FOOTWEAR TECHNOLOGY



Xtenex laces are made using elastic knots which don't move once secured but collapse when stretched allowing adjustment.

Xtenex

The laces that never come undone

Most people learn to tie their laces at an early age and give the process very little thought from then on. However, though seemingly unimportant, the way laces are tied could dictate whether an athlete wins or loses a race, or whether a person gets injured or not. As a result, several companies have worked to develop laces that are easier to tie and do not come undone so frequently. Xtenex and Greepers are two firms that claim to have come up with more effective lacing systems.

Fulfilling a need

Xtenex was established in 2000 by American entrepreneur Mike Gonzalez, who is now the company's CEO. While the laces have been around for a while in the US, they are now starting to make inroads into the French and German markets, among others, according to Eric Lenoir, who runs the firm's European business.

The laces were devised by Mr Gonzalez in response to a simple need posed by everyday life. Having been out playing in the snow, his children had great difficulty taking their snow boots off. The cotton laces had swollen and were difficult to untie. He decided something needed to be done about this, and that he was the man for the job.

After a lot of thought and experimentation, he came up with a solution, an index tensioning nexus which he named Xtenex. The laces are made using elastic knots which control the way the laces move through the shoe's eyelets. When stretched, the knots collapse so that it is easy to lace

up and adjust the tension. Then, when the lace is released, the knots re-emerge so that the desired fit is secured. The laces need only be fitted once and, unless adjustment is needed, will remain exactly where they are for the life of the shoe. The laces can be fitted to suit each individual's comfort and performance requirements.

According to the company, because the laces cannot move about once they are secured, the wearer will not experience discomfort, pain, numbness or other unpleasant symptoms that are often caused by lace migration when standard laces are used. Shoes and boots slip on without needing to be tied or untied each time without affecting the alignment of the lace. This is one of the reasons why the firm has already sold several hundred thousand pairs of the laces.

Going for gold

In order to spread the buzz about Xtenex laces to the European market, Mr Lenoir explains that his initial target was the sportswear market, and primarily the triathlon segment. He says that the laces were a "great success" in this field, particularly after German triathlete Jan Frodeno wore the laces when he won gold at the 2008 Beijing Olympics. Simon Whitfield, who had been one of the favourites to win the gold, having won it at the Sydney Olympics back in 2000, also wore the laces, both in training and on the day. He describes them as "simply the best product" and claims that, while many other companies have launched laces along similar lines, Xtenex is the first to "get it right".

"The laces became well known for triathlon so we are now focusing our actions on the running market, which is a bigger market," explains Mr Lenoir, who says he has received many positive comments about the product. However, the laces can be used for any sport, or even simply for everyday use. The company also produces laces for dress shoes and children's shoes, among other applications.

Mr Lenoir explains how they work. "You have to put your foot inside the shoe, stretch the lace and slide it through the eyelet very easily," he says. "The knot reappears and sticks. It is very easy to maintain the tension you want." And the benefits are simple. "There is no pressure on the foot because of the elasticity," he continues. "It is important to maintain the tension for each set of eyelets. With regular laces, if your foot swells, you get pressure."

According to Mr Lenoir, the lace system offers three key improvements compared with standard laces: comfort, as the lace is fitted to the wearer's specification; efficiency as, once in place, they will never need to be untied or retied; and safety, as the laces cannot come undone, they cannot be tripped over. There is also less risk of blisters and other footwear related conditions.



Greeper laces are threaded through a central aperture with four strategically positioned 'stoppers'.
Greeper

Trying them out

However, he says that many people are skeptical about the laces before the try them out. "We give a pair of the laces to the salesmen because you need to try them to feel the benefits. The first time people see them they can't understand the benefits without trying them," he says.

Physical therapist Charlie Merrill claims he felt like this when he first came across the laces. "I was skeptical initially about how an elastic lace would work on technical trails and hilly terrain," he says. "Once I got the tension set perfectly for my foot the laces were fantastic. My shoes were easy to get on and off, they held my foot very securely, and I forgot I was wearing them even on the most demanding section of the trail."

He adds: "As a physical therapist who works in a very active town where I treat many athletes, I look forward to some of my patients using these laces. My elite athletes will appreciate the performance of Xtenex laces in race situations.

"But my patients will benefit the most because the laces are so adjustable, allowing them to accommodate for pain and pressure points."

Inspiration

The UK-based Greepers company has come up with an alternative solution. Its founder, qualified optometrist Peter Greedy, was also inspired by his children to come up with a solution that would put an end to laces that were continually coming undone and looking tatty. In 2001, he had a flash of inspiration and came up with a design that could stop this happening permanently.

He set to work immediately in his shed and constructed the first pair of Greeper laces. The laces were threaded through a central aperture and four 'stoppers' were positioned in strategic places so that the laces looked like the type of bow used with standard laces. Moreover, the wearer could easily loosen and tighten the laces

and the bow would never come undone.

Having patented the technology, Mr Greedy left his job and set up Greepers Limited in December 2007. "The company actually started a little over a year ago, we started trading last July," he said during the GDS show in Düsseldorf in March, which marked the official launch of the brand in Europe. The British Footwear Association encouraged the company to appear in the Design Attack area of the trade fair, which is specifically aimed at new innovations. "The reaction has been very positive on all fronts," he added.

The benefits

Mr Greedy explains that the company initially sold a small line of trainers with the laces already fitted but, since September 2008, has also been selling the laces on their own. Like the Xtenex laces, the Greeper laces are designed to maintain even tension. "They stay tight all day because of the spring inside the mechanism," says the company founder. In addition, they can help to prevent accidents. "The laces offer a real safety feature because they never come undone," he says.

According to the company, there has been a good deal of interest from safety shoe manufacturers, orthopaedic shoe manufacturers and occupational therapists. "The laces work really well for people who are too old, or too young to tie their own laces," says Mr Greedy. He adds that they are also good for people with conditions such as arthritis, multiple sclerosis and autism.

While the laces were originally designed to be worn in sports shoes, the company has since launched a range of laces in different colours and thicknesses. "We've just launched the latest edition of executive shoe laces which has a smaller mechanism for a smarter shoe. They come in black and brown and are more suited for business shoes," says Mr Greedy.

Expanding its reach

However, the company's collection is largely aimed at the sports and outdoor market, and includes hiking boot laces, and skateboard laces among others. "We're in discussions with a major sports brand to license the lace technology, it would be an exclusive deal," says the company leader. Nevertheless, he explains that demand tends be limited to a certain demographic. "Demand is kind of polarised," he says, "there's the teens at one end and then the older side of the spectrum at the other."

But the word is spreading, and the firm is hoping to increase its market share, both in the UK and beyond. "There has been a lot of interest but it's early days," Mr Greedy says." Fortunately, the economic downturn does not appear to be doing the company much harm. "It hasn't impacted the business as it's seen as a value-added product. It could be seen as a luxury product, but it falls outside of that because it is linked with the medical sector, so the attitude is different," he explains. "To be able to 'value add' is a competitive advantage."

And, unlike some other advanced lace systems, the beauty of the Greeper idea is that it is very straightforward. "We've not seen other versions. MBT had a device but it was discontinued because there were complaints; it was too complicated," says Mr Greedy. "Ours comes ready-assembled, it's more simple."

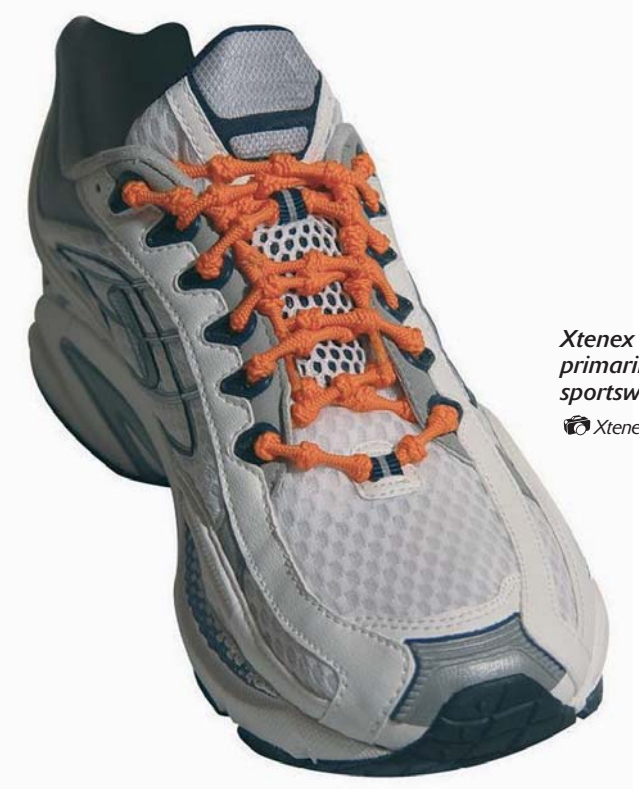
An Xtenex user's view

It sounds like a cliché, but I picked up a pair of Xtenex X 300 laces at an exhibition in March 2009 and now feel as though I couldn't do without them.

That's to say, I first put them into some reasonably formal black lace-up business shoes made by Pikolinos of Spain because that's what I was wearing on the day, only to decide later that the new laces were slightly too informal in a business context. So, as soon as possible, I put them into a pair of ordinary Hi-Tec sports shoes instead and it's in these that the X 300s, for me, have become indispensable.

The shoes feel so comfortable and secure that I almost never even have the laces tied. They've been great for walking and light running, although I think I would tie them if I was going to wear them to kick a football around.

Best of all has been to wear them to travel. On two recent long-haul flights, with several changes of airport, I'm sure I caught fellow passengers looking enviously at the ease with which I could pull my shoes on and off when the airport security people demanded it, or on board the plane for a little extra in-flight comfort. On landing next morning, it was also an advantage to be able to slip them back on as though they were moccasins, and to be able to pull the laces tight with just one hand to start the day with an extra spring in my step.



Xtenex laces have primarily targeted the sportswear market.

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