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FIRST RIDES: SCOPE O2 CARBON MTB WHEELS

Not a week goes by without another carbon wheel option coming up – although this seems far more common in road cycling than in mountain biking. Still, the options are growing. And you know what? There are lots of really good options coming out. I have been really happy with wheels from Kappius, rims from Nextie, Light Bicycle and EIE Carbon. I was less impressed by early model Enve rims but they have progressed to a rim that would barely be recognisable to their first models.

Without sounding like I'm showing off – we only have carbon mountain bike wheels in our garage. Carbon

rims are not just about weight – two sets of wheels are about 1700g. But the carbon mountain bike wheels are all about ride quality and stiffness, and we have a range of wheels from 1290g upwards, with 22mm through to 29mm internal width, and with 24 up to 32 spokes. A carbon rim can be stiffer for a given weight, and while our household has cracked 3 carbon rims since 2015, we would have done 3 alloy rims in the 18 months prior to that. So I feel it's a worthwhile investment. Hitting the rim hard is not good on alloy or carbon, but carbon does have a 0/1 failure rate. It's either ok, or not. But this is why we build, ride and test so many carbon wheels. They're the best option for us, and the options out there continually change.

Introducing Scope Cycling

Scope Cycling are a Dutch wheel brand, who have four sets of wheels – just one, the O2, is destined for the trails. The O2 spec list reads like a tick list for what I would look for in a carbon mountain bike wheel for cross-country racing, marathon racing or stage races. They have a 31mm wide out width, which leaves a 25mm internal width. This is ideal for most 2.1 – 2.3" tyres to infalte with a good size bag (allowing low pressure) without leaving the sidewall overly exposed, or moving edge knobs too far up the shoulder. The spokes are straight pull, which means the place with the highest loading on a spoke (the bend) isn't

there. Straight pull spokes can be a little harder to build with – but hey, you're buying a built wheel set. That's not your problem.

The wheels use 24 spokes at the front, and 28 in the back. The rear is laced 2:1 – so spoke tension is more even on each side to negate the effect of dishing for the cassette. The rims are also asymmetrical. Scope say they have laid extra carbon around the spoke holes, and not the whole rim bed, to allow for extra strength without extra weight on the whole rim.

The hubs come in Boost and non-Boost, and you can get end caps for most standards. You can also get a SRAM XD driver or Shimano 9/10/11 speed freehub. MicroSpline is not yet available for Shimano 12-speed. The hub bodies are CentreLock. You can even opt for a CeramicSpeed bearing upgrade when





built. The hub flanges are really wide, using all the room available. This is most noticeable on the front, especially when sliding into a Fox 32 SC fork!

The rims are shallow at just 23mm high. While carbon rims often had a deeper profile, it mostly meant rims were too harsh. So this lower profile is much more suitable for a mountain bike application, where aerodynamic gains at over 40km/h aren't really a thing you want to chase compared to traction, ride feel and compliance.

The claimed weight for the non-Boost set I was sent are 609g and 751g for the front and rear respectively. That's a claimed weight of 1380g. The Scope O2 wheels do come pre-taped and with valves fitted so the weight I recorded was 628g and 788g for 1416g total. 36g for two valves and tape seems right, and the

taping job was super neat, as you'd expect. The wheels spin very smoothly, and the rear hub has good take up, although I need to find out the specifics on how many degrees it rotates before engagement. It feels only a little less than a 54t upgrade in a DT Swiss hub, but a little crisper than a Hope Pro 4.

Setting up the Scope Cycling O2 wheels

Scope Cycling worked with Schwalbe on their tubeless ready rim profile. The O2 wheels are pitched for gravel as well as mountain bike use, and some 2.25" Maxxis Rekon Race popped on just with a track pump. I fitted some Joes No Flats sealant through the valve (thanks to the removable valve core) after the tyre was beaded. But more on the sealant and tyres later. There was no pop as the bead locked in, it just went straight in, nice and smooth all the way around. There was no air lost either.

I've clocked about 400km or so on the wheels so far. And fitted with a semi-slick, they're fast! But they're also smooth. First up I rode them only on my hardtail. The wheels roll really smoothly, and have me re-thinking my thought that a 24 hole front wheel wasn't for me. The front wheel feels as stiff as I'd need, and I think the wider flange spacing assists with this. The Scope Cycling O2 wheels look and feel great, and the take up in the rear hub has been great so far.

But these are fitted for a long term review, so I'll get back to riding them, racing them, and putting them through a variety of uses. Check back for a full review in a couple of months.

The Scope Cycling O2 wheels sell for 1398 Euro, which is about \$AUD2200. You can find out more on their website.