

NEW TECH

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Easy does it with variable-speed thrusters

On test with Sleipner's new thrusters – aboard a high-windage, 32-tonne steel yacht in a breeze gusting to 20 knots. How does the system perform?

Ever since we first heard about Sleipner's new variable-speed battery-powered bow and stern thrusters earlier in the year we've been itching to put them to the test. Until now the luxury of adjusting how much thrust you use to manoeuvre a big boat into or out of a tight spot has been the preserve of expensive and bulky hydraulic thruster systems.

Sleipner's new 12V/24V system is a much more cost-effective set-up and considerably more compact than a hydraulic system. It should also help resolve the issue of not being able to use an electronic thruster for long periods of time without overheating, because you'll rarely be using it on full power all the time.

Luckily, we were able to test the first boat fitted with this system, a one-off steel 65ft Royal Huisman motor yacht. Previously owned by yacht designer Ed Dubois, this 32-tonne boat presented a real challenge for the thrusters. Instead of hydraulic thrusters it was fitted with the SE240 bow thruster and an SE180 stern thruster, producing 240kg and 180kg of thrust respectively.

With 15 to 20 knots of wind trying to push the boat around, conditions were ideal. Once off the pontoon the boat turned easily on thrusters alone. It was surprising how little power was needed to initiate the spin and keep it rotating. The display showed that we were using about a third to a half of the available power to turn the boat without engines.

Using conventional DC thrusters, offering full power or nothing, we would have had to apply numerous bursts to keep it rotating. With the variable-speed system we were able to use a smaller amount of continuous thrust. Not only was this more intuitive, but it made for a quieter, more relaxed manoeuvre. The more power you want, the more you push the twin paddle switches. The response is quiet; we could barely hear the stern thruster from the helm. The bow thruster is more audible but then it is more powerful. Moving the boat around for ten minutes with varying degrees of power posed no issues. The readings on the LCD control panel showed 80°C and 23.7V for the bow thruster and 69°C and 24.9V for the



The harder you push the paddle switch the more thrust you apply



The 65ft Royal Huisman provided the system with a stern test

INSIDE A THRUSTER UNIT

Solenoids are mounted on the motor behind the cover

The motor has a thermal cut-out

A strong and lightweight bracket secures the unit

The five-blade Q Prop produces maximum thrust and minimum noise



stern thruster. The thermal cut-out temperature is 110 °C so it seems unlikely that overheating will pose a problem in anything other than extreme conditions. However, the system will cut out after three minutes of continuous full power as a safety precaution.

Sleipner state that in most cases, at 50% power or less, "close to continuous run time can be expected". This means that like a hydraulic system it also has a hold function, enabling you to set and leave the level of thrust. It's a

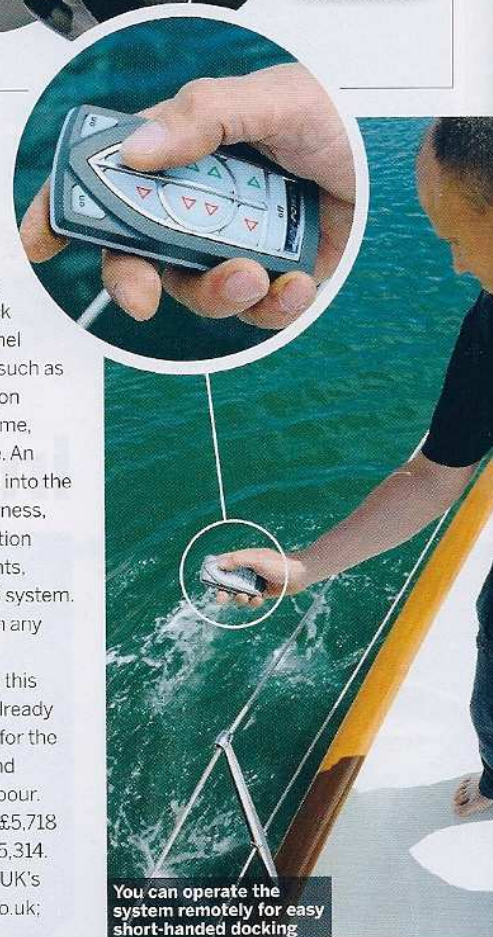
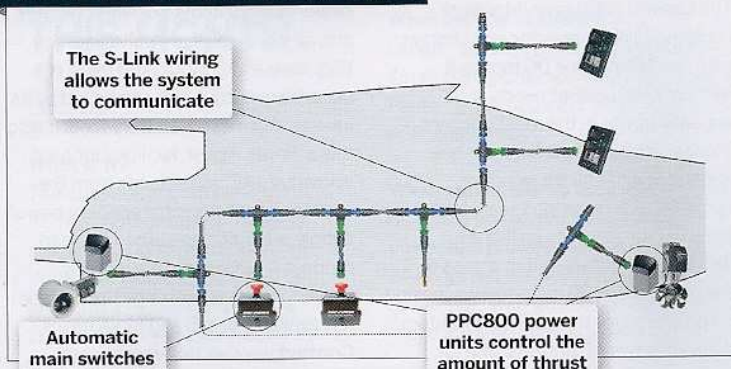
feature that short-handed skippers often rely on to pin their boats against the dock while they step off to secure the lines. Moving either of the joysticks with 'hold' applied cancels it, while you can increase or decrease the thrust in 10% increments with a simple +/- switch. The other big bonus is a remote control that allows you to operate both thrusters from wherever you chose, so you can take up station on the side deck and walk the boat in while keeping an eye on the gap.

The heart of Sleipner's DC system is the PPC800 Proportional Power Controller. This digitally chops the voltage and varies the amount of thrust produced. The brain is the PJC212 Proportional Joystick Control. This intelligent LCD panel displays real-time information, such as amount and direction of thrust on either thruster, remaining run time, battery status and temperature. An automatic main switch is linked into the system by the S-Link wiring harness, allowing intelligent communication between these three components, much like an NMEA2000/0183 system.

Retro-fitting is possible with any existing Sleipner thruster. The approximate cost of retrofitting this system to a 40-45ft boat that already has a Sleipner thruster is £467 for the PJC212, £176 for the harness and £1,500 for the PPC800, plus labour. The SP240 bow thruster costs £5,718 and the SE210 stern thruster £5,314.

Contacts Osmotech (Sleipner UK's main agents) www.osmotech.co.uk; www.sleipner.com

INSIDE THE NETWORK



You can operate the system remotely for easy short-handed docking

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