

Prime RP-38 Carbon Clincher Wheelset

by Dave Atkinson November 1 2016

Comments

Verdict: Really good tubeless-ready carbon clinchers for racers on a budget

Weight: 1,360g

Contact: www.chainreactioncycles.com

Looking for a set of full-carbon, tubeless-compatible race wheels on a budget? If so, then you should take a look at these Prime RP-38 clinchers from Chain Reaction Cycles. They're nicely built, with a low weight and decent braking performance, even in the wet.

The 38 in the name refers to the depth of the rim; 38mm is a fairly common depth for all-purpose wheels. It's deep enough to give you a bit of a nudge on the aero side, without being so deep that you have a white-knuckle ride when it gets windy. I've taken these RP-38s out in some fairly hectic conditions and found them to be very predictable – they do catch the wind a bit more than a standard box section rim but they're never scary.



Prime RP-38 carbon clincher wheelset - rim detail.jpg

As regards their aero properties, Prime isn't making any particular claims for them other than describing the rim profile as aero. It's a fairly wide and blunt shape as aero wheels go, not as bulbous as something like a Zipp 303 but still fairly chunky. You might go a bit quicker on your evening 10 over your shallow alloys, you might not. Given the depth, I'd expect the gains to be fairly marginal. It's more of an all-round wheelset than something you'd buy for shaving seconds.

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You're more likely to be fitting them because carbon wheels look cool. I mean, because they're lightweight and tubeless-ready. How light? Well, Prime claims a wheelset weight of 1,360g and when we stripped ours down to the bare wheels – no rim tape, skewers or tyres – that's exactly what they were: 620g for the front wheel and 740g for the rear. Sub-1,400g is proper lightweight territory but these wheels don't feel flimsy, anything but. Spoke count – 24 at the rear and 20 at the front – isn't high, but they're good quality spokes – Sapim CX-Ray – and evenly tensioned. You get spare spokes and nipples included.



Prime RP-38 carbon clincher wheelset - front hub.jpg

The hubs are decent straight-pull alloy units with sealed cartridge bearings (four in the front and two in the back). The freehub is alloy, but it has a steel anti-bite guard plate to stop the sprockets digging into the metal. It works too: pulling the cassette off after a few hundred miles revealed minimal notching, and the cassette didn't need to be persuaded off with hitting tools. There are four pawls in the rear hub with 26 engagement points, and they're nice and clicky without being too loud.



Prime RP-38 carbon clincher wheelset - rear hub.jpg

The rims are T700 unidirectional carbon fibre, with a 3k weave used for the brake track. The surface of the brake track is textured 'for enhanced all-weather performance', we're told. Does it work? Well, they're not a match for a good alloy rim in terms of grab from the supplied Braco pads, but braking in the dry is good, and predictable. There's no change in brake feel as the wheel turns, so they've been built to a tight tolerance. In the wet there was some judder from the pads at first, but as they wore in it subsided; the braking performance in the wet is decent rather than stellar, but they're predictable and I never had any issues stopping the bike.

Prime uses a staggered brake track, moving the braking surface down and away from the bead to increase heat dissipation between the brake surface and the bead, which is the most vulnerable part of the rim. I spent a few mornings dragging the front brake all the way down the descent from my house into town and managed to get a considerable amount of heat into the rim but it was never so hot that you couldn't touch it, and there are no signs of any deformation or delamination. Prime says it has tested the rims up to 350°C – you do get some deformation at those temperatures but the integrity of the bead wasn't compromised. And it's not a temperature you're likely to be able to achieve outside of a lab, anyway.



Prime RP-38 carbon clincher wheelset - nipple.jpg

The staggered brake track presents an issue, though, and it's that my brakes, especially the front, are right at their bottom limit in terms of pad adjustment. In fact, if I could I'd set them about a millimetre lower, but without taking a Dremel to the callipers that's not possible. With a certain combination of frame/fork and short-drop calliper you may not be able to set the brakes on the brake track properly, so watch out for that.

If you buy these wheels they'll come set up with tubeless valves and rim tape, ready for tubeless tyres. With a 16.5mm internal width you can fit anything up to a cyclo-cross tyre; ours came set up with 25mm Schwalbe Pro Ones. The valve setup is excellent: it's a quality valve and there's a flat section at the valve hole to make sure the rubber O-ring gets a decent seal. The rim tape isn't as great, it's a bit flimsy and it's easy to knock off the rim when you're seating a tyre, so be careful.

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Out on the road these wheels are everything you want them to be, really. The light weight is mostly noticeable when you're putting the power down to get up to speed, and there's very little flex in them – they're really well built. They don't noticeably wind up when you sprint and they don't pitch over when you lean them into a corner. Even when sprinting or putting in an effort up a hill, I didn't get any issues with rubbing on the pads. Mostly they do what they need to do with a minimum of fuss. They arrived true, and they've stayed that way.



Prime RP-38 carbon clincher wheelset - rear hub 2.jpg

I've reseated the tyres a couple of times and each time they've gone back up with the Bontrager Flash TLR pump, and stayed up. The Pro Ones are a favourite of mine (once you've got past the first couple of rides where they're a bit sketchy in corners) and the 25mm width suits the rims really well, giving a decent level of comfort without being over-heavy. I've mostly been running them at around 90-95psi, a bit less than I would with a standard clincher and tube, because there's no risk of pinching them on an unexpected pothole.

> Should you go tubeless? The pros and cons...

The quick releases are okay; they're an external cam design and they feel a bit flimsy but I haven't had any issues with them working loose. In the end I swapped them out for a pair of internal-cam Shimano ones. Attaching wheels to my bike is not an area where I really want to save weight.

Overall these wheels are excellent for the money. Eight hundred quid isn't exactly small change but it's not exactly expensive for a set of carbon, tubeless-ready wheels either. The positioning of the brake track might give you some headaches, and the skewers are okay rather than good, and the braking in the wet is a bit less powerful than I'd like, but there are no deal-breakers there. If you want to go tubeless then they're definitely a worthy upgrade: light, stiff and well-built. And if you don't want to go tubeless they're still a great value pair of carbon race wheels.

Verdict

Really good tubeless-ready carbon clinchers for racers on a budget

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road.cc test report

Make and model: Prime RP-38 Carbon Clincher Wheelset

Size tested: 38mm deep

Tell us what the wheel is for, and who it's aimed at. What do the manufacturers say about it? How does that compare to your own feelings about it?

Prime says:

The Prime RP-38 Carbon Clincher Road Wheelset is the perfect partner for those looking for one wheelset to cover any situation on any terrain. Our 38mm deep aero rim profile offers increased speed for less physical input by increasing the aerodynamic benefits across a wide range of yaw angles.

Our 25mm wide rim profile is optimised for use with wider tyres ranging from 25c to 33c. For road use 25c to 30c tyres can easily be accommodated with our preference swaying towards 25c for all round use.

The use of wider tyres offer many benefits; a wider contact patch for increased traction and cornering grip; reduced rolling resistance and added comfort associated with higher volume tyres.

For gravel and Cyclocross use tyres ranging from 28c to 33c will easily be accommodated.

The RP-38 features our CC-38 rims with R010 hubset and is hand built with Sapim CX-Ray spokes and Sapim Secure Lock aluminium nipples.

For optimum braking performance we recommend you only use Prime Carbon Pro brake pads.

Tell us some more about the technical aspects of the wheel?

CRC lists these features:

Prime carbon pro brake pads

Prime Quick Release skewers

Tubeless valves x 2 (Installed)

Tubeless tape (Installed)

Spare spokes x 3: 1 front, 2 x Rear (1 drive side / 1 non drive side)

Nipples x 3

Total Wheelset Weight: 1360g

Rim Specifications:

Material: T700 UD carbon fibre rim section

High TG resin 3K carbon fibre brake track with textured surface for enhanced all weather performance

Rim Profile: Prime U profile for enhanced aerodynamics and predictable handling in crosswinds

Tubeless ready

Spoke count: 24 hole / 20 hole front

Rim width: 25mm wide (16.5mm internal rim width)

SBT technology – Staggered brake track positions the braking surface away from the tyre bead to increase heat dissipation

Hub Specifications:

Rear:

Material: Superlight Forged & CNC machined 7075 alloy hub body

Spoke type: Straight Pull

Bearings: Premium Japanese sealed cartridge bearings x 4

Axle: 130mm x QR

Pawls: 4

Points of engagement: 26

Freehub Body: Light weight alloy with ABG (Anti Bite Guard), Shimano/SRAM 9/10/11 speed

Freehub Body Option: Campagnolo freehub body available for purchase separately

Hole count: 24

Weight: 219g

Front:

Material: Forged & CNC machined 7075 alloy hub body

Spoke type: Straight Pull

Bearings: Premium Japanese sealed cartridge bearings x 2

3 in 1 Axle: 100mm x 9mm

Hole count: 20

Weight: 77g

Rate the wheel for quality of construction:

7/10

Very well put together, arrived true and well-tensioned, and stayed that way. Skewers are a bit flimsy, as is rim tape.

Rate the wheel for performance:

8/10

Light, easy to spin up to speed, easy to go tubeless. Braking predictable in wet and dry conditions but a bit lacking in power in the wet. Stiffness is good.

Rate the wheel for durability:

9/10

Several hundred miles in, no issues at all really. Still true, even silly braking has no effect on the rim integrity.

Rate the wheel for weight

9/10

1,360g for a 38mm section wheel is very good, especially at this price.

Rate the wheel for value:

9/10

Hard to say they're not excellent value.

Did the wheels stay true? Any issues with spoke tension?

No issues at all, stayed true throughout.

How easy did you find it to fit tyres?

They're a close fit but it's not hard to get them on.

How did the wheel extras (eg skewers and rim tape) perform?

Skewers and rim tape are fairly ordinary, tubeless valve is good. Spare spokes are included.

Tell us how the wheel performed overall when used for its designed purpose

Very well, an excellent budget race wheelset.

Tell us what you particularly liked about the wheel

Light, well-built, tubeless ready.

Tell us what you particularly disliked about the wheel

Skewers and rim tape are ordinary, wet braking performance could be better.

Did you enjoy using the wheel? Yes

Would you consider buying the wheel? Yes

Would you recommend the wheel to a friend? Yes

Use this box to explain your score

These are very good wheels. The brake track positioning, quality of the skewers and rim tape, and the wet braking performance mean it's an 8 rather than a 9, but they're still excellent value and recommended.

Overall rating: 8/10

About the tester

Age: 43 **Height:** 189cm **Weight:** 92kg

I usually ride: whatever I'm testing... **My best bike is:** Kinesis Tripster ATR, Kinesis Aithein

I've been riding for: Over 20 years **I ride:** Every day **I would class myself as:** Experienced

I regularly do the following types of riding: road racing, time trialling, cyclo-cross, commuting, club rides, sportives, general fitness riding, fixed/singlespeed, mountain biking, Mountain Bike Bog Snorkelling, track

Prime RP-38 Carbon Clincher Wheelset 2016

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Prime 2016

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Dave Atkinson

Dave is a founding father of road.cc and responsible for kicking the server when it breaks. In a previous life he was a graphic designer but he's also a three-time Mountain Bike Bog Snorkelling world champion, and remains unbeaten through the bog. Dave rides all sorts of bikes but tends to prefer metal ones. He's getting old is why.