

Rugged Tactical Tools for Extreme Conditions (RTTEC) Series

Selected Industrial Views

On the occasion of SHOT Show 2017, MILITARY TECHNOLOGY publishes the Annual Rugged Tactical Tools for Extreme Conditions (RTTEC) Series that conveys the thoughts and messages of the world's tactical tools leaders, according to the question: "How do classify tactical gear and what features must THE perfect tactical tool have, and what new features/tools can we expect in the near future??"

Armadillo MERINO

Andy Caughey,
Managing Director, Armadillo Merino



(Photo: Armadillo Merino)

Skin, that's right skin and I'm specifically referring to your skin.

Why? Because your skin is your body's largest sensory organ with millions of sensors spread over two square yards that actively monitor your pressure, pain, heat and cold. Your body's natural and instinctive responses to your activities are vitally important to manage as they influence your health, sense of well-being and whether you sweat, shiver or move. By maintaining and protecting your skin you have identified the single biggest contributor to achieving optimal performance and a significant tactical advantage? Read on to learn why ...

Skin health is influenced by diet and also what you wear skin-side. The clothing layer you wear next-to-skin should provide a healthy buffer zone around the body that allows you to perform and not just to protect you from the external environments. While outer layers are specifically designed to protect, the next-to-skin layer is even more important in providing multi attribute properties that can maintain health and improve your operational effectiveness. Armadillo MERINO designs and manufactures the most advanced next-to-skin clothing in the world. Our tactical gear is chosen by elite professionals operating in the most extreme environments, including astronauts, SOF, SWAT teams, pilots, fire fighters, explorers, mountain rescue teams and other outdoor participants.

Tactical gear? – You beat. Skin-side garments are a vital contributor to your ability to perform and protecting you from danger. The multi-attribute properties of Armadillo MERINO garments make them the most effective piece of tactical clothing you can purchase for your own safety



The multi-attribute properties of Armadillo MERINO garments make them one of the most effective pieces of tactical clothing soldiers can purchase for their own safety and performance.

(Photo: Armadillo Merino)

and performance. Our gear helps you move harder, faster, stronger and for longer. Consider these multi-attributes:

Protection – save your skin with no melt, no drip fabrics and inherent flame resistance up to 1000°F, combined with anti static properties and broad-spectrum UVA and UVB sun protection. No toxic clothing chemicals in our clothing to damage your skin or your long-term health.

Performance – our gear delays the onset of sweating by up to 50% compared to synthetics. Achieve more MPG with a reduced rate of moisture loss and calorie burn while improving your rate of recovery. Armadillo Merino® fabrics manage moisture in both vapour and a liquid forms reducing the chance of chilling when standing after intense activity. No more cotton chills! However in the heat our kit will keep you cool by managing your rate of perspiration, with better air movement reducing thermal loading and moisture loss.

Comfort – soft to touch fabrics that are strong with natural stretch and recovery that contours the garment to your body while maintaining garment shape.

No stink – This is real bonus! Armadillo MERINO garments don't stink even after a week of intensive sweating. Try it for yourself.

Healthy body – we are all athletes. We eat well, we train hard, we equip ourselves with the best gear available however what you wear skin-side can still have the single biggest impact on how you perform when undertaking your mission. Don't leave it to chance.

CamelBak

Mark Crawford, International Sales Manager
(Europe, Africa, Latin America), CamelBak



(Photo: CamelBak)

Our CamelBak Max Gear line is classified as tactical based on its extreme durability, readiness for the elements of any environment and ease of use in extreme situations. We over test all our products, holding them to unparalleled standards and our tactical products even more so. The difference is in details whether that be noiseless zip pulls that don't clank around on the move, strap management that prevents compression and fit adjustment straps



The new URBAN AUSSAULT is designed with daily operations in mind, ready for an easy exit or an efficient pass through airport security. The pack features a separate padded laptop/tablet compartment, small essentials organisation with fleeceline glasses pocket, tuckable cargo compression, and a security stash pocket for important documents. Furthermore, the main compartment features full clamshell opening for easy loading and dual side pockets for power cables, bottles etc. Photos feature a prototype of the new URBAN AUSSAULT at AUSA 2016, where the pack was soft launched. At SHOT Show 2017 it is making its debut. (Photos: Mönch/DPM)

from getting caught in tight spaces, near IR compliant fabrics that blend in and are not easily detectable with night vision, or the quick access organization pocket with the perfect spot to stash extra mags/ammo. In the future from CamelBak, you will continue to see innovative ways to hydrate and carry essential tactical gear in ever evolving tactical environments and conditions.

Fechheimer Brothers Co.

**Bob Getto, President & CEO,
Fechheimer Brothers Co.**



Photo: Fechheimer Brothers

Tactical gear must be multi-purpose and extremely versatile. Our customers prepare for all types of situations; therefore, we put deep thought into the functionality of gear and apparel we build. It's our belief at Vertx that the only way to "get it right" is by constantly connecting with end users to determine exactly what they need to be successful in their missions. We then utilise this direct input to build our products. Such is the case with the Vertx RECON Uniform. We built this tactical uniform set after years of development with end users. Today, it is worn and specified by top federal operators. The Vertx RECON Uniform offers the ultimate in storage and mobility in a 50/50 NYCO MultiCam camouflage pattern and a 65/35 Poly Cotton in solid colours. The uniform set includes the RECON Pants, the RECON Combat Shirt and the RECON Garrison Shirt. Additionally, the RECON Combat Shirt includes a truly revolutionary technology called 37.5 Active Particle Technology. This technology is found in the body portion of the shirt and speeds up evaporation so that sweat doesn't build up under body armour. This evaporative technology keeps your core body temperature at its optimal level, 37.5 degrees Celsius, allowing you to perform better, longer. This increased performance has been proven in a number of scientific studies.

The Vertx RECON Uniform offers more storage ability, with higher quality construction, at an affordable price versus other competitors in this industry. Plus, with the exclusive benefit of 37.5, this is the only uniform available on the market today to help you conserve energy, sweat less, while staying 5X drier than other performance fabrics.



The Recon MultiCam Garrison Shirt offers maximum storage ability in a traditional-style field shirt. Paired with the RECON pants, the RECON MultiCam Garrison Shirt is 50/50 NYCO Ripstop for reinforced durability, with and without additional gear. The RECON MultiCam Garrison Shirt offers multiple pocket configurations for carrying and easily accessing needed essentials. (Photo: Fechheimer Brothers Co.)

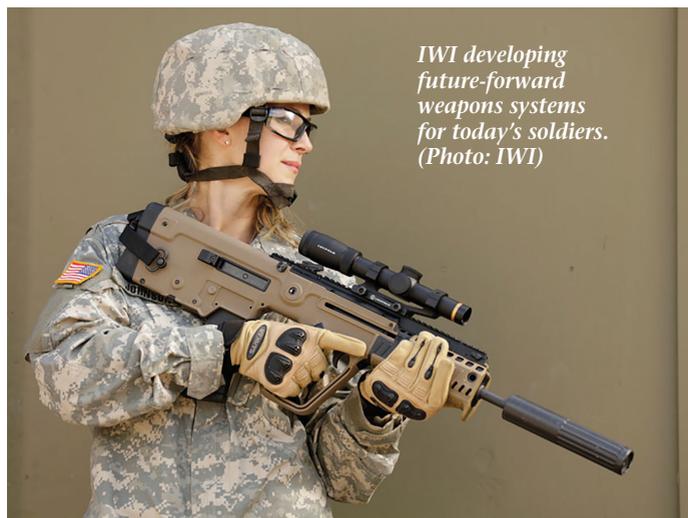
Israel Weapon Industries (IWI)

**Casey Flack, CEO,
Israel Weapon Industries US (IWI US)**



Photo: IWI

Battlefield conditions are constantly changing and any tactical tool for the operator must meet several criteria in order for mission success: reliability, customization, and ergonomic capability. Of any tactical tool critical to a mission, it is the weapon system. IWI has a long tradition of weapon innovation, battlefield testing under the most extreme conditions and producing systems that are 100% reliable every time. Battlefield conditions have changed dramatically. More combat scenarios are fought in urban settings, requiring the operator to move seamlessly through close quarters, through doorways and in and out of vehicles. IWI understood the needs of the modern warfighter and developed the TAVOR® X95, an innovative bullpup design capable of moving from vehicle through any close quarter combat situation. Designed with its weight balanced towards the buttstock, the X95 can comfortably stay shouldered while moving and clearing an area. More compact and lighter than its cousin the SAR, the X95 ergonomics are designed with the end user in mind; the charging handle relocated closer to the user's centre mass and an ambidextrous mag release, located on the X95 in the traditional AR-15/M16 location. In addition to the tri-rail forearm with removable vented covers to accommodate mission specific use of lights, sights or lasers, the X95's trigger guard can be converted to a traditional pistol grip and it uses standard AR-15 /M16/STANAG magazines; all hallmarks of the X95's capabilities for personalized customization to fit the user and the mission. The standard weapon of choice for many tactical operators worldwide is still the AK platform. IWI took the most popular weapon system and perfected it to become the GALIL ACE. Based upon the original GALIL rifle first developed by IMI in the late 1960's which drew upon the iconic Russian AK-47 and the Finnish Valmet RD62, the GALIL ACE is the result of technologically advanced materials and engineering. Built on high-impact polymers, today's GALIL is extremely lightweight and durable. It has been designed for combat in extreme environments with features such as a cover for the internal mechanism, keeping out sand and dirt. Full length Picatinny top rail and an under foregrip tri-rail allow the user to customize sight, light and laser accessories to the mission. The folding stock is adjustable and the GALIL ACE trigger has been adopted from the GALIL sniper rifle. The GALIL ACE also accepts standard PMAGs. These and many more features make the GALIL ACE a better tactical tool and easily out performs the standard AK platform with sub-MOA performance and reliability. IWI is committed to serving the warfighter and law enforcement operator by pushing the envelope when it comes to innovation based upon the changing dynamics caused by war, terrorism and strife. As IWI develops new products for the future tactical operator, new products will demonstrate constant ergonomic improvements, allow for more mission specific customization from calibres to accessories. New weapon platforms must be able to function accurately and reliably for operators of any size and in a multitude of changing conditions from environments, weather and levels of engagements. All IWI weapon systems have a history of being battle-born and proven and that history is the basis of all systems developed for the future.



IWI developing future-forward weapons systems for today's soldiers. (Photo: IWI)

SIG Sauer Germany GmbH

**Franz von Stauffenberg,
CEO, SIG Sauer Germany GmbH**



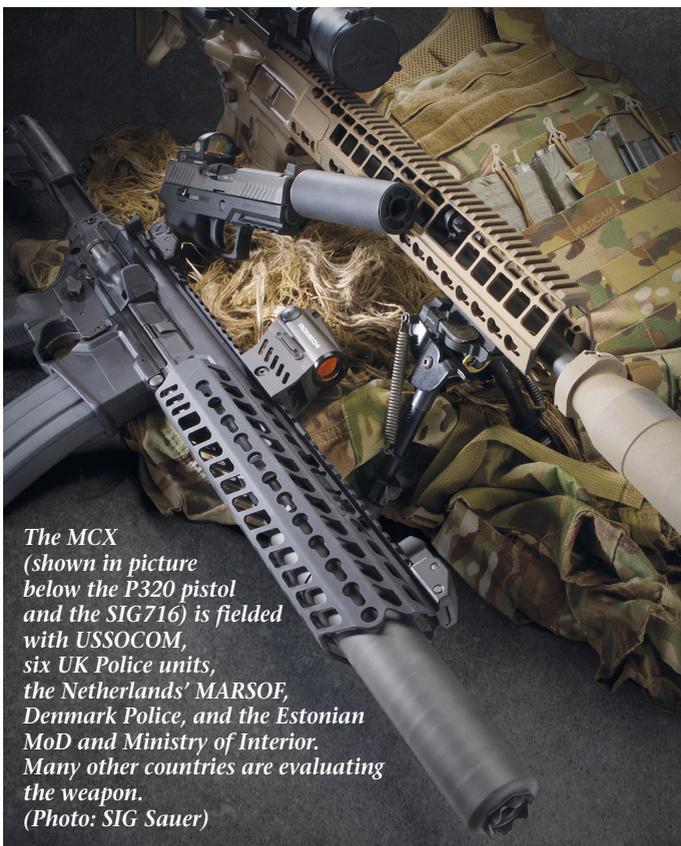
(Photo: SIG Sauer)

A global network of companies gives SIG Sauer a world-class firearms knowledge base, design expertise, and extensive manufacturing capacity, enabling the company to respond quickly and effectively to changing market conditions and the needs of its military, law enforcement, and commercial markets worldwide. SIG Sauer, through the extensive service experience of its employees, possesses a wealth of institutional experience in the law enforcement and military applications of firearms. SIG SAUER has a rich history of innovation and, in cooperation with its sister companies around the globe, continues to advance the design practice of firearms.

SIG Sauer Inc., our sister company in Newington, NH, run by Ron Cohen as its CEO, has become the fastest-growing firearms company in the US. It has tripled its work force and invested millions in state-of-the-art manufacturing facilities at its New Hampshire plant. Just as important, Cohen has invested in a high-quality leadership team. Ron is an engaged CEO who has been part of those engineering discussions for a decade and consequently has built a product portfolio that has driven growth around the world. Ron not only figured how to grow Sig, but part of SIG Sauer's success comes from Ron's personality.

Our (SIG Sauer Germany) main offices in Eckernförde/Germany are currently growing in personnel and infrastructure in order to produce excellent quality in required quantities at market prices for the L&E and military market in Europe. The plan is to re-enter the L&E and military business in Europe with SIG Sauer's new products consisting mainly in MCX (assault rifle), MPX (machine pistol), P320 (SFP), optics, and silencers, while commercial products will still be produced.

There are several reasons why we have already started production for the MCX family in Eckernförde. We want to be able to adapt the MCX to the different requirements of the European customer. There are so many different variants, that it is essential to produce the main parts in Germany. We control the build standard for the MCX and for our main earmarked customers in Europe it is essential that spare parts and production have short delivery times. Eckernförde is a perfect plant to fulfil these needs. For the customer it is a great advantage to have two companies/plants where the MCX is produced in different versions.



*The MCX (shown in picture below the P320 pistol and the SIG716) is fielded with USSOCOM, six UK Police units, the Netherlands' MARSOE, Denmark Police, and the Estonian MoD and Ministry of Interior. Many other countries are evaluating the weapon.
(Photo: SIG Sauer)*

At the moment, SIG Sauer Germany focuses on the L&E and military markets in Germany and Switzerland, but we could serve all of Europe, as it is planned in the future. SIG Sauer Inc. manages the other European countries with our joint portfolio. Our idea of doing business is focused on Europe and other NATO countries, as we have no intention to enter areas in other continents. The current centre of gravity is interesting demands in 2017.

The future holds a new product launch and a unique narrative of the company SIG Sauer Germany. Our team is nicely positioned and consists of a balanced mix of ex-operators and experts from industry, a combination of which lead, e.g., to the MCX.

The SIG Sauer Group is expanding continuously every year with new products and systems. More news are prepared in order to have a bigger portfolio but it is too early to disclose more details at the moment.

Streamlight

**Matt Baker,
Director of Federal/Military Sales, Streamlight**



(Photo: Streamlight)

Streamlight manufactures cost effective tactical lighting solutions for the operator that feature programmable settings, variable beam outputs while remaining very easy to operate and to maintain. Streamlight products are commercially available, powered by commercial batteries. Our core military products have NSNs assigned, combined with extensive field test reports from the USMC, US Navy NAVAIR, US Army Air Warrior, and other DoD commands.

Our TLR series of weapon lights features an enhanced TLR-VIR that offers push-button, dual-spectrum output (white LED and IR) in a holster-ready size for any military handgun systems. The dual output of the TLR-VIR provides a close-quarter-battle effective solution that also gives impressive down-range beam patterns for rapid target identification.

Our SIDEWINDER series of products continue to find applications in the EOD (explosive ordnance disposal) sectors for use in hands-free, sometimes covert, settings that need to have environmental

considerations as well as accurate target identification. Our SIDEWINDER COMPACT II gives the EOD operator an essential piece of lighting equipment. We supply a required survival light for DoD aviators, and this has allowed for evolution into other flight crew and ground maintenance units. The SIDEWINDER COMPACT II, originally built for ground combat roles, can now be mounted to flight helmets to provide in-cockpit illumination and jointly serve as a rescue beacon for egress / ejection operations. This versatile light can also be mounted on any combat helmet via direct attachment, rail system or by using the NVG bracket. Streamlight can "missionise" products to perform above ANSI or other MIL-STD testing levels, allowing our products to perform in sub-zero temperatures, or submerged in water for hours, or withstand the rapid, successive recoil jolts of belt-fed machine guns to remain on target. Streamlight product functions are simple to operate, and the forward deployed logistics chain to support our systems in the field is simple, too.



*Streamlight's TLR series of weapon lights features an enhanced TLR-VIR that offers push-button, dual-spectrum output (white LED and IR) in a holster-ready size for any military handgun systems.
(Photo: Streamlight)*