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are the UK's leading manufacturer of stab vests and ballistic vests to local authorities, the NHS, government departments and blue chip companies. We work at the cutting edge of technology, and our body armour is the lightest, most flexible and therefore most comfortable in the industry, whilst still meeting all Home Office & CE Mark standards.

Fortis® body armour is lightweight and flexible - our business approach is equally flexible and refreshing. We offer a range of different styles and a unique system that allows the carrier (cover) style to be changed whilst using the same armour inside. We hold stocks of all styles in all sizes and protection levels, giving you rapid delivery with no minimum order and no fuss.

Purchasing body armour may appear complicated, but with guidance it's pretty straightforward, with clear guidelines provided by the Home Office. We offer a no-obligation advice & consultation service & samples.

Body Armour: Frequently Asked Questions

These are the questions our customers ask the most – we hope the answers will be of use to you too.

1.1 “One of our staff has had a knife/improvised weapon/gun pulled on them, or is concerned that they may have in future – what do I do?”

Carry out a risk assessment taking into account the risks – or threats - to your staff. This means the general threats in your local area (consult with the police) as well as the specific threats relating to the duties your staff perform. If a threat is identified, you should issue appropriate body armour. No body armour can protect from all threats - it is designed to protect from death or serious injury, whilst still being flexible and lightweight enough to allow your staff to perform their normal job roles.

1.2 “What standards should I look for to ensure my staff are properly protected?”

The UK Home Office sets the standards for body armour protection in the UK. Aside from the CE mark, the UK Home Office standards are the only thing you need to look for from a protection point of view. Simply calling something “body armour” or a “stab vest” does not mean it provides any protection - this is why the Home Office standards are essential. Other countries have their own standards (eg. NIJ for ballistic resistance in the US) but the Home Office standards are the **only** standards that apply in the UK.

*** Be VERY wary of body armour “made to” or ‘tested to’ Home Office standards – it must be ‘certified to’ - tested and certified by the Home Office - ask for a Home Office certificate to be sure.***

1.3 “What’s the law relating to body armour?”

It is not illegal to buy or sell “stab vests” that aren’t certified by the Home Office – the onus is on the employer to ensure the protection is adequate. Every organisation has a duty of care to protect their staff under the Health & Safety at Work Act, and this includes issuing body armour for staff that are at risk. If an incident occurs where employees are not adequately protected, in addition to facing possible industrial tribunals and compensation, the Corporate Manslaughter and Corporate Homicide Act allow for unlimited fine and publicity orders.

1.4 “What’s a “spike”? Do all stab vests protect from spikes?”

An attack from a spiked implement such as screwdriver, chisel, ice pick, “shiv” or similar improvised weapon could be more likely than a knife. They’re easier to obtain, and carry lesser legal consequences (if any) when found during as a result of a police search. Wherever there is a knife threat it is almost certain there will also be a spike threats, therefore it’s important to ensure that a stab vest has Home Office certification for spike threats (SP1, SP2 etc) as well as knives (KR1, KR2 etc).

1.5 “If a vest protects from knives and/or guns, it must protect from syringes, yes?”

No - it depends on the vest. There is no Home Office standard for syringes (the SP1 standard refers to spikes, not syringes). Because of the very fine needle point of a syringe, it will penetrate the majority of conventional body armour. Many stab vests with Home Office KR1 and SP1 certification can be penetrated by a syringe. To protect from this widespread and increasing threat, look for a supplier with specific syringe protection. Our armour WILL withstand hypodermic needle penetration.

1.6 “What is blunt trauma/impact based assault?”

Whilst knives, spikes and guns present a more serious threat of death or serious injury, blunt trauma (blows from blunt objects such as baseball bats, bricks, even fire extinguishers) are probably the most likely threat your staff will face. However, because bricks and similar objects are thrown, they can easily land where the vest does not cover, so it is important to choose a lightweight, flexible armour that allows your staff to easily manoeuvre away from trouble in, and make clear that blunt trauma protection does not make them invulnerable in confrontation. There is no Home Office standard for blunt trauma – as with syringe protection, look for a supplier that specifically includes blunt trauma protection.

1.7 “My staff are concerned that stab vests will be “too heavy,” what should I say?”

As a good employer, manager or health and safety advisor you will want to ensure the comfort of your staff - but without jeopardising their safety. You’ll want to protect staff at risk by issuing Home Office certified body armour. However, with current technology it isn’t possible to produce Home Office certified body armour that is as thin and lightweight as normal clothing. Like all management decisions, the best thing to do is look at the overall picture. If you research the Home Office certified armour (with syringe & blunt trauma protection if needed), as well as considering other comfort factors such as armour flexibility and heat control, you’ll be doing everything you can to ensure the comfort and safety of your staff. If you give your staff the information you find during your research, they’ll support your decision – after all, you want the same thing – their safety and comfort at work.

1.8 “Do stab vests have to be made to measure to be effective?”

No. The safest armour will fit closely around the body, but armour doesn’t need to be made to measure to provide adequate protection. 99% of wearers will fit in standard sizes S-3XL, and this is the way the majority of police forces in the UK issue their armour. For very tall wearers, it’s advisable to purchase armour with extra length to ensure the lower internal organs are adequately covered, and for wearers outside the standard S-3XL and some bigger busted women, sometimes ladies who require a ‘D’ cup fitting or larger, special sizes are necessary both from a comfort and protection point of view.

1.9 “I heard that rigid/hardened armour offers more protection?”

Wrong. In the 1980’s all body armour was rigid or “hardened” – making it uncomfortable and difficult to move in. Thankfully, technology has moved on to the extent that flexible armour is now available that provides equal or greater protection from all threats (including blunt trauma or body blows, where flexible armour has the advantage of dissipating the blow around the whole of the armour). We recommend a “try before you buy” approach – ask for a sample of any body armour you’re considering purchasing, to check for comfort doing everyday tasks for normal lengths of time such as sitting and standing, getting in and out of cars etc. Flexible armour will act like a sponge and soak up the trauma, whereas rigid armour will transmit the full force of the blow into the body.

1.10 “Do the armour panels have to be replaced after a certain period of time?”

The Warranty Period on our Fortis® KR1/SP1 stab and spike protective vests is **10 years**, after which period of time it should be replaced.

Armour that is **multi-purpose** (that is, handgun, knife and spike resistant HG1/KR1/SP1 or higher) carries an **initial 5 year warranty**; after this period it can be checked and recertified for a further 5 years for a modest cost (*similar to an MOT on a car*) to give a total life of 10 years.

1.11 “I don’t understand why the armour panels have to be replaced after this period if they are not damaged”.

The armour panels have to be replaced after this period even if they are not damaged because the material used in the vest will, over time, degrade. Remember, these are PPE items and they may be called on to prevent serious and life threatening injury and be subjected to extreme trauma. Put another way, you would not speed around a race circuit at 200 mph on a high powered motorbike, knowingly wearing a 10 year old crash helmet that had been generally abused and mistreated.

We’re confident that if Fortis® armour that was older than the guaranteed period was involved in a situation, it would perform as expected.....but ‘confident’ wouldn’t stand up in a court of law if someone was injured. We have a duty of care and a responsibility – as do our material suppliers – as do you -and we know that over a period of time the efficacy of the materials **will** tail off. That decay will be gradual, not seismic, but there **WILL** be a fall-off in performance. We build in to our calculations **massive** safety margins and, to cover everyone in the chain, from the raw material supplier right the way through to the end user, we (as do all reputable body armour manufacturers) stipulate a ‘best before’ date.

In a ‘worst case’ scenario, if an employee is seriously injured, or worse, whilst wearing armour in the normal course of their duties then you can be sure the Health & Safety Executive would quite rightly take an extremely close interest – every aspect and element of the event would be subject to forensic examination and if it were to be found that the armour was beyond its ‘best before date’, the employer (and line manager) may face a charge of corporate manslaughter. Yes – this is ‘worst-case’ – but accidents are unpredictable events in terms of time and severity and body armour is a critical item of PPE equipment.

1.12 “My staff are starting to ask for new ones all though they are not due to run out until later this year (if they are due every 5 years.)”

Body armour doesn’t have to be replaced by law, we’re simply pointing out the possible consequences of a worst case situation and making you aware of the facts, but our advice would certainly be to change the armour packs after 5 years.

1.13 “We never changed them in the military, unless they had too many holes in them!”

Definitely not the case any longer! Fact: body armour is now checked after EVERY tour of duty and the authorities operate a critically controlled system of body armour and ballistic plate refurbishment.

Our *Frequently Asked Questions* section covers the body armour basics. After that, deciding on your body armour comes down to three straightforward choices:

2. Determine the type of threat your staff will be likely to encounter

Are your staff at risk from knives, or is there also a risk from guns? As well as your internal risk assessment, you may want to consult with the local police for confirmation of the type and level of threat in your particular area.

3. Choose a protection level The UK Home Office standards are explained below.

3.1 Levels of Stab & Spike Protection:

3.1.1 KR1 (Knife Resistance Level 1) & **SP1** (Spike Resistance Level 1) are the levels of stab and spike protection recommended by the Home Office for general police duties. KR1 (when combined with SP1 and syringe/needle protection) will provide adequate protection in the vast majority of situations.

90% of standard ‘patrol duty’ protection is covered with KR1/SP1 or HG1/KR1/SP1 level protection.

3.1.2 KR2 (Knife Resistance Level 2) & **SP2** (Spike Resistance Level 2) are the levels of stab and spike protection recommended by the Home Office for more dangerous police duties, such as armed patrol in higher risk scenarios, eg. patrolling at airports or escorting prisoners.

Knife Resistance relates to edged weapons such as knives and axes. **Spike Resistance**, which is a separate threat and a separate Home Office standard, relates to spiked weapons such as screwdrivers, chisels and other improvised weapons. The different levels relate to the number of Joules of energy from a knife (KR) and spike (SP) thrust that a vest can withstand, tested mechanically in laboratory conditions.

3.2 Levels of Ballistic (bullet) Protection:

3.2.1 HG1 (Handgun Resistance Level 1) is the level of protection recommended by the Home Office for general police duties where handguns may be encountered and protects from standard ammunition fired from short-barrelled handguns.

3.2.2 HG2 (Handgun Resistance Level 2) is the level of protection recommended by the Home Office for higher risk scenarios - tactical firearms teams, special forces - situations where sub machine guns may be encountered and protects against long barrelled handguns, 9mm carbines and sub machine guns.

Please note that NIJ IIIA and other NIJ standards are American bullet resistance standards which have nothing to do with protection from knives or spiked weapons and do not apply to the UK market, which is regulated by the Home Office HG, KR and SP standards.

Bullet protection is generally combined with knife and spike protection, providing what is sometimes called “dual purpose” body armour. Hence the typical body armour for general policing duties where handguns may be encountered is a HG1 + KR1 + SP1 vest.

4. Choose a style

It's important to choose a style your staff are happy with to ensure they wear their armour for the maximum time they're exposed to risks. If your staff won't wear their armour because it is inappropriate for their duties or because they have a strong objection to the way it looks, you've wasted time, money and effort.

Body armour styles are either covert (concealed, under the clothing) or overt (over the clothing). Each has pros and cons. With a covert style it's not obvious that a person is wearing body armour, but some people find them less comfortable as they're worn closer to the skin and offer fewer adjustment points. Overt styles are easier to don and doff, allow the weight to be distributed more easily around the body and are more comfortable, but can sometimes present the wrong image.

4.1 Covert (White or Black)

Discrete protection – when worn under the clothing our thin, lightweight highly flexible armour is concealed. Can also be worn over light clothing if preferred, as an overt style. Fully adjustable at shoulders & sides, giving maximum comfort levels. Heat management system - maximizes airflow, draws sweat & moisture away from the body.

4.2 Hi Vis (Hi Vis Yellow -looks like a normal Hi Vis vest), with epaulettes and bellowed pockets.

Dress it up - over shirt & tie for a smart, authoritative look. Dress it down - over a casual-shirt. Multiple adjustment points, offering superb comfort levels. Heat management system - maximizes airflow, draws sweat & moisture away from the body. Belt loops – use to ensure comfortable weight distribution around the body.

4.3 Waistcoat (Black)

Smart look – looks like a waistcoat – the fact the wearer is wearing body armour is not obvious. Multiple adjustment points, offering superb comfort levels. Heat management system - maximizes airflow, draws sweat & moisture away from the body.

4.4 Patrol (Black)

Smart “uniform-style”, with epaulettes and bellowed lower pockets which can carry multiple items. Wear over uniform, or over civilian clothes, for a smart professional appearance. Multiple adjustment points, offering superb comfort levels. Heat management system - maximizes airflow, draws sweat & moisture away from the body. Belt loops – use to ensure comfortable weight distribution around the body.

4.5 General Purpose (Black)

Fully adjustable at shoulders & sides, giving maximum comfort levels.

Heat management system - maximizes airflow, draws sweat & moisture away from the body.

We can specially-make you a variation of any of the existing styles, whether you wish to vary the colours or other features, or we can come up with a completely new design for you.

4.6 Getting the right fit

Fortis® body armour is unisex, and comes sized from XS to 3XL, with adjustment points to achieve an even closer fit. 90% of wearers, both male and female, can wear the above stock sizes comfortably and safely. For staff outside these sizes, we offer the following:

4.7 Extra Tall Fittings: Certain tall wearers over 6'2" may require an Extra Tall fitting. This ensures the lower internal organs are sufficiently protected on tall wearers. If you're unsure, call us for further assistance.

4.8 Extra Female Shaping: recommended for female wearers requiring a 'D' cup fitting or larger. We suggest wearers try on a sample of our standard unisex vest first before ordering armour with extra female shaping which takes 4-6 weeks to produce. Your staff can speak directly with our female staff if preferred.

4.9 Made to measure: For staff outside the S-3XL chest and waist sizes.

5. A unique system that gives you the choice

Fortis® body armour consists of two parts: ARMOUR PACK + CARRIER. Armour slides in & out simply & safely, allowing the carrier to be washed or changed to a different style.

Fortis® armour packs fit into any of our styles of carrier. Carriers can be bought separately. This unique flexible approach has a number of benefits and options:

- You can give your staff the choice of several styles depending on their personal preferences. By giving your staff a choice, you maximise the chances of them wearing armour when at risk and minimise wearer dissatisfaction and complaints.
- You can issue different styles to staff for the different duties they may perform at different times.
- You can replace worn out carriers – as the armour is the most expensive part, this saves you money.
- All staff are equally protected by the same armour packs, only the carriers vary.

We keep life simple - everything is held in stock, so even if you order a different carrier style for every employee, all will be delivered at the same time. We'll even fit the Fortis® armour into the carriers for you.

6. What's inside our armour packs? How do we make them so strong and lightweight?

The material is an advanced composite of ultra-high-tensile fibres and thermoplastic resin with outstanding toughness and durability. Covered by a worldwide patent, the laminated material is a thin, flexible sheet, cut into shape and layered to give unrivalled protection, flexibility and manoeuvrability. Whereas non-laminated body armour needs a sealed protective layer to keep out moisture and water(which can damage or tear), Fortis® body armour is totally resistant to the effect of moisture and UV light.

7. Other protection not covered the Home Office standards

There is no Home Office standard for syringe protection, but Fortis® body armour provides a high level of resistance to syringes nevertheless. This is not the case with many suppliers.

Fortis® body armour provides excellent protection from blunt trauma (blows from fists, baseball bats, bricks etc), protecting the spine, ribs and organs from body blows and also from non-penetrating stabbing attacks which would otherwise be painful and could disable the wearer. Our flexible armour dissipates the energy from a blow around the whole of the armour pack, minimising local impact.

All Fortis® armour has the following features which combine with the above to make it unrivalled:

- Very flexible – moves as the body moves, very comfortable to wear even for long periods.
- Very lightweight –1.7kg – 2.5kg depending on size and protection level.
- Area of full protection extends over whole armour, edge to edge – *(some other armour is 'feathered' at the edges, which means that the area of full protection may only be 80% or less of the total area).*
- Retains full protection even when wet and when exposed to UV light.
- Advanced heat management system - maximizes airflow, draws sweat & moisture away from the body

8. Leading the way in protection

If you purchase Fortis® body armour you are providing your staff with the best protection possible.

Fortis® offer body armour certified by the Home Office at all available protection levels, giving you the full range of options to protect your staff. Fortis® body armour is also certified to Home Office spike resistance (SP) standards. Many suppliers offer knife resistance (KR) but no spike resistance. Spikes are a separate and serious threat, with a separate Home Office standard.

Fortis® armour is CE Marked (certificate CE08DC1532) & conforms to the requirements of PPE directive 89/686/EEC, BS 7971 and EN340. CE marking is relatively new – not all suppliers' armour is CE marked.

Fortis® armour is manufactured in our UK factory to ISO 9001:2008 standards. We supply UK-made body armour, supporting UK jobs and industry, and minimising our carbon footprint.

9. Leading the way in service

Choosing the right body armour for your staff is a big responsibility with a number of factors to consider. We're here to help and offer all of the following services with no obligation to buy.

9.1 Samples The only way to be sure you've made the right choice is to look at a sample.

9.2 Free consultation We'd be delighted to visit you to discuss the roles your staff perform and the threats they may face. Seeing the armour, trying it on and hearing real-world examples to compare to your own will give you peace of mind.

9.3 References We're happy to provide details of other clients that you can speak with who will vouch for our quality, service and value.

9.4 Free training We offer free training to show you how to use, adjust, launder and care for your body armour. Our experience has shown that most wearer complaints can be easily resolved – e.g., our carriers can be adjusted in numerous places, and when properly adjusted, offers greater wearer comfort.

10. Warranties and Guarantees

Whichever supplier you choose, **insist** on seeing their Home Office certificate and CE Mark accreditation.

10.1 Warranties As you would expect from the largest supplier to local authorities, NHS, blue chip companies and government departments, Fortis® armour carries Home Office accreditation & CE marking and is backed up by a comprehensive warranty covering you for all eventualities.

10.2 Armour Packs Dual purpose armour packs are guaranteed for 5 years after which we can re-examine and re-certify for a further 5 years (at a small cost). Stab vests cannot be recertified (*5 year life*).

10.3 Carriers The carriers are guaranteed for 12 months. If you feel a carrier has performed poorly during this period, our garment technicians will inspect it and provide a report for you, plus a free repair or replacement if a carrier is shown to be faulty.

10.4 Free replacement Should your body armour be damaged as a result of a criminal assault, return it to us together with full details and a police crime reference - we will repair or replace it free of charge.

10.5 Insurance Fortis® armour products carry £10,000,000 of Product Liability insurance.