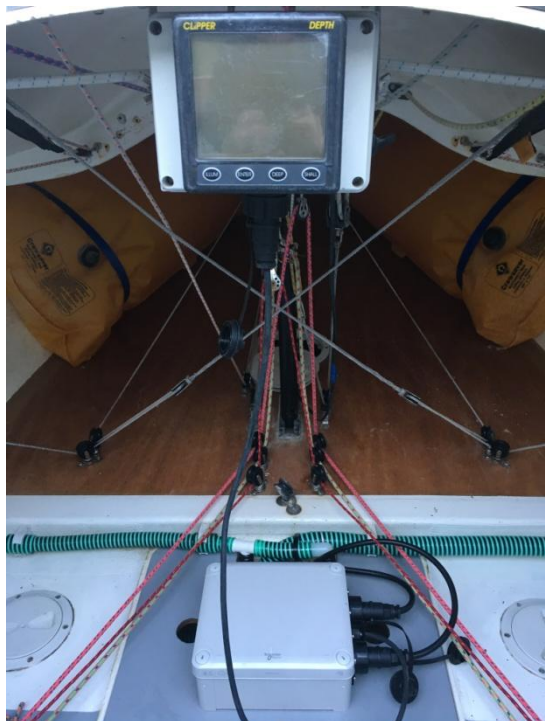


ELECTRIC PUMPS

I have installed two Whale Supersub 650 electric pumps on *Surprise* (for use at Burnham for club racing and leaving on the mooring) and have made battery packs for them. The battery I am using is 7.0aH enclosed in a waterproof box with 2 x sockets and a trailing socket, the trailing socket being for the echo sounder. This weighs 2.6kg and has cost me £63.00 in parts.



The Supersub 650 has a running current of 3.4amps, according to the Whale website, and will move approx 35 litres per minute to a height of 1m, so one pump could run continuously for approx 2 hours and in this time could move in the region of 4200 litres. It would have to be a pretty horrific race if you needed your pump to run continuously.

I have chosen to go for two pumps because the wells in my floor are not connected so each side needs to be pumped out separately, and I figured that the 7aH battery will be more than enough for both pumps used hard over a wet and windy weekend. I filled the wells around the keel in *Surprise* and it took 50 litres and with both pumps turned on, it emptied them completely in under a minute, If you were to take 100 litres (around 22 gallons) of water on board during day, the pumps could run for approx 3 minutes (according to Whales' info) but taking into account the initial start up to get the water out, it is more likely around 10 minutes, so a 7aH battery could last about 12 days. In reality less, but it is unlikely that you will get 100 litres of water into your Squib every day.

The total cost for the battery, connectors, two pumps, pipework and connectors (some people may be able to use existing pipework) is in the region of £180.00, not really cheque book sailing, and I see the investment great value for money as it will save precious crew energy and I won't get moaned at each time I hit a wave and fill the boat with water.



To charge the battery I have made a lead up to plug into the cigarette lighter in the car and into the battery so that it charges on my way to and from the boat. That way means it is always with me.

There are numerous other electric pumps out there, most likely with similar performance and fairly simple to install, you can use the existing outlets through the side of the boat. Initially I put a tee into the pipe between the manual pump and the outlet and that worked fine, now I have both pumps feeding into the same pipe to the outlet. This may not work with all pumps, the Whale 650 has a non-return valve in each so I can use one outlet pipe for both.

Duncan Grindley *Surprise*