

Velo Vision Sample Article

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I hope you enjoy the read.



Peter Eland
Editor and Publisher,
Velo Vision

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VELO VISION AND VELO-VISION
We weren't first with the name. *Velo-Vision* (note the hyphen) is a progressive HPV-friendly bike shop in Körten, near Bergisch-Gladbach, Germany, who also make their own recumbents. *Velo Vision* magazine is working in friendly harmony with *Velo-Vision* in Germany.

Velo Vision is printed on paper produced from sustainable forests to Nordic Swan standards.



COVER PHOTOGRAPH:

The Challenge Concept XT trike on the road.

OPPOSITE: The Koga Worldtraveller on a forest track near Bellingham. Both photos by Peter Eland.

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TESTING TIMES

Once again we have an issue chock full with bike tests – I hope you enjoy it. Our March issue is always popular with manufacturers wishing to launch fresh products ready for the new cycling season, and our thanks in particular go to both Challenge and Hase Bikes for rush-shipping us test trikes hot off the production line. Our continued thanks also to all of my friends in York who model for the photos and whose 'second opinion' insights I often feed back into the review write-ups.

It's a sign of a flourishing industry that there's a constant flow of significant new models seeking evaluation and exposure to you, the critical reader and potential customer. Are we ever going to run short of new and exciting bikes to test? Not likely!

Peter Eland



THREE WHEEL CHALLENGE

The first trike from prolific Netherlands recumbent bike makers Challenge has been eagerly awaited – we got hold of the very first production trike for review. Is it set to shock the competition?



BACKGROUND

The Challenge trike was announced officially at the September trade shows last year, though it's been under development for considerably longer. Challenge say that the Concept XT trike reviewed here is just that – a 'proof of concept' to showcase their trike ideas, and a series of other models will follow. They're unwilling to reveal much detail as yet but super-lightweight and suspended models are expected.

The 'Concept XT' model was priced for pre-order at €2690 (about £1770, US\$3476) and including goodies such as upgraded disk brakes and carbon track rods which will be optional on later series. But by the time you read this the pre-order phase will be over (it's in production now) and the price for an XT-equipped model is €2590, about £1710 or \$3345. Fitted with the SRAM X7 groupset (with twistgrips replacing the bar end shifters), it's €2350, about £1550 or \$3030. Prices include tax but exclude shipping, and may well also vary somewhat if you buy via a dealer.

To get to the test trike spec, upgrading the track rods from the 'straight across between the wheels' type to the indirect carbon type with fine tracking adjustment plate, as fitted on our test bike, costs €95. The Avid BB7 disk brakes as fitted are an €75 upgrade compared to the standard BB5s.

For all models carrier racks are optional, in two designs. The €190 'Voyager' carries 'four large panniers' and the smaller €95 'Sport' carries 'two small panniers'. Mudguards will be available for €80. The upgrade to carbon seat (from glassfibre, saving 470 g) costs €210. Unfortunately none of these accessories were ready in time for our test. It's worth noting that seat-back and side-slung recumbent bags from Radical Design and others are another good way to add carrying capacity.

Other component and drivetrain options are also available, including rear disk brake and Rohloff hub options. Contact Challenge or check their website for full details.



FIRST IMPRESSIONS

With its sleek, stripped-down 'no mudguard, no rack' set-up and shiny XT components, the Challenge trike has, perhaps, a head start on the looks – but it doesn't really need it. It's the frame, big beefy aluminium in a gorgeous, pearlescent green which carries the day. With the cross-beams looking like fighter jet wings and the clean curve of the main tube, the Challenge pulls off a very 'poised' look which drew admiring comments from all who saw it.

It's nit-picking really, but in a few places the welding draws attention to itself with, for example, a slightly bumpy trailing edge on the cross-beams and around the rear 'wishbone'. Welding up this sort of seam with cosmetically perfect results is pretty much impossible at reasonable cost, so a little lumpiness is just part of the deal with this design.

Before we leave the frame it's worth noting the replaceable rear derailleur hanger and disk-brake-ready rear dropouts. Leg length adjustment is via an aluminium boom which slides smoothly and is locked via two pinch bolts. The front derailleur cable is neatly concealed within the frame. A tab welded onto the bottom bracket is handy for mounting lights or, perhaps, a front fairing. There's only one frame size available, but plenty of adjustment, so it should fit riders from around in height.

Because Challenge wanted the cross-beams to slope up from the wheels to the frame (their designer told me "the other way round makes it look like the trike's been squashed!") a custom kingpin assembly was required. They took the opportunity to engineer in a clever wheel removal system: the brake calliper on its mounting plate comes away with the wheel when you remove it, so there's no need to re-adjust the disk brakes on reassembly. The sealed industrial-style bearing units in the steering pivots are smooth and play-free.

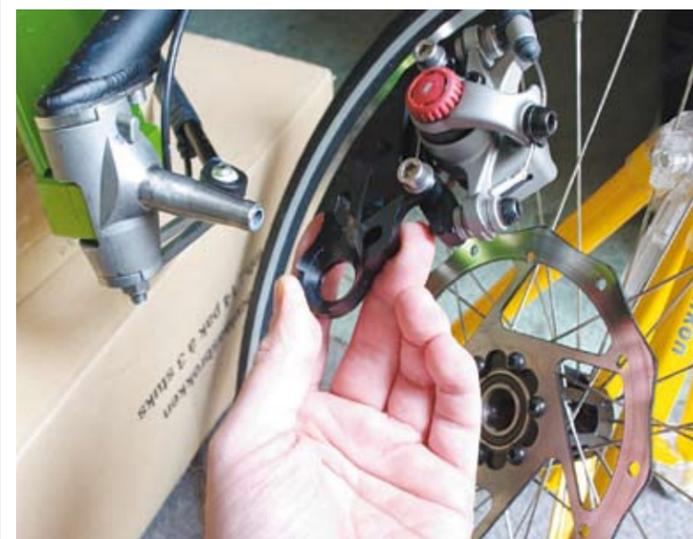
Bolting on underneath the kingpin castings are stainless steel track arms, connecting the two front wheels via the carbon

track rod assembly. This has very minimalist track rods either side, with lightweight composite rod ends bonded into the carbon fibre tubes. On other trikes, the rod ends are often threaded in the track rods, allowing adjustment of the steering tracking (i.e. making sure the front wheels are parallel when you're going in a straight line, to avoid tyre scrub). To provide this adjustment, Challenge have come up with a system which uses two sets of stainless Allen bolts to spring apart (and then lock) a flexible linkage plate under the trike's main boom. There's not much movement available, but it's plenty to compensate for any assembly tolerances and so to achieve perfect tracking. Very neat...

The idler for the chain is fitted just behind this steering plate, and little stainless steel plates neatly keep the chain locked into the pulley, and also hold a small section of chain tube to guide the return run. If you want a chain tube on the top run up to the

chainring to keep your trousers clean, an alternative fitting can accommodate this. Moving back to the top of the kingpins we come to the steering arms, which extend backwards via a telescopic length adjustment to hold grips, brakes and gear changers. It's very tidily done, and puts the hands in a comfortable position by the rider's side.

The brake levers are a custom Challenge design, with the pivot carefully placed to ensure that as you squeeze them with your top



ABOVE: The disk brake calliper is mounted to a separate black anodised aluminium bracket.

To re-assemble, the caliper slips over the brake rotor and the whole thing is slid onto the axle and secured by an Allen bolt.

TOP: Neatly engineered handlebar assemblies with the custom brake levers, each with parking brake

RIGHT: Challenge custom hubs with the red anodised internal spacer adding a certain 'bling'...

BELOW RIGHT: A view from below the frame reveals a solid chain idler support and neat guides. The steering tracking adjustment mechanism can be clearly seen, with stainless bolts to 'spring' the arms together or apart.



two fingers, they don't squash any fingers you've left wrapped around the bars. Challenge say the shape of the CNC-machined lever has been somewhat refined for extra comfort since ours were made, though I didn't have any complaints. Each brake is fitted with a spring-loaded 'parking' lock.

The seat is a hard-shell style, with a pronounced 'nose' on its base to keep you centred. Aluminium brackets attach it at top and base via Allen bolts; the top one is slotted to provide angle adjustment of between 30 to 37° or optionally 37 to 43°. Height of the seat base is around 26 cm, on the highish side for a sporty trike, perhaps.

The gearing system combines high-end Shimano derailleurs with bar-end shifters and an oversized 'Gossamer' 53/39/30 chainset which seemed to be of very fine

quality. With an 11-34 cassette this provides a range of 23 to 125 gear inches on the 26" rear wheel, quite appropriate for a sporty trike.

The front wheels are the 20" (406) size, and built around jewel-like Challenge custom disk brake hubs. With straight-pull spokes (crossed inside, radial outside) and a red-anodised spacer tube within, they look just lovely, and they're secured to the axles via a recessed Allen bolt.

Challenge provided a basic pair of plastic pedals which you'll see in some of the pictures, but most owners would swap them for a clipless system. We used the 'combi' SPD pedals from the Koga for much of our testing.

Overall width is 83 cm, track is 76 cm, and weight as tested was 16.6 kg (inc. pedals, seat pad). Overall length varies with boom extension: for me, at 6' 2", it was about 205 cm.

THE RIDE

I'm rather a fan of well-fitting hard-shell seats and I'd struck it lucky with the Challenge model: it supported the curves of my back well, and the stock seat-pad provided a good balance between cushioning and firmness – you need a firm base to brace against as you push into the pedals. As you'll see elsewhere this issue, a 'Ventisit' seat-pad is a good alternative.

Seated in the trike, your hands fall naturally onto the grips, and off you go. Making the first steering corrections starts the re-training period that'll be necessary to get used to the direct steering: it feels really odd at first to shift your hands sideways to turn, instead of fore-and-aft as on, for example, the Kettwiesel. After a while, though, it just feels slightly odd, and after a few hours riding it was only now and again that I really noticed.

The action is light enough that you rarely need to apply much force, anyway.

Maybe I just needed more riding time, but even after getting used to the system I couldn't really say I like it. The side-to-side hand motion just doesn't feel as natural or controllable as front-to-back, which it seems to me uses stronger muscles in the arm and shoulder – the ones you'd use for sawing wood, for example. I also missed being able to hang off the bars while cornering, something you can do with indirect steering and which helps keep you planted in the seat.

Then again, I don't think I should come down too hard on this type of steering. It doesn't work for me, but it's popular in the USA on the Catrike range, for example, so clearly lots of people do like it. As ever: get a test ride if at all possible and make up your own mind.

The Challenge drivetrain was a silky-smooth affair, with bar end shifters providing positive, smooth click-shifting at the rear and an easily-trimmed ratchet action for the front. Not much else to say – it worked, and well. As I rode the trike mostly on the flat and without any significant luggage I rarely used the bottom ring, but did appreciate the higher gears: in this guise as a fast day-ride or fun trike, the range seemed just right.

Climbing up one of the few steep hills around York, I could mash the pedals without any discernable frame flex: the trike also felt rigid and sure-footed for fast descending. Braking was very good from the Avid mechanical disks, and I did like the custom Challenge levers. Helped no doubt by the very short cable runs to the disk brakes, I found the action extremely positive and precise. Braking hard on one wheel only provoked only very mild brake steer, easily controlled, so braking one-handed while indicating was no problem at all.

Overall, despite any reservations about the direct steering, the Challenge trike was a fun ride, a trike that really wanted to be pushed fast and to zap past the weekend cyclists in a green blur. And, even with me as a pilot, it might just have overtaken more than a few...

CONCLUSIONS

Challenge enter the competitive trike market with an extremely impressive trike. It has killer looks, any number of exquisite design details to pore over, and a real racing feel. The promised accessories should round off the package for anyone needing an all-weather or touring-capable trike, too.

It's hard to fault the Challenge's performance on the road, with its stiff frame, light steering and high performance component package. I must admit I wasn't convinced by the direct steering, but it's well executed and this is a personal preference.

As the HP Velotechnik Scorpion has already done, I'm quite sure the Challenge will find a good number of eager buyers, convinced by the design, performance and – yes – the name of the company behind it. Will ICE and Greenspeed be quaking in their boots? Perhaps to some extent, but both companies do offer, for now, a considerably wider choice when it comes to seat height and style, track width, and so on. So in many cases buyers won't face a head-to-head comparison. Also bubbling under as a competitor is the rather affordable Catrike range from the USA, similarly using the direct steering system. But in any case, it's quite likely that Challenge will be bringing new people into triking from their existing two-wheeler customer base, rather than taking business that might otherwise have gone elsewhere.

Overall, the Challenge trike measures up and more to any of its direct competition – no small achievement given the pace of developments in recent years. As in the two wheel arena, when it comes to trikes Challenge are now a force to be reckoned with.

Peter Eland

AVAILABILITY

Challenge Bikes: Tel +31 55 521 2405 or see www.challengebikes.com The trike is also available via Challenge dealers worldwide.