



# A DEEP LOOK INTO BODY ARMOUR

**Thomas Bowman** examines the different options available when it comes to body armour and reveals a multitude of solutions

**T**here is an old saying in the world of combat that says: 'Defence is the best offense'. And nothing better epitomises this more than body armour. We've come on leaps and bounds since the days of cumbersome body vests that did little to protect the wearer from a variety of weapons and projectiles. Modern body armour comes in many shapes and sizes, but its most important feature is its versatility. Whether lightweight or military-grade, with heat-resistant properties or extra plates to stop ballistic weapons, body armour finds wide application among police, military, private security, maritime personnel, EMS and other units that want to be prepared for a variety of emergency and/or combat scenarios.

But what types of body armour do different security and military operatives need and how do the various protective systems and levels compare against each other? To answer this question, we must dive into the respective threats that each prospective wearer type anticipates and the available combinations and materials that best work to counter them.

The Security Industry presents significant challenges to personnel, which require a high level of versatility. Security guards fulfil a large variety of roles by ensuring the safety of people, institutions or properties. They work with different individuals and offer protection in a number of scenarios – from court trials to elections, public events and exhibitions. Some security guards are commissioned to protect banks or malls. Regardless, all face potential dangers and need to have adequate armour to protect themselves.

**Modern body armour is designed so it doesn't restrict movement or impede speed**

In most settings, security guards often come in close contact with attackers. The nature of their job requires them to work in close proximity to large crowds, where it is easy to conceal a small firearm or sharp-edged weapon. There are many instances where attackers attempt to stab or shoot security guards and if they don't have adequate protection this can result in a life-threatening injury.

A covert vest is a great option for any security guard. The covert body armour is available in black or white, so it can match the uniform of the guard. It is important to select the right size for a comfortable fit under your clothes that provides maximum protection without restricting movement, speed or agility as you will be wearing it for extended periods of time.

## PROTECTION FROM ATTACK

Military personnel deal with a lot of high-risk threats and intense physical training and mission activity that requires a very specific type and level of protection. They face a variety of attacks and need to retain their agility and freedom of movement while at the same time obtaining the maximum level of protection available.

Military-specific armour allows for additional ballistic protection to be fitted to protect the neck, throat, upper arm and groin area. Ballistic SAPI side plates can also be inserted into specially designed SAPI pockets. Molle webbing can also be added to allow for further equipment customisation of the vest. As well as providing protection to

more peripheral areas, these panels convey authority in volatile situations, which can help prevent conflict.

Military armour can be fitted with hard ballistic plates to stop larger armour-piercing rounds – these protect against Level IIIA and IV threats to protect vital organs.

Apart from fire and heat, which pose a great health risk, another serious threat for firefighters comes from the harm from collapsing buildings or explosions. Level IIIA vests offer the highest blunt trauma protection rating in soft body armour choices. This makes them very useful as the materials they're made of can help mitigate the damage caused by falling/exploding objects.

Bullet-proof vests provide Paramedics and EMTs with much needed protection in the light of frequent reports of unprovoked attacks with firearms and sharp-edged weapons. Being called to the scene of accidents, emergency crews often need to deal with intoxicated, unstable and violent people who may refuse to be treated for injuries and even attempt to assault medical personnel. As accidental injury makes up the bulk of threats to the EMS, it is likely that weapons will take the form of anything to hand, usually sharp-edged or spiked weapons. This is why a stab and spike-proof vest is ideal.

**RECENT TECHNOLOGY HAS BEEN USED TO MAKE BODY ARMOUR COOLER AND TO INCREASE AIRFLOW**

Unlike bullet-resistant vests, modern stab-proof vests utilise Kevlar lined with either chainmail or laminate to stop sharp-edged weapons from cutting the protective fibres. However, if an attacker has a needle or an ice pick for example, any vest without laminate will not protect the wearer, as a spiked weapon will pass through the fibres and chainmail. Laminate lines protective layers with a tough yet thin plastic, preventing stab and spike weapons from penetrating. Modern safety vests meet the testing standards of several international institutions, so paramedics and ambulance crews can be guaranteed the maximum level of protection in their line of work.

Law enforcement agencies heavily rely on body armour in day-to-day as well as special event operations. When it comes to the standard NIJ certification for protection levels, the type of body armour police officers use varies greatly. Some are equipped with Level IIA vests, others wear Level II, and some will wear level IIIA. While body armour should ideally counter the threats that law enforcement agents anticipate encountering this is not always possible.

Instead, police officers are usually equipped with body armour that is effective against one type of weapon: their own sidearm. A shocking number of police officers are shot with their own weapons after gun grabs or in friendly fire. So their vest should be able to defeat the rounds used by themselves and any other officers in the agency.

Maritime personnel agents often turn to body armour to ensure their safety and security. Recent technologies have been successful in making body armour cooler and increasing airflow, which is particularly beneficial for environments with intense humidity and heat, such as the maritime industry.

New types of body armour incorporate inflating technology, so that upon contact with water, the body armour provides an extra layer of safety for any personnel

working in the maritime industry. In the event of an injury from a pistol or melee weapon, the new BCB's Inflatable Body Armour System automatically inflates within seconds of coming into contact with water, which means the person will remain afloat without any effort on his or her part. This upgrade is a huge leap forward in guaranteeing the safety of maritime personnel.

**MATERIAL FLEXIBILITY**

Products for the maritime industry personnel typically focus on different issues, such as providing body armour with better UV protection and odour control for instance. An added benefit of many of these products is increased comfort as manufacturers use softer materials. One surprising issue for buoyant body armour mainly comes from the bulletproof materials themselves. Allergic reactions to Kevlar, which is commonly used, is surprisingly common and can pose a significant inconvenience (even health hazard) to people working in the maritime industry whose work requires them to wear body armour. This has prompted certain revisions in the materials considered by manufacturers and now certain flotation devices and buoyancy aids are available as part of armour that rely on different materials to offset the heavy reliance on Kevlar.

Working in a hostile environment often means enduring extreme weather conditions. This presents unique challenges for the body armour as it has to be made from lightweight and breathable materials that keep the body from overheating. Modern vests are designed to offer maximum comfort and protection to allow the wearer to move with ease through rough terrains. Even higher levels of body armour don't restrict movement or impede speed, which allows border patrol agents to fulfil their duties comfortably. Protective vests are available in a choice of overt or covert styles depending on personal preference. Despite the fact that no bullet resistant vest is 100 percent bulletproof, agents that have adequate protection are better equipped to deal with threats they are likely to face in their line of work.

With ballistic-resistant vests – protection levels range from soft level IIa (ideal for low-level handguns such as a 9mm, which are commonly used in urban attacks) to soft level IIIa (ideal for high-powered handguns such as a .44MAG). Higher calibre weapons, such as rifle rounds or armour piercing bullets, can only be stopped by hard armour plates manufactured from ceramic. These can be rated at level III (standard AK47, 7.62 NATO round) and level IV (armour piercing rounds such as the .3006 AP) and are typically used by the military and personnel in war zones.

**ADDITIONAL ADD-ONS**

Some assignments in particularly volatile zones require that standard body armour gear is supplemented with add-ons, such as ballistic helmets and plates for arms and legs. Working in environments where there is insurgency or war means journalists will likely deal with the threat of snipers, so wearing a helmet is absolutely necessary. Additional plates can also increase safety for the wearer, but this happens at the cost of slowing them down, which can be dangerous if they have to quickly move between locations.

Generally speaking, armour with more layers of bullet-proof material offers greater protection. Soft armour allows for the addition of extra panels that increase protection. One common way to do this is by inserting metal or ceramic plates into the pockets on the inside or outside of the vest. When you don't need as much protection, you can wear the vest as ordinary soft armour by taking them out.

A well-constructed vest can offer invaluable protection from a number of threats to police officers, civilians, military and security operatives, bodyguards and urban preppers. The bottom line is that no one can be sure whether or not they will find themselves in a potentially life-threatening situation at any given moment. And with the increase of terrorist attacks, riots and protests, crime and assaults, body armour is not just reserved for professionals any more. Civilians can also greatly benefit from wearing it for protection and it can significantly increase the chances of survival in any setting ●

**Thomas Bowman** has many years of experience in the defence industry and is currently the resident expert writer for *SafeGuard Armor*, which provides a range of body armor, stab-proof vests and other levels of protective clothing.

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