

Reviews

Gear up

COMPONENTS, KIT, AND MEDIA SELECTED
AND REVIEWED BY BIKE JOURNALISTS AND CYCLING UK STAFF

Put to the test

Is there a product that you think needs reviewing?

Write to: *Cycle*, PO Box 313,

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Swytch

Electric Assist Kit for Brompton

Turn your Brompton into an electric-assist one for less than a grand

£999 (£500 if pre-ordered)

swytchbike.com

Brompton's own Electric model appeared in 2017 but there are still many retrofit options out there, like this one from Swytch. It consists of: a replacement front wheel with a hub motor; a battery pack (power controls are on top of the battery and integral front light); a battery mount (frame or handlebar options); a pedal sensor; and an extended handlebar stem peg to allow folding with the handlebar battery mount in place.

"Installation typically takes ten minutes," Swytch say. It took me longer but was simple enough:

fit a tyre and swap over the wheels; mount the pedal sensor and cable-tie the lead; attach the battery mount (a large, strong clamp); plug in the cables; then swap over the handlebar catch. As easy as that? Yes – with a couple of caveats. I used the optional, Brompton-specific pedal sensor, which costs a bit extra and requires removal of the crank arm to fit. But it's neater and less prone to damage on a folder than the larger sensor. Secondly, the motor's cable run requires careful setup to avoid restricting steering.

When riding, the power kicks

Pros & cons

- + Easy to fit
- + Effective assistance uphill
- Full price is rather steep

in after a second or so of pedalling; this is a motion sensor system, without the immediate response of torque sensing systems. However, it's one of the better ones I've tried, without much delay or run-on, often a problem on poorly programmed kits. It zipped up the Pennine foothills emitting only a moderate hum. Range from the 252Wh battery was at least 20 miles, sometimes quite a bit more, despite being ridden mainly on power level four out of five. My only quibble was the lack of a handlebar control; the buttons are on the battery.

The kit is fairly lightweight, adding 3.4kg. Of that, 1.78kg is the battery, which is removable at the push of a button. ●

Richard Peace



Other options



NANO ELECTRIC £785+ (KIT ONLY)

One of the most versatile Brompton retrofit systems [throttle plus pedal and pedelec options], with a long track record of reliable conversions.

nanoelectricbikes.co.uk



ARCC INNOVATIONS BROMPTON WITH E2-POD £1,799+ (FITTED, KIT ONLY)

A high-tech 'Rolls-Royce' system designed and made at Arc's plant in Cambridge.

arccinnovations.com

Verdict

A neat, light retrofit kit that gives a great performance boost. As with the 'official' Brompton Electric, a wireless handlebar control would make it even better.

Cycle's test promise

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Absolute Black

MTB Oval chainring 104bcd 32t

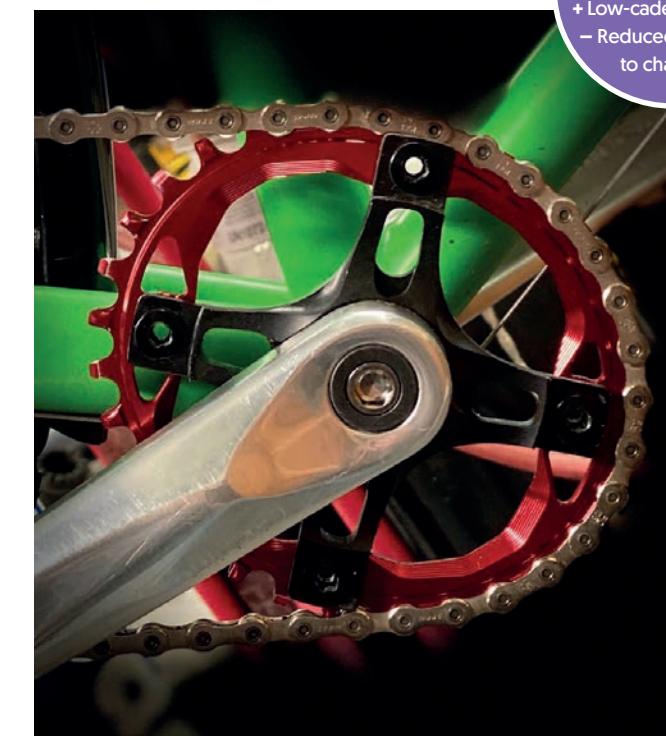
No, it's not Biopace. Yes, it's worth trying to see if you like it

absoluteblack.cc £59.99

From 1893 to 1983 oval chainrings came in and out of fashion, usually every other decade. Unfortunately, Shimano's Biopace didn't get its marketing right – or the product – and it's taken 30 years to wipe the slate clean. The recent renaissance took hold thanks to the marginal gains philosophy, advances in design and machining, and an explosion in new riders who haven't learned the smooth-pedalling 'souplesse' of more experienced cyclists.

Whether on road or off, these new generation oval chainrings smooth out the 12 o'clock dead-spot known as top dead centre (TDC) by reducing the effort to push past this point. As the power phase begins on the down stroke, the ovality evens this out, resulting in a little bit of souplesse for the masses.

It's arguably kinder on the



knees as the gear is effectively lowered where the stroke is weakest. My experience was positive. There's a short period of acclimatisation when pedalling feels 'gooey' but this soon fades. The benefit when climbing hills is noticeable. It's easier and smoother. It's also particularly suited to 1x gear systems, as a single ring means no risk of a dropped chain during front shifting.

You can test the 'smoothing out' theory by riding a knobbly tyre on flat tarmac with a round chainring. If you lack souplesse, you'll probably hear a rhythmic buzz as the torque changes through the 360 degrees of the pedal stroke. Fit an oval ring and this 'bouncing' should disappear.

A smoother delivery of power

will logically reduce wheel spin and increase traction, especially on technical climbs. Just bear in mind that this is only one piece in the puzzle. Having the appropriate crank length, saddle position and shoe/pedal combination are all influencing factors in performance and comfort.

Absolute Black have done their research, as evidenced on their website. They offer a wide range of both oval and round chainrings compatible with most quality chainsets designed for mountain, road, gravel, and cyclocross bikes. I tested a red anodised 32-tooth chainring (104mm bolt circle diameter) intended for 1x10/11/12 or singlespeed applications.

Weight: 41g. ●

Liz Colebrook

Verdict

Worth trying on hilly terrain to ease the knees, improve traction off-road, and keep your pedalling strokes smooth and efficient as they deliver power.

Other options**HOPE OVAL RETAINER RING
104PCD £40**

This ring has 12% ovality and 113° clocking (rotational position). It weighs 48g (32t). Six colours. hopetech.com

**ROTOR 1x QRING
110x4 £68**

Rotor makes lots of oval rings, including some with adjustable clocking. But this one [right] is a simple 12.5% ovality ring. rotorbike.com

**Pros & cons**

- + Can improve pedalling efficiency
- + Low-cadence traction
- Reduced clearance to chainstay