



Fuel cell review

Philippe Falle, one of our expert gear reviewers, sailed across the Atlantic with an EFOY Comfort 210 fuel cell aboard the Grand Soleil 43 *Quokka 8* and has mixed feelings about it.



"It says it can produce 8A, but in reality we were only getting around 5A, which is an expensive addition just to keep up with instruments and nav lights," he reports.

The *Quokka* crew also got through 30lt of methanol fuel – one 10lt can every four to five days – at a cost of £39 per 10lt.

Falle says: "On the positive side we only had to run the engine once every 24 hours. In short, it was light and noise-free, but expensive for the power output received."

Falle thinks the output offered by the Hydromax sounds ideal.

How fuel cells work

Fuel cells convert chemical energy into electrical energy. They use a central stack of cells, comprising anodes, cathodes and an electrolyte solution. As electrons pass from the anode to the cathode, they produce an electrical direct current (DC).

A catalyst is used to oxidise the fuel – typically hydrogen – and methanol is often preferred as a hydrogen-rich fuel. Larger cells in a bigger stack series can be used to meet high electrical demands.

The by-products are water and a little heat, while methanol types also produce a small amount of CO₂. The EFOY Comfort, for example, typically produces a mug of water per day, says distributor Fuel Cell Systems.



Restube personal safety device

There are times when wearing a lifejacket is simply not practical afloat – extreme watersports being a prime example. And there will be many who sometimes want the comfort of a personal flotation device without the bulk – perhaps when taking a swim away from an anchored yacht.

The Restube is a personal lifebuoy that stows into a small bum-bag-type pouch. It was designed precisely for these scenarios after German founder Christopher Fuhrhop had a life-threatening experience while kite surfing. The lightweight tube inflates like a lifejacket, by manually activating a CO₂ canister.

The Restube uses a vertical or horizontal belt attachment and a sports model is available with a harness mount. To avoid comedy potential, make sure it is outside your boardshorts before activating...

Price from £58.99. www.sontecmarketing.com



Zhik ZK Seaboats

Any self-respecting French sailor can be spotted a nautical mile away thanks to the blue Le Chameau Neptune wellies with red gaiters that they still swear by to keep their feet dry and toasty.

Here is the modern Aussie equivalent. The ZH Seaboot uses a combination of neoprene, rubber and merino to promise ultra-protection, warmth and comfort. Waterproof self-draining gaiters help ensure complete impermeability.

They look robust, with the sole continuing over the toe and heel, and include high-visibility stripes.

A merino liner promises warmth and natural odour control – for those keen to avoid the camembert-like whiff from a traditional boot.

Price £219. www.zhik.com



OTHER FUEL CELL OPTIONS

EFOY Comfort 210

EFOY, made by SFC in Munich, has a range of fuel cells from 40-150W. The EFOY Comfort has been the only truly established, tried and tested fuel cell on the marine market and is favoured by Mini Transat sailors for its light weight. The 210 weighs 8kg.

Price £4,998. www.efoy-comfort.com



Hymera fuel cell

A 150W standalone cell, the Hymera uses compressed hydrogen from a rented cylinder, so is less practical afloat. A handy feature is a built-in inverter that allows AC devices to power directly from the cell.

Price £2,394. www.fuelcellsystems.co.uk

