

FFWD WHEELS REVIEWED

F4C wheel set tested by USA cyclocross magazine cxbike.com

See complete story at: <http://www.cxbike.com/product-spotlight-fastforward-4c-wheelset>

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by Josh Liberles

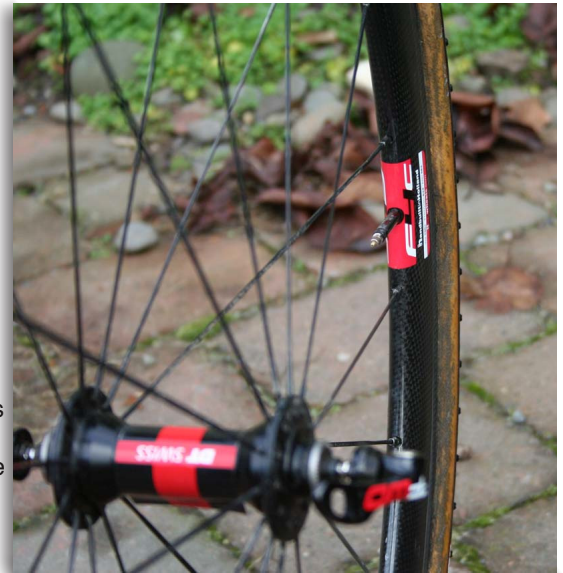
For the past several months, Cyclocross Magazine's remote test lab in Oregon has been slinging through the mud, putting Fast Forward's new F4C carbon cyclocross tubulars to the ultimate test.

Founded in 2006, Fast Forward is a relative newcomer to the high end world of carbon wheels. The Dutch company's wheels are not yet distributed in the U.S., although you can order them directly online. Unless you watched Swiss rider Christian Heule tear it up at early season American 'cross races, you've likely never heard of the brand. Now that Fast Forward has dramatically upped the ante and committed to sponsoring Tom Boonen, Stijn Devloder and the rest of the Quick Step UCI Pro Tour road team for 2010, the company's worldwide notoriety will likely skyrocket.

Fast Forward offers wheel setups from narrow, lightweight climbers to full-on discs. Somewhere in between, there are several models ideal for cyclocross. The F4C, with a 38mm rim depth, and F5C, at 50mm, come in either a clincher or tubular variety. The "C" in the model name stands for "Control," but it could just as well indicate "Cyclocross." Fast Forward introduced their Control lineup in 2009 for heavier riders, those looking for more stiffness and durability, or those who race in extreme conditions (cyclocross would certainly qualify). The difference over their standard builds is an addition of four spokes to both the front and rear wheels, making for a 24-spoke front, 28-spoke rear, and adding about 70 grams to the wheelset. All of the Fast Forward tubular rims are 20.1mm wide while the clinchers are 19.7mm.

The rims are manufactured in Asia and all of the wheels are hand built in Holland and can be customized around a house-branded Fast Forward hub, the DT Swiss 240s or the lightweight and pricey DT Swiss 190 with ceramic bearings. Spokes are Sapim CX-Rays for the basic builds or DT Swiss Aerolite for those built on the DT Swiss hubs.

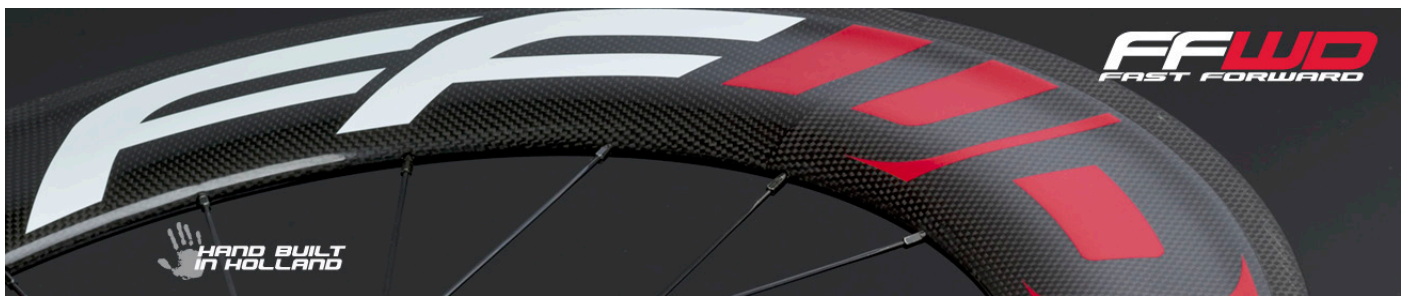
For our demo setup, we selected the F4C rims for its blend of durability, light weight and aerodynamic advantage for the wide open, full-throttle sections. The DT Swiss 240s hubs provided tried-and-true, bombproof, smooth rolling without the huge price jump of the 190's and came with a Campagnolo freehub to match my bike's mix-and-match Campy 10-speed setup.



Right out of the box, the presentation of the wheels impressed me. All Fast Forward wheelsets include a sweet, padded double wheelbag, valve extenders, quality skewers and carbon brake pads – really nice bonuses. The skewers, wheel bag and hub all match Fast Forward's red, white and black color scheme emblazoned on the sides of the wheel. A glossy clear coat covers the carbon and makes the wheels glimmer. While none of this matters much for performance, presentation and first impressions are huge to any market, perhaps even more so for the cycling world, and Fast Forward nailed it.

The 38mm rims have a 1315-gram claimed weight, which was right on par with what I measured. I mounted 32mm Challenge Grifos with the goal of a setup that I could ride in a variety of conditions. Based on the fact that I tested these wheels in Oregon, a more mud-specific tire may have been a better "all-around" selection for the races that I saw, but this setup provided a good balance for some of the grassier or frostier midweek training rides in the park. Depending on the course, I would vary pressure from mid to high-20's in the front, high-20's to low-30's in the rear.

I definitely put this wheelset through the paces, racing and training in all sorts of weather and course conditions. While looking for the perfect pressure to suit a course or trying to maximize traction on muddy days, I bottomed out the tires on several occasions. The rims proved their strength and were never the worse for wear; I never rolled a tire off of these wheels and, despite good hard use, the wheels only required a minor truing once in several months.



FFWD
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Overall the wheels performed very well; they were light, nimble, stiff and strong. One concern I typically have with carbon wheels is braking performance – particularly with all of the rain, mud and slop I see in and around Portland. The F4C's don't have a textured braking area that other carbon hoops do, it's a gloss finish over the entire surface. Although this initially increased my apprehension, it didn't seem to have a negative impact and **braking performance has been stable and predictable, even in wet and muddy conditions.**

I initially used the stock TRP carbon brake pads that come with the Euro-X brakes, then switched to Swiss Stop yellows once those wore out. I was pleasantly surprised that I was able to modulate my speed and stop well with both setups. The one drawback to the gloss finish was that after enough braking action, it does begin to show scratching and cosmetic wear along the outer portion of the rim where the brakes strike, but I haven't seen any real performance drawbacks there.

The exposed, accessible nipples, which are becoming a rarity in many high-end wheelsets, were a godsend – and one, unfortunately, that I had to take advantage of on two occasions during testing. On back to back days at the tail end of my season in the Portland USGP's, I broke a spoke in the front wheel. The incidents had much more to do with the chaotic nature of 'cross racing than any shortcomings in the wheel. The first instance occurred as the pack transitioned from the course's hardpack to the first mud section and a rider swerved into me, sending his pedal into my spokes. After replacing the spoke that night, the very next day I was delayed by a pile-up and a rider managed to step right onto my front wheel and snap another spoke.

In both cases, the wheel was surprisingly plenty rideable – enough to get me back to the pits. These incidents would have likely broken spokes in just about any wheel; what was unusual was that the failure happened at the nipple. The DT Swiss brass Pro Lock nipples are known for their durability.

As Rik van Putten, Fast Forward's chief of marketing and sales, pointed out, other wheels would have likely had a more dramatic failure in similar encounters. "What's good about this is that the nipple was not pulled through the rim," said van Putten. "Our carbon reinforcement strip around the spoke holes withstands a great amount of force on the rims without pulling spokes through."

The other decided benefit is that, because of the wheels' traditional, exposed nipples, in most cases spokes can be replaced and wheels trued without having to remove tubulars, which can be a time-consuming pain in the butt.

The FFWD 4C as demoed with 240s hubs weighs in at 1315 grams and retails for 1198 Euro (about \$1700). Fast Forward lists the 4C rims at 330 grams each and DT Swiss lists their 240s hubs at 108 grams for the front, 222 grams for the rear. With the house-brand FFWD hubs and Sapim CX-Ray spokes, they come in at 1330 grams for 998 Euro (about \$1430). Although I wouldn't label either setup as "cheap" – **these are top-shelf carbon race wheels**, after all – the prices are competitive with Zipp's (the Zipp 303 Cyclocross wheelset, which is ubiquitous on the US domestic pro 'cross circuit this year, retails for \$2285, has 24 front /24 rear spokes, claimed weight is 1206 grams, and rims are a little deeper at 45mm.)

Look for Fast Forward wheels to be all over the European circuit this coming season, both on the road and in the 'cross races. Surely an explosion in the U.S. market can't be far behind.

Fast Forward offers a 2-year manufacturer's warranty on all of their wheels as well as a crash replacement policy for half-price rim replacements. More information and order directly on Fast Forward's website.

