAV, weapons and missiles, satellites, robots, electronic equipment, among others. No matter the size and characteristics, Peli-Hardigg offers a solution to any company's need of safe transportation and extreme protection.

The Peli-Hardigg Mobile Military Cases range provides war fighters extreme protection to the sensitive electronics, weapons, optics and communication equipment, needed to accomplish the missions.

Maurice Morsia

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<https://www.youtube.com/watch?v=V86kIPyKNTQ>

<https://www.youtube.com/watch?v=z6rRBvJG2kQ>



Peli Products (UK)

Peli Products UK have been associated with BTK for many years and over that time, the product ranges have developed to offer a wide choice in both lighting and protective cases.

Peli Area Lighting Systems are ideal lighting units for operations where there is no power supply available.

These systems offer man-portable, rechargeable, LED lighting for isolated locations. With silent operation and no trailing cables to create a trip hazard, they offer a safe and economic alternative to generator powered lighting. This range has been designed for military applications including urgent operational requirements, vehicle or aircraft maintenance and search and rescue.

Peli's renowned watertight, crushproof Protector Cases and Peli Storm Cases, are available with engineered foam solutions for all types of equipment, Peli cases are available in over 60 sizes. The inserts can be configured specifically for any weapons and additional peripheral items for maximum protection.

Peli weapons cases with custom foam inserts reduce the risk of damage to weapons during transit and offer secure transportation of weapon-mounted sights with no need to re-zero. Cases are sealed (to IP67) against moisture ingress reducing the chance of rust and corrosion.



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Replicate real world training scenarios with Partition Panel Systems. We have a range of wall panels, window and door entry frames available in Lite, Heavy-Duty and Ballistic versions. The panels easily fasten together to allow rapid assembly into CQB training scenarios. The modular and durable format allows users to quickly change scenarios, which is vital to ensure training is realistic and challenging. Produced in consultation with Special Forces, Military and Police Firearms specialists, that can be used for basic and high level training, including aggressive door and window entry and ballistic training up to 5.56mm.

Contact: www.pp-systems.co.uk | info@pp-systems.co.uk



Praetorian International
1210 Park View
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Thaele
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www.praetorianinternational.com



Praetorian International is a UK company that is approved by the UK MOD and UK Trade and Investment Department (UKTI). We are ISO 9001:2008 accredited and conform to internationally recognized codes of practice. We design training courses that are extremely flexible and if changes are required then we will react accordingly. We work with the client to achieve the best results within an agreed budget and timescale.





Our clients include:

His Majesty, King Abdullah II of Jordan. Commander in Chief and Head of Jordan's SOCOM.

Government of Norway – HSK/FSK Special Operations

Government of Holland – Brigade Special Operations, Royal Marechaussee

Government of Trinidad and Tobago – SAUTT and MOD

Government of Bahrain – Bahrain Defence Force

Government of Pakistan – School of Infantry, Quetta and Special Forces

USAF - Solicitation Number FA5705-11-R-P500 Frontier Corp Sniper Rifle Maintenance

We are the only company that offers a full guarantee. Our training will match and exceed the client's expectations; an example is our past performance in Jordan which is widely recognised to be the 'region's' most successful example of equipment procurement, integration and training in the last few decades. We trained, advised and mentored over 465 SF snipers during an intensive 28 month training period. We saved our clients \$5.8mUSD over a \$23.6mUSD budget (almost 25% of project value) and enhanced their sniping capabilities and Force Multiplier effect for the next 20 years. I will send further details including case study and references.



Established in 1991, Primetake designs, develops, manufactures and supplies specialist ammunition for professional users within military and law enforcement. Their product portfolio spans from Tactical 12 Gauge and Omega Sniper/ Match grade ammunition to pyrotechnics, distraction devices, saluting ammunition and other technical products, whilst continuing to offer a world leading range of bird scaring cartridges for the military and civil markets.

The company operates from a modern facility near Lincoln in the East of England and offers an unrivalled worldwide distribution network, exporting high quality cost effective ammunition solutions across the world. Their products have a reputation for high performance, quality, reliability, safety and of course innovation and enjoy an international following among many elite military and law enforcement units.



Primetake prides itself on technical excellence employing an expert Research and Development team. Products are continuously reviewed for performance and consistency throughout their lifetime, enabling Primetake to stay ahead of the market; while a rigorous development process and a highly skilled workforce mean that every Primetake product is thoroughly tested and completed to an exceptional standard before leaving the premises.



Primetake is part of Key Technologies Ltd, a leading defence and security technology group in the UK. Primetake is an ISO 9001 and ISO 14001 accredited company and along with their partners, endorse and subscribe to the TRAC and TRACE due diligence and anti-bribery platform owned and maintained by TRACE INTERNATIONAL INC.



Qioptiq, an Excelitas Technologies Company, designs and manufactures photonic products and solutions and is one of the world's principal designers and manufacturers of infra-red (Thermal), image intensified and fused night vision equipment. More than 100,000 individual night sights have been supplied to over 56 different countries for a wide range of defence, police, border security, coastguard and search and rescue applications. Qioptiq also provides a range of world leading surveillance equipment utilising both visible, image intensifying and uncooled thermal imaging technology.

Qioptiq in-service sights (including equipment for specialised sniper applications) are military ruggedized, high performance and low power. Our mission is to deliver high performance equipment for demanding environments and a fully integrated through life support service that exceeds our customers' expectations.

Qioptiq designs and manufactures solutions that serve a wide range of markets and applications in the areas of medical and life sciences, industrial manufacturing, defence and aerospace, and research and development.

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Riflecraft Ltd was started by our director, Andrew Evans-Hendrick after leaving the armed forces. It is staffed by several other former members of the Armed Forces, as well as suitably trained civilian staff.

Coming from the world of sniping and reconnaissance, Riflecraft has specialised in meeting the evolving operational requirements of the world's Armed Forces, small arms and observational teams.

We have been fortunate in being awarded several contracts with both UK MoD and friendly nations to provide both lethality and STA requirements, many of which have had to be supplied on an urgent operational requirement tempo.

We design and manufacture complete weapon systems from .22lr to 20mm, mid-life improvement programmes for in-service weapons, sound moderators for all small arms, mounting solutions for support weapons and complete STA suites for observation teams including integrated NV/TI and data capture options.

We also offer all supporting training of users or supporting staff for any system we provide.

We enjoy taking existing equipment, an evolving operational requirement and effectively bring an innovative solution in on time, on budget!

Bring us your lethality or STA problems and we will give you a solution!



SAVOX COMMUNICATIONS COMPANY PROFILE

Savox Communications, a privately held company, was founded in 1982 and today is one of the largest professional communication solution providers in the world.

Savox is providing integrated defence communications solutions supporting the mounted and dismounted operations - including future soldier systems – and platform intercom systems for both Naval and Land applications. The Savox product portfolio, including solutions covering defence, covert users, disaster response and fire and rescue sectors, represents a unique and broad spectrum of products to support military, special forces, public safety, first responders and disaster response personnel, as well as working professionals in their daily operations around the globe.

SAVOX THOR Tactical Headgear for changing Operational Requirements

The THOR Tactical Headgear System was designed and developed to meet the stringent needs of Finland's '*Future Warrior 2020*' Programme, together with the headgear requirements of all arms of the Finnish Defence Forces (FDF). In addition, the new headgear meets and surpasses the demands of a wide variety of other military and security end users, including Combat, Marine, Special Forces and SWAT units.

THOR is a complete, fully integrated system incorporating ballistic protection, communications, night vision goggles (NVGs), hearing protection and powered accessory rails in its design. Due to its modular construct, it can be configured to meet the needs of different users in both operational and training and scenarios.

THOR's lightweight ballistic, helmet shell offers state-of-the-art protection through its 'boltless' design and latest Dyneema® and aramid material composition. To reduce fatigue for the wearer – a major issue with many other headgear solutions – the highest levels of comfort and stability have been reached in THOR's design, confirmed by users during extensive trials – the development phase of THOR included two extremely thorough prototype rounds involving exhaustive field and usability testing. In addition, because the main sub-systems and components, such as its NVGs, have been designed, specifically, for THOR integration reliability has been achieved ensuring total harmony between the individual elements of the core system.

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SDE

System Design Evaluation Ltd (SDE) is an Independent Technology Company whose core business is in the provision of impartial technical support and advice to both government agencies and industry at all levels in the defence sector. This support spans the breadth of the land, sea and air domains and ranges from assisting strategic policy makers to detailed technical assistance at operational level both in procurement and research. The extensive knowledge base, skills and experience of our multi-disciplined project teams enable the Company to fully support and, more importantly, populate the many processes that both support and contribute to the Concept, Assessment, Demonstration, manufacture, In-Service and Disposal (CADMID) procurement cycle and Defence lines of Development (DLOD). The Company is fully accredited to ISO9001.

The core activities of the Company are: System Integration Support; System Performance and Effectiveness; Design and Simulation; Safety & Environmental Risk Management; Trials Management

Training: Defence Services, Defence Analysis, Requirements Engineering, Technical Authoring, Third Party Assessments, Knowledge Management, Project Management

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Steel Core Designs Ltd is a Kent based company conceived 5 years ago specifically to capitalise upon the current director's skills and knowledge of this particular market place and produce a premium quality rifle, able to compete with the world's best. The initial task was to design, test and develop the rifles, once completed we embarked upon the marketing and sales drive which is 100% export driven, specifically for the military and law enforcement sector.

Our three main calibres are exclusively military in 7.62 x 51 NATO, 0.338 Lapua Magnum (8.6 x 70) and 12.7 x 99 NATO. The main military offering is the SC-76 and SC-86 Thunderbolt Extreme and the SC-127 Cyclone HSR.

SCD Weapon Overview:

The SCD rifle is a premium product, designed specifically to meet military requirements for a rugged, high precision rifle, often operating in extreme

environments. Steel Core Design's rifles are designed and made in England, using the latest technology they are precision built to fine tolerances with high grade materials. Our Quality control meets the highest recognised standards.

Steel Core Designs has proven itself to rank amongst the world's most accurate rifles. It is by design and not by chance that our rifles have proved to be reliable, ergonomically pleasing and durable; built to meet and exceed the most stringent safety standards.

The SC-76 "Thunderbolt Extreme" Short Barrel (SB) – engagement to 600 metres.

Long Barrel (LB) – engagement to 1000 metres.

The SC-86 "Thunderbolt Extreme" Short Barrel (SB) – engagement to 1400 metres

Long Barrel (LB) – engagement to 1800 metres

The SC-127 Cyclone HSR engagement to 2000+ metres

NB: The above is dependent upon ammunition, type of target, Barometric conditions and of course shooters skill.

- Our receivers use a rugged, high tensile steel 4-lug bolt, incorporating an innovative firing pin system. The short firing pin travel enables a very fast "lock time" (firing pin release to primer impact) of around 1.5 milliseconds. This improves rifle control during the firing cycle.
- SCD barrels are produced to a very high quality match grade specification, fluted for improved heat dissipation and rifle balance. Barrels are PVD coated and are threaded at the muzzle for easy attachment and detachment of the muzzle brake and/or the fitment of suppressor.
- Heavy recoil plate system is located into both the action body and rifle stock. This feature reduces flexing of the stock structure, assists in rifle accuracy, and enhances recoil management.

THUNDERBOLT

SC - 76



SC - 86



CYCLONE

LSR



MSR



HSR



HURRICANE

HUNTER



VARMINT



- The ergonomic stock design follows the natural path of the recoil. The barrel, receiver and butt are in straight line to the users shoulder. Rifle control during the shot is maximised and assists the user in spotting shot impact and new target acquisition.
- Low friction and wear resistant VDP coatings reduce the need for lubrication. The weapons are ideally suited for the extremes of heat, cold, damp and dry dusty conditions found in current operational environments.
- A high quality trigger is vital to enable shooter and rifle to perform together. All SCD triggers have a two (2) stage operation, first and

second pull, factory set to 1.5 Kg. pull weight. The release is both crisp and predictable. Maintenance requirement is minimal. The complete trigger unit can be readily removed for cleaning.

- The rifle safety lever is incorporated in the trigger mechanism for ease of use.
- The 600mm Picatinny scope rail is available with a parallel or angled option to suit the weapon and/or customer requirements. The top rail will accommodate additional thermal and night vision equipment. The integrated side and lower Picatinny rails are supplied for supporting additional equipment and accessories.
- The SCD designed bipod is fully height adjustable and fits directly to the forend. The bipod features a swivel action which rotates around the centreline of the bore. This feature minimises shot deviation due to torque reaction. The bipod features a quick release mechanism and needs no tools for removal or fitting.
- Our highly efficient muzzle brake is a standard fitment to all our tactical rifles and greatly reduces recoil and increases control of rifle movement during the firing process.
- The “Thunderbolt Extreme” has a unique ambidextrous, ergonomically designed stock. The unique blend of “rubberised” materials used in the stock design reduces vibration and are highly resistant to impact damage. The specially formulated synthetic material used in the stock construction is highly resistant to attack from solvents and many commonly used chemicals. Aircraft grade alloys combined with our synthetic coating result in a stock which is stable, durable and quiet to carry. Proven to perform in extremes of hot and cold operational environments.
- The SCD stock features a folding butt as standard for easy bore sighting, cleaning, maintenance and transit. The butt is adjustable for length with spacers and incorporates a quick deployment mono pod, fully adjustable with thumbwheel fine adjustment.
- Standard Colours are Black & Dark Earth. Non-standard stock colours are available but may be subject to additional cost.



Tardis plc have developed a forensic tool that is capable of reliably providing an account of a weapon handler's actions once the fire-arm has left the armoury, from the issue of the weapon itself to the quantity of rounds fired – but, FRAS has so much more.

The FRAS device is designed to fit to the rail of any weapon using standard neck-held fittings, and once secured in place the two are paired and then ready to capture any data the weapon generates when used. As each weapon is identified by an individual serial number, so is FRAS and the two are paralleled to unite them as one, so that data captured remains unique to the weapon and the person that discharged the rounds.

As weapons are deployed in differing climatic conditions, so is FRAS, and as such we have different integral re-chargeable DC power-packs relevant to the country of operation. FRAS will operate for several days from any one full charge, and is fully re-charged in just one overnight charging session. It would be entirely consistent for FRAS to be acquired as a set to ensure full operational capability worldwide.

Any data generated from FRAS can be downloaded from the device to a PC by standard 2.0 USB, but before the download is permitted, the software requires an authentication from an encrypted FRAS Server to ensure the paired data is validated.

Once the data has been downloaded, FRAS' memory is automatically cleared, but it simultaneously stores a permanent log of the recipient device that the data was downloaded to, so that a full and comprehensive history is known from FRAS user-source (and hence paired weapon) to gatekeeper and any attempt to alter or tamper with the data will be recognised by FRAS and recorded.

FRAS' capabilities: The detail that can be drawn from a weapon once FRAS is configured and fitted:

- It identifies the geo-location of any round fired by GPS

- The compass heading of the round by azimuth
- Whether the round was in the incline or decline
- The velocity of the round
- A Round's trajectory
- Irrefutable Data safeguarding any law enforcement officer for wrongful weapon discharge
- This same technique will also identify fatality by ricochet due to there being no direct line of weapon source by trajectory
- We are also able to identify when the magazine is fitted, and account for every round that is discharged
- Additional data that FRAS can establish is whether there were any misfires, double-taps (usually through poor quality ammunition), a jam in the magazine and whether the correct SOP was used to clear the round and reload, and of course whether a round was the military phrased and often feared 'dead-mans-click'

The benefits are immediately clear, in that, it is capable of providing evidential data for Court if deemed necessary— saving the Judicial system and the public purse millions per year – but also provides immediate relief to those in the front-line when being judged on the outcomes following an armed engagement, as the data is auditable and irrefutable and handled by the Armourer or similar issuing authority.

So, how do we do it?

- FRAS measures individual signatures of weapons; they carry their own unique signature of vibration – the DNA, relative to the type of weapon which is used relative to a model
- The vibration signature is different for each weapon type manufactured globally; an AK could not be confused with a Sig-Sauer or H&K as an example – they would each be different relative to their type and model
- A unique algorithm to FRAS ensures the science is pure (Source Code held by Tardis plc)

As we know, there is an increasing need to provide accountability of the use of weapons once they leave the armoury, and particularly true in the Public environment, but given the current threat levels that developed nations face.

There is perhaps no better time than the present to equip our highly trained services with such a low cost solution that delivers such a significant value in auditable, traceability and irrefutable data safeguarding any law enforcement officers or military personnel with post event reviews.

Once FRAS is installed there is no going back and no escaping the data; it's encrypted, it is tied to the weapon by serialisation number and in turn tied to the user operator at the point it is issued from the armoury – including every Round. The data generated by FRAS will become a life record to the user and the weapon/s they deploy with, almost like a personal medical-card which can only improve respect in the Public eye for licensed firearms when deployed in the Public domain.

FRAS' ongoing development plans, Tardis plc will soon be releasing FRAS-Air, which is an outstanding solution encompassing various technologies but harmonising these as one essential forensic tool by the inclusion of UAS/UAV systems with the use of FRAS-Ground Software suite compatibility.

This will allow FRAS-Air to be deployed in unison with civil operational theatre, both tactically and training, but with the assurances of a full forensic suite of support post the event so that operatives can benefit from a continuation of life training by measurement and examination of personal results.

An illustration of this capability is perfectly provided by a wagon-wheel style presentation identifying each marksman on the periphery and the target at the hub and as Rounds are discharged their path is highlighted by a colour-coded worm-line trajectory giving a near real-time account of the contact.

That is to say, who fired first and in what order. The data will carry all the incumbent features FRAS provides today, but with the added ability to support a virtual live record of data as it is fired live from the weapon.

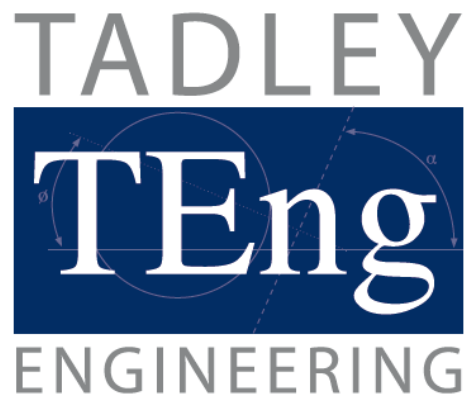
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Tadley Engineering is a Hampshire based engineering company providing World Class Mechanical Engineering and Manufacturing services to the Defence, Nuclear and Aerospace industry. We specialise in:

- Design
- Precision machining
- Sheet metal work
- Structural fabrication and coded welding
- Press work
- Clean room electromechanical assembly

Alongside our engineering services, we provide a range of surface treatments including metallisation, shot blasting, wet paint and powder coating.

Our company has the highest commitment to quality and we hold accreditations in AS9100, ISO9001 and BSEN1090 to execution class 4 (EXC4). EXC4 is applied to special structures or structures with extreme consequences of structural failure.

With a proven track record with delivering on highly complex engineering projects for the UK MoD, we are delighted to support clients with any sensitive or bespoke manufacturing requirements.

Our defence products and services include:

- Ballistic “make-safe” devices and gun clearance traps
- Weapon storage cabinets
- Bespoke armoured structures for military vehicles and platforms
- Spare parts and components for weapons (105mm light gun)
- Picatinny rail adapters and weapon mounts
- Precision projectiles



Wiltshire Ballistic Services have been testing weapons, ammunition and bullet-resistant materials for over 40 years.

We test to both national and international standards, and the equipment used at the range is of the highest quality and accuracy, testing both small and medium calibres as well as large projectiles and rockets.

The company's independence guarantees impartial results; whatever the result, confidentiality is assured. With the guidance and proactive assistance of experts who have a wide base of experience, you can have confidence in dealing with a true centre of excellence, which represents the best opportunity to develop a product for your own market or customer – and quickly.

We have testing facilities from 10m to 80m and can batch, proof-test, all bullet-resistant materials including armour plate, shields, vests, glass, bomb disposal suits, bank counters, doors, civilian safes, cockpit doors and much more, up to 20mm indoors and larger calibres at an outdoor facility.

As the pressure to make lighter, better fitting, high standard protective materials increases, Wiltshire Ballistic Services strive to test to the highest standards, while helping customers develop their products by testing new materials and compositions. WBS can test your products quickly and efficiently and work with complete customer confidentiality.



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ZERO Cases (UK) Ltd



ZERO is a world-class manufacturer of military-grade, lightweight deep-drawn and fabricated aluminium, roto-moulded plastic, enclosures, assemblies and waterproof cases for the defence, aerospace, industrial, medical, electronics, oil & gas and telecommunications markets. Our real product is protection - ensuring the safe transport and viability of valuable, fragile, equipment and electronics, without compromise. Our on-staff engineers can design application specific protection for any military or industrial requirement. For Unparalleled Protection - visit www.zerocases.com.

Case Study

Siemens manufacture Small Gas Turbines (SGT) and engaged with ZERO as part of their improvement process for serviced parts. They are tasked with

sending engineers and repair kit worldwide and require protective enclosures to ensure on-time arrival in workable condition.

Siemens were previously using:

- Wooden Crates
- Flight Cases
- Aluminium Containers

Discussions were started with a possibility of a family of products which delivered long term ROI, reduced serviceability, repair and replacement. ZERO proposed a family of products which offered staged Protection vs Investment:

Siemens Gas Turbine Engines – Clutch Case

World Class Manufacturer of Industrial power plants

Siemens Issues

- Avoid damage (and loss) of expensive engine Gearbox/Driveline
- Devise a Packaging Regime with
- Corporate Identity
- Easy Access for field personnel
- Compliant with Siemens H&S Regulations
- House it in a Carry case which is
- Compliant industry standards
- Rugged
- Flexible
- Lightweight

ZERO Product Solution

- Modular Container with Foam Internals
- Internal Hi-Density Foam with Cut-out for gearbox
- Orientation Features
- Paint Colour & Labelling to Corporate standards
- Embossed Siemens Logo

Tim Bristow

ZERO Cases (UK) Ltd | European Sales Manager

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ZERO Cases (UK) Manufacturing Capabilities ([watch video](#))

Afterword



For a large group of UK SME's to stay friends for over ten years and work cohesively on a regular basis, is rare; but that's what the Ballistic ToolKit has done. How?

They started out in 2005 as an umbrella interest group in the Small Arms sector, brought together by the Small Arms (SA) Desk Officer in the former Defence Exports Service Organisation (DESO), MoD. Back then, the country desk officers of that organisation processed the F-680 applications to Export Control in the MoD, and it became apparent to the SA that UK companies were not winning overseas contracts, often losing out to the Germans, Austrians and the USA; but the opinion was: if the small bunch of UK Small Arms companies got together and provided a more robust, perhaps tailored, solution, for each contract opportunity, they would do better and provide options way in advance of expectations. The partnering of companies had recently been achieved by bringing a generator company and an oils and lubricants company together to provide a more robust solution for a contract opportunity in India.



A tailored group of three companies was therefore tried-out under a specific operational requirement, which became known as ‘The Sniper Pyramid’. The companies came together to provide a weapon, match ammunition, and specific training, to satisfy the Export Control constraints of an opportunity in a certain country.

The licence and the resulting contract were both successful, encouraging companies to work with other UK SME’s within their sector. Interestingly, the group, now called the Ballistic ToolKit, ‘black-balled’ certain companies from joining, because they didn’t like certain practices of those companies. This gave the group some credibility with Her Majesty’s Government (HMG) and quickly placed them as the centre of excellence in their own field, forming themselves as an industry-led group in 2006 and keeping the title Ballistic ToolKit, as it had already generated much respect in official circles.

The Ballistic ToolKit has had three Chairmen over the past ten years: Guy Savage, Mel Townsend and Paul Everington. Guy took the helm for the first three years and oversaw the first three BTK Live-Fire Events. Mel then led a management team to direct the group into specific specialist areas to encourage further collaboration and vet companies further. He also worked closely with the British military for trials and identifying opportunities. Once that had been achieved, Paul Everington took over and ran the group, working alongside HMG to ensure that the BTK Live-Fire event with the British Army, became an annual calendar feature and was bigger and better than anything a prime defence contractor could achieve.

With the support of the former-DESO, the British Army, and local police and security forces, the BTK punched well above the weight of the individual

SME's within it. It hosted and impressed dignitaries from London-based Embassies and High Commissions with its BTK Live-Fire events, which not only boasted cutting-edge equipment, it took the customer experts out onto the range and proved it through live demonstrations. This approach inspired much confidence and, consequently, won many contracts, further enhancing the group's reputation with defence and security professionals around the world.

Nowadays, the Ballistic ToolKit has reached a much wider audience in the Security, Cyber and Disaster Relief sectors, evolving with the times; but not ignoring their original footprint, so constantly pushing the boundaries of their cutting-edge technology in the Defence world. This has ensured that the Ballistic ToolKit is a group worthy of serious interest, and continue to stimulate its relationship with some of the biggest and most sophisticated customers in the world. For example, its relationship with the USA is excellent. It regularly attends SOFIC, the annual exhibition and conference of Special Operations Command (SOCOM), in Tampa, Florida and has also had its own event at AUSA in Washington DC, one of the biggest US Army events one can attend.

The only criticism of the Ballistic ToolKit is: it is poor at marketing as a brand and identifying and sharing its success as a lucrative business venture. This is mainly because it is not an umbrella company, it is an umbrella organisation, who work on a gentleman's handshake (or gentlewoman's, in some cases!); so it makes it difficult for official users of the group to identify the overall capability. My only observation regarding that is: in ten years, the Ballistic ToolKit has never turned down any challenge and has successfully delivered everything asked of it on several continents and sometimes to extremely tight deadlines. This is commendable; but because there may appear to be blurred lines of engagement, sometimes it is difficult to appreciate if the group are capable of certain complex asks and, therefore, there is sometimes a reluctance to make complex requests of it.



This is something the Ballistic ToolKit appreciates and takes very seriously. It is currently addressing this issue, to the extent where you will find in this brochure a very important chapter concerning Diagnostics. Diagnostics informs potential customers of the various Capability Clusters the group can offer under specific sector disciplines. It is there to explain what the clear art-of-the-possible is for each of the seven capabilities areas and, to inspire confidence when customers draw up their requests of the group. These lines of engagement are crucial to boosting confidence with professional users but, those same potential users still need to challenge the art-of-the-possible because, as I have said, the Ballistic ToolKit has never turned down a challenge in their areas of expertise.

The Ballistic ToolKit has shown over the past ten years – and highlighted in this brochure – a consistently high level of professionalism and cohesiveness, that is rare to find in the competitive world and, I'm certain that they will continue to build upon this for many years to come.

Former SA, MoD



The Ballistic ToolKit provides specialist equipment, training and support to Security, Military and Law Enforcement customers around the world

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