



# technical wizardry»

As soft shells head mainstream, the industry is adding more bells and whistles to garner consumer attention.

**if** you haven't noticed, soft shells are becoming mainstream. Need proof? REI has made a killing on its private label One Jacket that is below the magic \$200 barrier. EMS now has a full-featured soft shell for \$180 and a stripped-down version for \$130. And Lands' End has an \$88 soft shell jacket for women with, of course, a cell phone pocket. Soft shells are even taking off in the alpine ski world—SIA reported nearly 60 percent growth (to \$2.2 million) in preseason sales this fall.

Of course, we've seen this before with the evolution of fleece. What started as a small niche in the outdoor industry grew to mega-sales by brands like Old Navy and Target. The industry response was to make the fleece more technical, with features that weren't always better but at least had a good story. And that's what's happening again with outer shells, both hard and soft.

With a flood of proprietary stretch fabrics, and a slew from Gore, starting to compete with powerhouses Malden and Schoeller, consumers are getting more confused than ever about outer shells. First, we had to explain what the heck "soft shell" meant and how it could make their lives better—a lot of people still don't get the concept (including some that sell it). Now we have to explain how there is a wide range of soft shell fabrics—as if anyone could keep them all straight—and they can be combined in different ways.

Many customers are surprised that not all soft shells are wind-proof, that warmth varies greatly, and that some don't breathe very well. While some brands like Arc'Teryx and Marmot do a commendable job explaining performance differences, most leave consumers guessing.

As clothing technology progresses, we are starting to get into the mythical realm of the do-it-all shell that replaces multiple pieces in your pack.

## Hybrid Shells

Started by Arc'Teryx several seasons ago, the process of combining different shell fabrics for optimal performance is now com-

monplace. Since nobody agrees on the definition of "soft shell," it should be no surprise that "hybrid" has no consensus either. Typically, the term means some fabric is high-stretch/more-breathable and some is non-stretch/more-waterproof.

- The **Arc'Teryx** Hybrid line of four jackets and a one-piece suit, all in men's and women's sizing, continues with some minor upgrades. Most of these feature one of the Schoeller fabrics with Gore-Tex panels (though the Gore folks won't let it use the name because the shells are not fully waterproof).
- The new **The North Face** Caber Hybrid Jacket uses its proprietary Apex stretch fabric and its 3-ply Hyvent waterproof-breathable fabric to create an ideal shell for tossing logs in Scotland.
- The men's hooded **Mountain Hardware** Manticore Jacket is built with its Conduit soft shell material on the back and under the arms while the rest is 2-ply waterproof-breathable Conduit fabric; seams are taped and zippers are water-resistant. The Griffin Jacket, for both men and women, is a hybrid with a similar construction (no hood and the waterproof-breathable laminate is a 3-ply) intended for forward-motion winter sports such as skate-skiing.

## Welded Shells

Several winters ago, Patagonia demonstrated the technology of welded seams in storm shells that would reduce weight and bulk of jackets by about 10 percent. These never went into production though the company continues to experiment, but some other companies are beginning to deliver on the promise.

- The **Mammut** Laser Jacket, available this spring, is the first soft shell to utilize laser cutting and seam welding. Made from Schoeller WB-400, it is a highly water repellent and rugged hooded men's shell ideal for ice and alpine climbing.
- **Mountain Hardware** began using welded seams on sleeping bags last year and now the technology is making its way into the clothing line. The men's and women's Heliark Jacket is a soft shell without any stitched seams intended for cold, wet activities, though it has no hood.

## Waterproof Soft Shells

If consumers are having a hard time sorting out the difference between hard (we call them storm shells) and soft shells, the emerging category of waterproof soft shells is really going to make their heads hurt. These jackets have 4-way stretch, brushed inner surfaces, and are fairly trim fitting—all standard "soft" features. Yet they also have fully taped seams and water-resistant zippers to make them fully waterproof—all standard "hard" features.

- The **Mammut** Besal Jacket, made with a stretch Schoeller waterproof/breathable laminate, will be the first to hit the market this

# Marmot's

## Phenomenon EL Jacket



LIGHT-EMITTING PANELS

spring; it has both a hood and pit zippers. Our testing finds it to be a rugged, albeit rather heavy, shell that keeps out nasty weather and doesn't restrict movement in the slightest.

- Next fall, **Mountain Hardwear** adds a hood (and much needed pit zippers) to its Synchro Jacket, made with its proprietary waterproof-breathable laminate, so it too will join the new club.
- Another shell blurring the definitions will be the **Marmot** Shadow Jacket, which is made with a 3-ply stretch MemBrain fabric and weighs less than one pound. And the Marmot Telluride Jacket is a ski piece made with a new Gore-Tex soft shell fabric with taped seams and a roll-up waterproof hood.

### Storm Shell Gee-whiz

As soft shells make a dent in the high-end storm shell market, it's getting harder for consumers to justify both. With waterproof-breathable fabric performance currently plateaued at Gore-Tex XCR—until another contender comes along and releases RR-XCR (Really, Really, eXtended Comfort Range)—and narrow seam tape, manufacturers are relying on trick features to attract attention.

- Certainly, the **Marmot** Phenomenon EL Jacket is the shining example of gee-wizardry. An XCR shell with all the usual deluxe features, it has also four electro-luminescent panels on the sleeves that are sure to grab attention. Powered by two AA batteries that last about 12 hours, the flexible shock-proof panels emit enough light to read a map and are ideal for high visibility. While "light jackets" may not go over well with consumers, the benefits for rescue, police

and military are obvious, so expect to see more of this technology.

- Last winter, **Burton** introduced the limited edition Ronin iPod Jacket with soft controls for the popular digital music player built onto the sleeve. Next season, three models of 2-ply waterproof-breathable jackets, and the shoulder strap of a daypack, will sport the electronic switches.
- **ArcTeryx** started the current industry-wide craze for water-resistant zippers five years ago. Next season, its top-of-the-line Alpha SV and Alpha LT jackets will feature the WaterTight Vision front zippers that eliminate the teeth for easier sliding and better durability.
- If for no other reason, the **Lowe Alpine** Ice Light Jacket and Ice Light Pants will raise eyebrows since they break a decade-old imbroglio with Gore and end a short-lived run with BHA. Of course, these men's and women's shells have good design features but it's the Gore-Tex XCR hangtags that will get people in the industry talking.

### Technical Warmth

There has also been a fill-power war raging in down sleeping bags, and the same competition has now moved to parkas. These days, the standard among the major brands is 700-fill down while the showcase parkas contain 800-fill or higher.

- **The North Face** pulled out the stops for

the limited edition Quantum Nuptse Jacket, which has 900-fill down and an outer shell of Pertex Quantum fabric with sewn-through construction. This should rival some of the ultra-light down jackets **MontBell** has offered for years. Also new is the Prism Optimus Jacket, a fully baffled parka with 800-fill down and welded-seams. The water-repellent fabric and Primaloft hood and pockets will make this a high-end down parka with superior wet weather performance.

- While just about all of the down clothing made for high-altitude climbing contains 800-fill down, the **Mountain Hardwear** Absolute series will be the first with welded-baffles and water-resistant zippers. While undoubtedly nice, these are because-we-can rather than because-they're-needed features. (Water is always in solid form when you wear clothing this warm.)
- **Patagonia** is relatively new to the down clothing market, but its 700-fill Down Jacket has been a success. Next season, the line expands with a hooded and baffled 800-fill Down Parka and a quilted 700-fill Down Sweater (such innovative names!).
- Pushing the laminated XTR/Primaloft concept, the **ArcTeryx** Fission LT series reduces weight even further. These jackets are approaching the performance of good down while offering complete waterproofness. 



PHOTOS COURTESY OF MARMOT