

## RISE TO THE CHALLENGE: EVENT FABRICS / TOPO ATHLETIC



Membrane technology provider eVent has worked with Kansas-based outdoor footwear company Topo Athletic to launch Hydroventure, which the two partner companies have called “the lightest waterproof breathable trail running shoe available on the market”.

# New shoe “doubles” breathability

**E**arlier this year Hydroventure, a new model of shoe from sports footwear brand Topo Athletic, became the first footwear product to use a new waterproof and air permeable technology from eVent, DVdryLT. ‘DV’ in the new technology’s name stands for ‘direct venting’. The team at eVent has highlighted its ability to dissipate heat and moisture through footwear and to advance breathability during athletic use.

This appealed to Topo, which was set up in 2013 by Tony Post, who was formerly the chief executive of the US business of sole technology specialist Vibram and, before that, a senior executive at Rockport. A successful college athlete and, later, a marathon runner, Mr Post said at the time of the launch that he wanted to develop footwear that “helps amplify the body’s natural and intuitive abilities”. He had in mind shoes designed to “honour the shape of the foot and respect the body’s mechanics”. He

*The Hydroventure in action.*

 Topo Athletic

was one of the first people to try running in the Vibram FiveFingers and says he quickly noticed he was moving in a shorter, quicker stride and landing more lightly. To his surprise, pain he had been suffering regularly in his knees and back went away.

### Something missing

But he says he knew there was “still something missing from the market”, which he describes as a shoe that allows runners to access “the important benefits of natural running” while maintaining some of the features of traditional running shoes. Other brands’ attempts to do this fell short, he felt, by being too narrow, too sloppy, too stiff, too soft, too thick or too heavy. Plus, in his opinion, most of these shoes looked unattractive. He felt he could make improvements and launched Topo.

### Light, not minimalist

The Hydroventure is the brand’s third trail shoe (it also has products for road-running and for the gym) and it comes with a Topo-imposed billing of being “the lightest fully waterproof trail running shoe on the market today”. It has an EVA midsole, that features a “flexible rock plate” to protect runners’ feet against rocks and roots. Other features include multi-directional lug traction for durability and grip and an anatomical toe box to allow toes to spread naturally. Its weight, in the men’s US size nine, is 275 grammes (not quite as light as many of the ‘minimalist’ shoes on the market, but not as ‘minimalist’ either).

Tony Post says: “Making a comfortable lightweight construction is central to our product philosophy. Over my 30-year career, I’ve helped create many waterproof shoes, and the historical challenge has often been the multiple layers of material, cements, tapes and gaskets, all of which make the upper stiffer and add weight. Thanks in large part to eVent’s new technology, the Hydroventure is more comfortable and lighter in weight than any other waterproof breathable running shoe on the market today.”

### One-piece upper

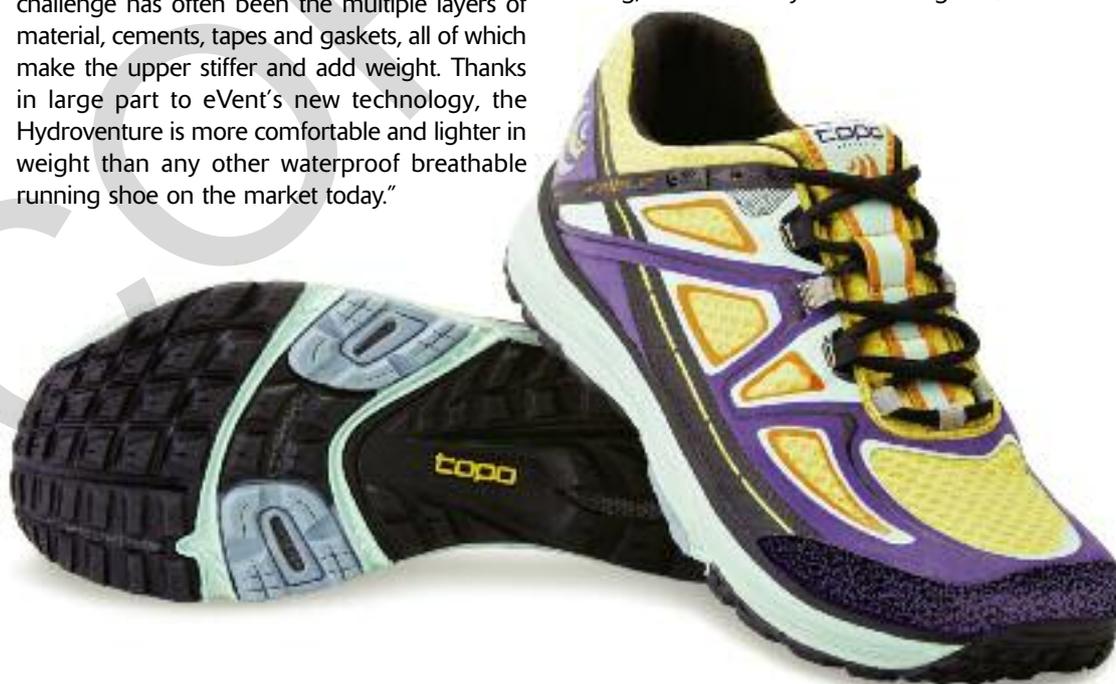
One of the factors that has helped keep the weight of the shoe down is that Topo developed a patented one-piece upper construction for the Hydroventure, which allows the fabric laminate “to become the body, or upper, of the shoe”. The two companies said at the time of the launch that this reduces the complexity of the construction found in most light, waterproof shoes. The manufacturing process eliminates layers and glue; this saves weight and cost while increasing breathability and improving flexibility.

The position of eVent is that its new DVdryLT construction also yields “a significant weight reduction” because it requires 50% fewer parts and 30% fewer steps compared to what’s typically required in a waterproof shoe; it has calculated this at almost 30 grammes per pair.

### More than double the breathability

And, according to eVent’s internal comparisons of its own waterproof and air permeable footwear technologies, the level of breathability is “vastly improved”. A three-layer (outer mesh, inner lining and membrane) one-piece upper laminate such as the one Topo uses in the Hydroventure “more than doubles breathability over traditional waterproof shoe construction”, the companies state.

Chad Kelly, director of sales and product line for eVent fabrics, claims: “The invention of eVent DVdryLT is a tremendous step forward for performance footwear. The one-piece construction is, simply put, like putting the best-quality jacket over the top of your foot. Footwear brands can now design a go-to waterproof shoe that is comfortable year-round in wet conditions. It eliminates the problems that have long been associated with waterproof shoes: the stuffy feeling, the inflexibility and the weight.” 



*A one-piece upper incorporating eVent DVdryLT has helped Topo produce what it claims is the lightest breathable, waterproof trail running shoe on the market.*

 Topo Athletic