



The new Scultura from... 4.56kg

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Shutter Precision PV8 Dynamo Hub £89.99

Well made dynohub with excellent power output; a great option for day-in-day-out riding

Weight 387g Contact www.ison-distribution.com by Dave Atkinson September 6, 2012

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Next Review Fondriest TFZero



Shutter Precision PV-8 dynamo hub

If you're looking for a dynohub for day-in-day-out riding then the Shutter Precision PV8 Dynamo Hub is certainly one to consider. It's under 400g in weight, puts out plenty of juice and has stood up well to the rigours of the British 'Summer', and at £90 is decent value too.

SP make a range of hubs, including a switchable one that uses the same internals as the Supernova Infinity 8, but this is their lightweight option. This rim-brake option weighs just 387g, about as light as you'll find. There's a disc version too that's just over the 400g mark.

Both of those units use the same basic shell, which means the flanges on the PV-8 aren't as widely spaced as they could be at just 50mm apart. While in theory this means that the wheel won't be quite as strong as a wider hub, in practice (built up with Halo double butted spokes to a Mavic Open Pro rim) the wheel's been fine. It's no more flexible than I've noticed, and I've been bunging it into corners to check.

Build quality looks to be very good, with aluminium end caps protecting the sealed bearings and dynamo gubbins inside. The Shutter Precision dynamos use a different setup to most hubs: there's a metal ring that's magnetised with a number of individual poles around its circumference, and this rotates with the hub in a slot in the stator. It's a clever way of building a dynamo and certainly it's less work than arranging the magnets around the hub shell, the traditional way to do things. It also means you only have to precision-fit one ring rather than 30-odd magnets, so that makes it cheaper too. It's been wet here, like it has everywhere else, and a quick check behind the end caps reveals no moisture inside from a summer of riding. That bodes well for longevity.

Shutter Precision claim a 72% efficiency for this hub, which means you only need to feed about 3.3W in to get your 2.4W out - that's class-leading if accurate. The output from the PV8 is certainly impressive, up to about 5mhp the generator output ramps up steeply and then flattens off as you get faster. It's a very similar power curve to the Infinity 8; not surprising considering they share effectively the same internals.

With a Supernova E3 Pro light running up front you get easily enough light for all-night riding, and even when you're running a USB charger as well you get a usable beam, though there's not quite enough light to go at all-out speed.

You'll be seeing a lot of dynamos based on these internals. Supernova use them, Biologic have started to, Exposure's new light is paired with one and there'll likely be more as SP seem happy to license the technology. Most of the third party manufacturers are developing their own hub shells to fit the SP internals in, but from what I've seen there's very little wrong with the original and at £90 it's excellent value. A wider flange version would be a welcome addition to the range but that's really my only gripe.

Verdict

Well made dynohub with excellent power output; a great option for day-in-day-out riding.

road.cc test report

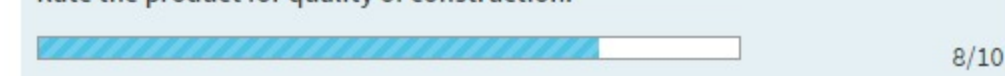
Make and model: Shutter Precision PV8 Dynamo Hub

Size tested: n/a

Tell us what the product 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?

The SP 8-series hub dynamo incorporates the best technical advancements and seeks to attain perfection in field of hub dynamos. Painsstaking innovation has made an optimal hub dynamo reality. The SP-8's technological advances are well hidden under its durable shell. Numerous simulations were conducted to optimize the mechanical dynamics of the dynamo contained within the SP 8-series concept. At the dynamo's core is a high grade NdFeB permanent magnet designed in line with a single plane concept that is coupled with a unique yoke alignment design strategy. The resulting hub dynamo attained an efficiency of 72% at 15km/hr and proved a novel design. Its 6V3W output meets German StVZO requirements and has received approval number K845. The intelligent light weight design was tempered throughout with painstaking attention to structural performance. The smooth oval shape of the hub was optimised for balance, while attaining an unprecedented weight only 360g.

Rate the product for quality of construction:



Rate the product for performance:



Rate the product for durability:



Rate the product for weight, if applicable:



Rate the product for value:



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

Very well. Nicely built, faultless in operation.

Tell us what you particularly liked about the product

Power to weight ratio.

Tell us what you particularly disliked about the product

Narrow flanges.

Did you enjoy using the product? Yes.

Would you consider buying the product? Yes.

Would you recommend the product to a friend? Yes.

Overall rating: 8/10

About the tester

Age: 40 Height: 190cm Weight: 102kg

I usually ride: whatever I'm testing... My best bike is: Genesis Equilibrium with SRAM Apex

I've been riding for: 10-20 years I ride: Every day I would class myself as: Experienced

I regularly do the following types of riding: commuting, sportives, general fitness riding, fixed/singlespeed, mth, Mountain Bike Bog Snorkelling, track

4 user comments

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I'm considering a dynamo for touring with the aim of charging USB devices (phone, gps) during the day, and switching over to lights if riding in the dark, and this looks like a decent piece of kit for a price I'm prepared to pay.

But, what else do I have to buy to make this work? I'm thinking at least:

* A new wheel build (with presumably shorter spokes and hence the need for spares?)

* Cabling

* Power regulator to smooth out spikes and usb adapter.

Would that be all? Sorry if this seems like basic stuff google should be able to sort me out with, but it's a case of too much information, and not knowing who to believe.

Thanks...

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posted by neildmoss [231 posts] 12 Likes
6th September 2012 - 18:01

Neil - that is all but of course with all things electric there are many ins and outs, particularly with keeping a steady current going into something like an iPhone. Current best bet is (any) hub with an Bauch and Muller ewerk regulator and top up battery and light. This isn't cheap. I don't use it myself but people say this is the current best setup AND YET is still new tech and a little flaky.

I use shimano NS80 hub with a B&M Lumotec light and it's brilliant actually.

Bausch and Muller are bringing out a new dynamo light 'Luxos' which looks absolutely brilliant - 70 lux in a 'car like' bean pattern with an integrated USB port. Tick, tick, tick. Personally I'd wait for that to come through.

News on this site: http://road.cc/content/news/65540-eurobike-2012-touring-bikes-trends%E2%...

PDF of features in english: http://www.bumm.de/fileadmin/user_upload/Katalog/Katalog_2012_GB.pdf Hope that helps.

Also in general www.yacf.co.uk has more Audax geeks on it that here, and those are the people who really know about this stuff...

A

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posted by alotronic [377 posts] 13 Likes
7th September 2012 - 9:21

Magic - thank you Mr A.

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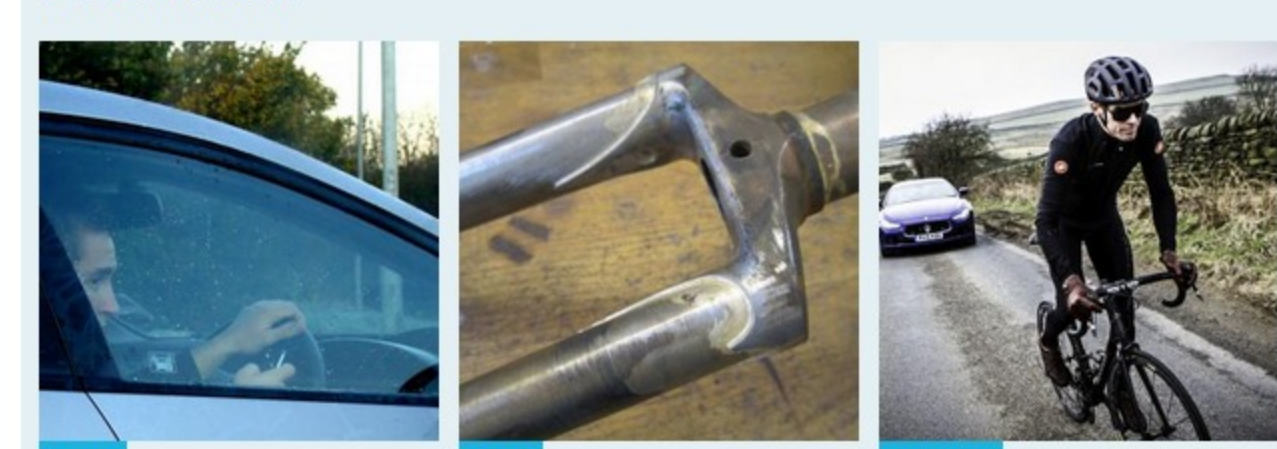
posted by neildmoss [231 posts] 13 Likes
7th September 2012 - 9:33

Pleasure!

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7th September 2012 - 12:00

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- ★★★★★ Perfect
- ★★★★☆ Exceptional
- ★★★★☆ Very good
- ★★★★☆ Good
- ★★★★☆ Quite good
- ★★★★☆ Okay
- ★★★☆☆ Not so good
- ★★★☆☆ Poor
- ★★☆☆☆ Bad
- ★☆☆☆☆ Appalling

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Events coming up

Bike 4 Cancer London To Brighton Bike Ride
June 9, 2015 - 06:00

Girls: Time to Saddle Up at Edinburgh Bicycle Co-operative in Manchester
June 10, 2015 - 19:30

Afasic Essex Villages Ride
June 13, 2015 - 09:00

The Eastbourne Cycling Festival Tri Store Sportive
June 14, 2015 - 07:30

Evans Cycles Cheshire Sportive
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road.cc Week of 8 Jun 2015 - 14 Jun 2015

973 24,286.7km 985.56m

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