

# PROTECTING OLYMPIC RIDERS

## New Technology from Hit Air will be protecting Olympic Riders this summer

This summer Great Britain will be represented by William Fox-Pitt, Zara Phillips, Mary King, Piggy French and Tina Cook in 3 day Eventing. Great Britain is one of the most successful eventing nations and all eyes will be on us at the end of July. 3 day Eventing comprises three disciplines Dressage, Cross country and Show Jumping with its roots in a comprehensive cavalry test requiring mastery of several types of riding.



... The professional riders of today cannot afford to be sidelined ...

Over the past two decades the FEI (Fédération Equestre Internationale) have been working with national federations around the world to make this sport safer. Everything from frangible pins to create collapsible cross country fences, to technical course design changes made after years of

Riders who use the Hit-Air vest include the Olympic Eventing Gold Medalist Phillip Dutton, "I am really excited about the new technology. I feel confident that I will be better protected if I fall. This is the way of the future."

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data collection at International competitions. The area which has made huge strides in the past two decades is rider body protection. Until the mid 80's riders wore only a helmet to protect themselves. It wasn't until the early 90's it became mandatory to wear a static foam based body protector.

Hit-Air vests are a culmination of over fifteen years of research and development by the Japanese company, Mugen Denko, the award winning designers of the original worn air bag. The technology was originally developed to protect motorcyclists hitting tarmac at over 70 mph – but the design has been refined over the last few years to suit the unique ergonomics of the rider.

Sam Watson, 4\* event rider recently stated, "Until I saw the Hit Air I had no desire to ride in an air jacket. However, it is so light and unobtrusive that I don't realise that I'm wearing it. .... I was shocked by the extra protection from the Hit-air and how much it cushioned my fall. I never want to fall without it again...there's too much at stake!"

### HOW DOES AIR TECHNOLOGY WORK?

The vest is worn over a body static body protector. The lanyard attaches to the saddle once the rider is mounted. In the event of a fall and the rider becoming separated from his horse, the lanyard pulls a key ball out of the vest releasing a

mechanism inside which pierces the compressed CO<sub>2</sub> cartridge. This is what triggers the inflation.

These vests provide leading-edge, shock buffering and stabilizing protection to the neck, spine, rib cage, lower back and vital organs when inflated.

## NECK

Once inflated the vest provides a large neck air bag which inflates around the base of the helmet. This decelerates the head and neck protecting from hyper extension which causes whip lash, concussion and other neck injuries.

## LOWER BACK AND SPINE

Upon inflation a flap un-pops and releases an air bag which covers the lower back along with two more which cover the length of the spine. When the rider hits the ground or an obstacle the inflated vest will absorb the impact and stabilize the body.

## RIB CAGE AND CHEST

Hit Air provides unique ribcage protection and two air bags down the front of the chest. Broken ribs and collar bones are common amongst

event riders and have lengthy recovery times. The professional riders of today cannot afford to be sidelined.

## PATENTED TECHNOLOGY

There is a patent on the design to fold the airbags away within a harness style vest. This allows the vest to inflate outwards, which has several major benefits.

There is no possibility of winding the rider on inflation, although the vest still provides a stabilizing effect to the upper torso. This is very important to our riders and also to medical teams.

The vest can be worn neatly over the body or body protector as the vest does not need to accommodate the inward inflation. The vest is discrete and it limits the interference with riding.

The vests are light-weight and flexible. Riders do not feel that they are wearing any additional protection at all. Any interference or restriction caused by extra garments will interfere with the rider's effectiveness and therefore cause a safety issue in itself.

It isn't just Olympic level event riders who are choosing Hit Air to protect themselves. Although 3 day eventing is classed as one of the most dangerous sports, hacking down the road is where most equestrian accidents happen. In 2011 there were 225 incidents on roads reported to the BHS through [horseaccidents.org.uk](http://horseaccidents.org.uk), a dedicated incident reporting site. These included: eight rider fatalities and 52 serious rider injuries. Many accidents remain unreported. Leisure riders have seen International event riders embracing this technology and can see how it can help make them safer on the roads, commons and bridleways of Britain.

Senior safety officer at the BHS, Sheila Hardy recently stated, "This is something that is beneficial to riders whether they compete or not."

For more information on Hit Air Vests please visit [www.hitairuk.co.uk](http://www.hitairuk.co.uk).



Hit-Air deflated



Hit-Air inflated

