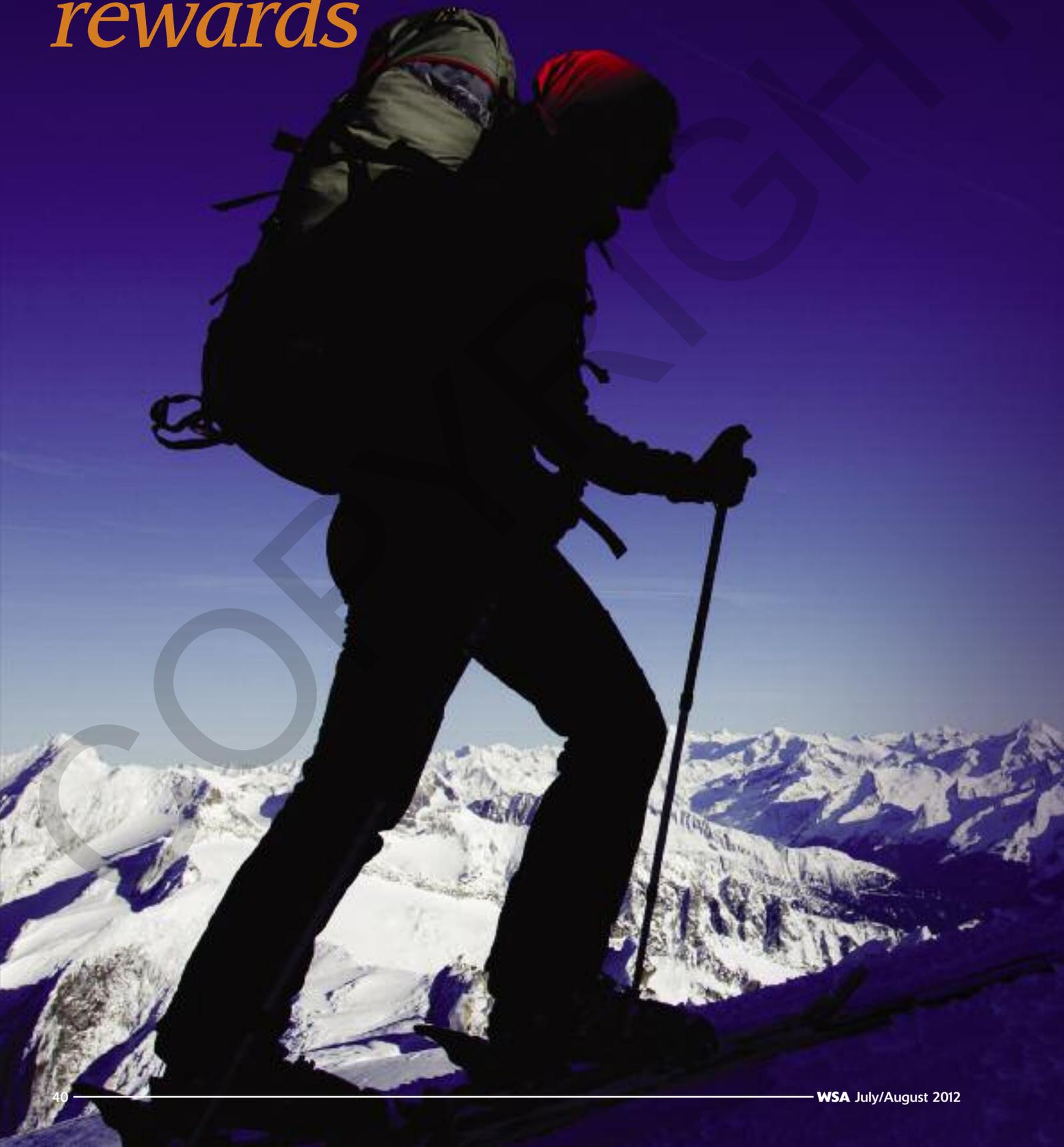


## FOOTWEAR TECHNOLOGY: GARMONT

Light in weight and visually attractive, Garmont's Masterlite ski mountaineering boot has won admirers in high places.

# *Boot beauty brings rewards*



**M**anufacturer of performance outdoor footwear Garmont has won a national design award in Italy for its Masterlite ski mountaineering boot.

The structure of fabrics – from the difference between 2D and 3D lay-ups to composite materials, and crimp and non-crimp wovens – can make an important difference to apparel design and manufacture.

The boot is a lightweight, streamlined, elegant ski mountaineering boot designed by the outdoor brand in partnership with MM Design, a creative design agency based in the Italian Alpine province of South Tyrol. Its shell is constructed from the Pebax thermoplastic elastomer in what Garmont describes as a web-frame design, “reduced to its critical elements for a solid structure with ultralight weight”. The hardware is simple, effective, and fast, the Treviso-based footwear brand insists. Its sole structure is stiff, springy and supportive. In addition, the Masterlite has a specifically designed lining, which has the proprietary name G-Fit Light. This too is ultralight, as well as being “fully custom-thermoformable and very supportive”.

### Roll of honour

Garmont first brought the Masterlite to market in the autumn of 2010 after working on the design for most of that year and half of the previous one. The red dot product design award, one of the most acclaimed international competitions organised each year by the Design Zentrum Nordrhein Westfalen, included the Masterlite among its 2011 winners. In 2011, it also won a Design Index award from Italy’s Association for Industrial Design (ADI) and a spot among all the winning designs in the ADI yearbook at the end of the year. All yearbook entries make up the shortlist for the Best of the Best awards, in which the Masterlite boot was one of four winners in June 2012.

President of the Italian senate, Renato Schifani, presented the award at a special ceremony in Rome at an event to mark a national day of innovation. The country’s minister for education, universities and research, Francesco Profumo, was also in attendance.

Dr Achille Morlin, president of Garmont, said immediately after the event: “We are honoured and very proud of this accolade which is testimony to our passion for clean, innovative product design and recognition of our commitment to offering our customers best-in-class products designed to enhance outdoor performance.”

For partners MM Design, the specific challenge here was to make a lightweight boot without compromising on performance, whether



*The shell of the Masterlite is constructed from thermoplastic elastomer to reduce it to its “critical elements” for a solid structure and ultralight weight. But it is also visually striking.*

 Garmont

for competitive skiing or for fun. “A source of inspiration often comes from nature and particularly from the structure of the human body,” MM Design has said. “Bones are in fact cable structures consisting of a series of ligaments and joints that create the overall structure. This is the reason why despite their great load capacity, they consist of light structures.” It was this that led to the idea that a very thin shell and lining in the boot could work.

### Sensory perception

The brand’s product manager for ski boots, Paul Parker, believes that on picking up the Masterlite, a person whose last contact with skiing and ski boots was, say, five years ago, would notice a couple of key things. First, it’s very light, less than 1.2 kilos per boot. “That’s very sensory,” says Mr Parker. You can feel it right away.” The second thing is visual. He describes it as “visually unusual and interesting and different from other ski boots, even today.” He recalls one of the owners of a rival ski-boot brand coming to the Garmont stand at the end of ispo 2011 and remarking that the Masterlite was the most interesting product he had seen at the show. “He meant visually,” Paul Parker insists. “The boot caught his eye. It’s very strong technically, but we also worked hard on the aesthetics.”

He explains that the partnership with MM Design worked well he and his team were able to give their contacts there a clear brief.



Alex Terzariol and Mario Varesco of MM Design at the ADI Best of the Best Awards ceremony in Rome in June 2012.



When some ideas came back from MM, Garmont's technical team became involved "to make sure we could actually produce what they were proposing".

### From a skier's point of view

Specific to the shell, Garmont describes it as, as mentioned above, as ultra lightweight, as having a web-based structure and as being "reduced to its critical elements", but still solid. Mr Parker, who came up with this description, has no doubt that skiers on seeing this will still have confidence in the Masterlite's ability to withstand stern weather conditions and protect the ankle and the foot. "I described it from a skier's point of view," he says. "It's strong where it needs to be strong, but we've reduced the weight by limiting the thickness wherever possible."

Making a sole that is stiff, springy and supportive. In the walking phase of being in the mountains, you can lose energy if the sole of your boot is too flexible, says Mr Parker, because it drops your hips back as you move up the hill. "It's a little bit rigid, but it has a bit of give because of the PU inserts so it is comfortable for walking," he explains. It's manufactured as a separate piece and a Strobel machine attaches it to the upper.

As mentioned above, the G-Fit Light lining is proprietary technology, although it employs patented technology from partner companies in the construction, Mr Parker makes clear, principally relating to the EVA foam the lining contains. It is a thermoformable inner boot: it forms to the wearer's foot through the application of heat. There is toe-room and a secure heel-hold.

Asked which aspect of the Masterlite he likes best and why, Paul Parker points again to its lightness in weight, but also to how the boot

works. "If we are looking at pure design," he adds, "I also like that it's very clean and that it has a different and unusual look."

In snow tests, the reaction so far has been positive, he says. This is a competitive market, especially in Europe (and in northern Italy where Garmont has its base in particular), but 'lightweight' is the direction it's moving in, he insists. He adds: "It takes time to move into this market. The awards are great, and they matter to us because they represent prestige in the marketplace, but skiers are less cognisant of all that; they are more concerned with on-snow tests and the blog posts that follow." 



A springy and supportive sole makes it easier to walk in the boot in snowy conditions. The lining contains proprietary technology, based on EVA foams.

