

### Sail Area/Displacement

The parameter Sail Area/Displacement gives an indication of sail power to weight of the craft and thus its agility. A boat with a high SA/disp will generally compare well in light winds but will need early reefing of the sail. The formula has no dimensions since the displacement has been reduced by raising it to the power of 0.6667.

**When I use the formula with metric values,  
I just use the sail area in sqm and  
the displacement in metric tons since one cubic meter  
of fresh water is one metric ton.**

So what value on the SA/disp should we aim for?

- A value of 15 is quite low; “Motor Sailor”
- A value of 20 isn’t bad, OK for cruisers
- A value of 25 is very hot. Fine for small junk-rigged boats – easy to reef you know...

$$\frac{Sail.Area}{Displacement} = \frac{Sail.Area[sqft]}{Displacement[cubic.feet]^{0.6667}} = \frac{Sail.Area[sqm]}{Displacement[cubic.meter]^{0.6667}}$$

#### Example:

Junk-rigged schooner Samson, SA=107sqm and Displacement= 23metric tons (roughly).

$$\frac{Sail.Area}{Displacement} = \frac{107[sqm]}{23[metric.tons]^{0.6667}} = 13.2$$