

Continued from p. 76

low profile helped the Enve 1.25s track confidently in crosswinds. The EC90 Aeros were also competent in crosswinds and felt rigid and snappy under quick accelerations. It was hard for any wheels to match the Enve 1.25 hoops, the lightest of the bunch, on climbs—their low, 998-gram weight was apparent on even small upslopes.

The Reynolds RZR, which holds the distinction of being the most expensive wheelset in this test, received high praise. The wheelset features carbon spokes woven with Kevlar fibers. A torque flange on the rear hub allows spokes to attach to three points on the hub, instead of the traditional two, helping to make these the stiffest-feeling wheels we tested. High-tech wizardry also leads to a few drawbacks: The rigidity likely helped the wheels accelerate quickly and corner confidently, but our rides outside of this test led us to note that these race wheels may not be the best choice for all-day rides. (However, even if unyielding, the RZR may not prove too harsh for heavier riders, and there is no rider weight limit.)

Reynolds says the spoke pattern and rim shape work to reduce drag, especially in crosswinds. Although we did not take any wheels in this test to a wind tunnel to confirm that claim, we can say the RZR is easy to control, even in strong gusts. Reynolds imbued its cutting-edge wheel with a dose of avant-garde styling that may not suit every rider's aesthetic. At 900 grams (a Team version is also available, weighing in at 1,199 grams), this combination of light weight, stiffness and drool-worthy technology will be more than some cyclists can resist.

Of the clincher wheels we tested, only the Zipp 404s came close to matching the tubulars in high-speed corners. Handling improved as a result of a

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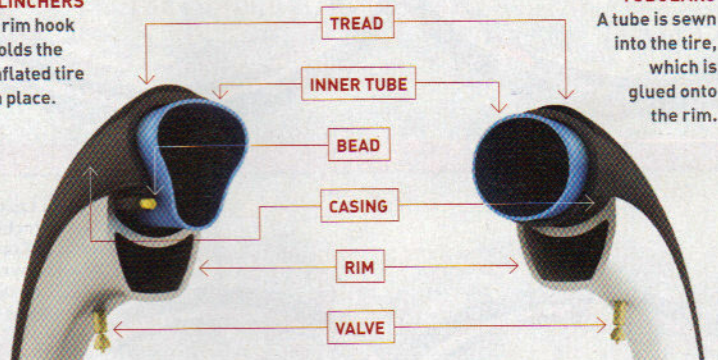
fatter rim profile at the bead seat (16.25mm, instead of the industry standards for road wheels, 13 and 15mm), says Zipp, which allows a wider profile for the tire and less sidewall flex. But that same girth necessitates a brake adjustment any time you switch to a narrower set of wheels, something to consider if you like to regularly change wheelsets. Still, this latest contender from Zipp is also among the best performing of the aero wheels in crosswinds, confidently tracking straight under even our smallest test rider. Despite their 1,557-gram weight, these wheels

climbed well, making them strong candidates for daily riding.

The clincher Bontrager Aeolus 9.0 is a solid choice for any triathlete, but the set did not receive high marks from our test riders. Spokes are fixed to a shallow rim, to which a carbon fairing is bonded, achieving a deep (90mm) profile. These wheels, more than any other in our test, acted like spinnakers in a stiff crosswind, pulling even our largest test rider off his line during heavy gusts. Plus, the stiff wheelset weighed in at 1,845 grams, making it the heaviest in our test. These were very stable wheels, which stuck so firmly to their trajectory in corners that changing lines—to avoid a pothole or

#### CLINCHERS

A rim hook holds the inflated tire in place.



## A Tired Debate

{ The skinny on tubulars vs. clinchers }



INTANGIBLES ASIDE, LAB TESTING SHOWS THAT THE CHARACTERISTICS of tubular and clincher tires are just about equal.

It's easy for riders to get sucked into the "tubulars ride better" vortex. After all, tubulars are the choice of the pros and are steeped in legend and winner's jerseys. But a true apples-to-apples comparison is elusive: Unfair conclusions may be drawn by matching midrange clinchers stuffed with cheap butyl tubes against supple, high-end tubulars that feel more comfortable and responsive.

Compare a tubular tire and a similar-quality clincher set up with a latex tube and you'll find they weigh about the same, and they yield similar ride characteristics and performance.

While there's no difference in relative puncture resistance, anecdotal evidence suggests that tubulars resist pinch flats better than clinchers. Prevailing wisdom also favors tubulars for their run-flat characteristics, because they are less likely to come off the rim.

Of course, tubular wheels are lighter than clinchers—often by a lot. But while lighter wheels may make a bike feel more responsive, they might not actually be much faster. Just ask Cervélo race engineer Damon Rinard, who researches every potential advantage for his team. His take? "Heavier wheels aren't the big performance disadvantage most riders think they are. I've done the math, and although rotational inertia is real, it's tiny."

So, professional riders may choose tubulars for their perceived safety, not just for the weight advantage. It's easy for pros to choose tubulars when a support vehicle with preglued spares follows them around. The rest of us have to be concerned about walking 10 miles home because there wasn't a spare tubular among the whole pack.

Still unsure? Performance-wise it's nearly a wash. If you have to have the lightest wheels and ride what the pros ride, choose tubulars. But, if you don't have a staff of professional mechanics to handle the sticky ritual of tubular installation, clinchers are a more attractive option: They are generally less expensive, changing tires is easy, and carrying a spare tube and CO<sub>2</sub> is a lot easier than a prepped tire. —M.P.