

# Hull Shapes & Performance

*Power Designs*



# Power Catamaran Hull Shapes

By Jeff Schionning



Thank you for your interest in our power catamaran designs.

Schionning Designs use three hull types for our range of power catamarans, each with different design and performance characteristics.

The hull shapes are:

- **Prowler Semi-displacement**
- **Prowler VT (Vapour Trail)**
- **Growler Whisper**

The **semi-displacement hull** is a slim hull shape with a canoe-end underwater aft, meaning this hull simply slides through the water. The semi-displacement hull has no dynamic lift and the shaft exits parallel to Waterline from the canoe-end, making the propeller fully protected as is the rudder. The hull has a long flat bottom with about 600mm draft and is of course easily beached.

This hull is pretty much 100% efficient at speeds from 0 to 27 knots, with speed almost unaffected by load but the trim can be affected if everyone walks forward. A very fuel efficient—a 40 foot catamaran with two 125 Horsepower engines uses about 1litre per mile at 10 knots, 1.5 litres per mile at 15 knots and 2 litres per mile at 20 knots. With these motors the vessel has a top speed of 21 knots. This hull type is very comfortable in rough conditions as she runs through the chop instead of bobbing over it.

The VT and Whisper hulls are both a planing hull type, adding power/horsepower adds speed, a direct relation. Our Prowler VT950 with two 200 Horsepower outboards does 32 knots, the VT has a deep 'V' shape running the full length while the Whisper hull does not but has a more gullwing shape allowing less draft.

Both hulls have fine 'V' shaped entries running to an unusually wide hull. The Prowler VT950 has a floor width of 1.30 metres, this gives huge accommodation down below. These hulls tend to rise in a more linear way onto full plane rather than popping up at some point as do most planning hulls.

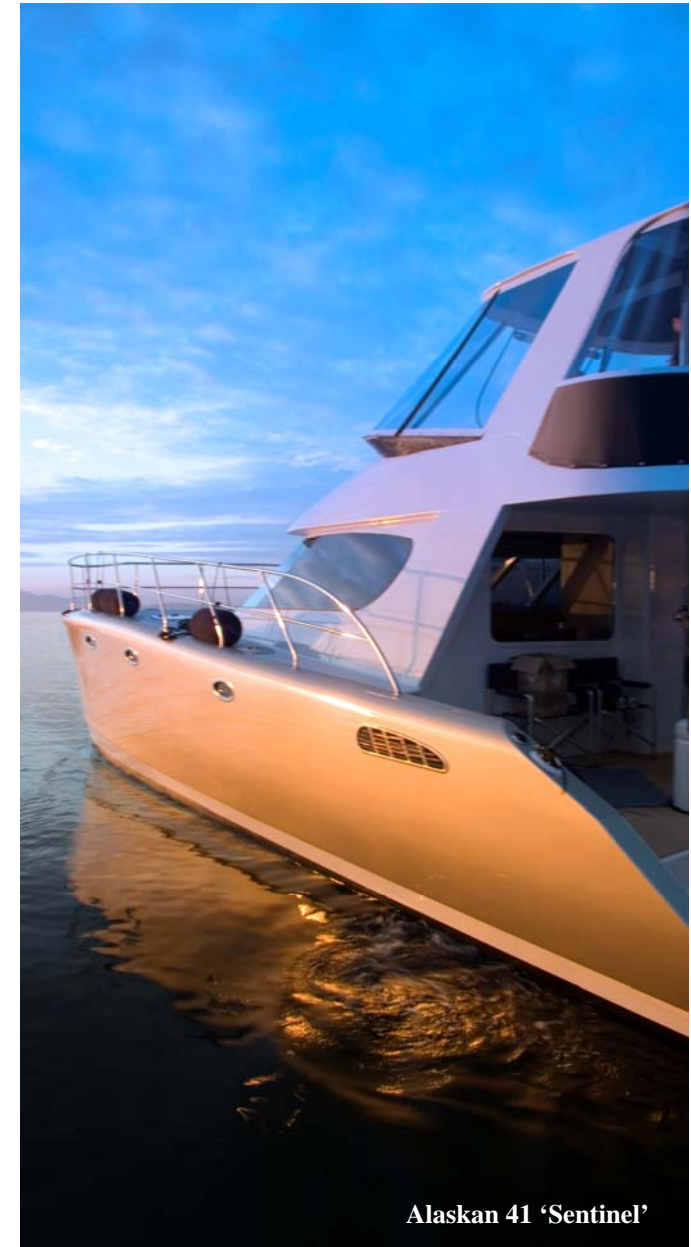
The VT and Whisper hull shapes are also very comfortable in rough conditions, easily cruising at 17 knots into a rough swell—however economy is not quite as good using about 3 litres per mile at 20 knots but still using half the fuel of a comparative monohull.

I hope this assists you with browsing our designs and learning more about multihulls and their specific design aspects.

Feel free to email [info@schionningdesigns.com.au](mailto:info@schionningdesigns.com.au) should you need further assistance or would like to enquire about any of our designs.

Kind Regards,

*Jeff Schionning*



Alaskan 41 'Sentinel'