

525 SPECIFICATIONS

LOA..... 24'7"	I = 26.5	100%=116sqft
LWL..... 18'6"	J = 8.75	
Beam..... 9'4"		
Disp..... 2400 lbs	P = 29	Main=145sqft
Draft..... 4'6"	E = 10	
Ballast..... 950 lbs		

Hull Speed 5.76 knots static; 6.14 knots dynamic (waterline increases by 2.5 ft as the speed increases)

Sail area to Displacement Ratio

.667

(SA in sqft) / (DSP in cubicft)

DSP= (2400*35lbs)/ 2240 = 37.5

SA=29*10/2 + 26.5*8.75/2 = 260

.667

260 / 37.5 = 23.2

13-14=motor sailer
 14-15= slow in light air
 15-16=off shore cruiser
 16-17=coastal cruiser
 17-19=racer
 20-23= light racer
 23+ =ultra light racer

*

Displacement to Length Ratio

3

(DSP in long tons) / (.01*LWL)

DSP=2400/2240 = 1.07

3

(.01*18.5) = .0063

1.07/.0063 = 169.8

40- 50=light racing multi hull
 60-100=ultralight mono hull
 100-150=very light racing mono hull
 * 150-200=light racing mono hull
 200-250=light cruising auxiliary
 250-300=avg. cruising auxiliary
 300-350=moderate heavy auxiliary
 350-400=heavy cruising auxiliary

*

Shaft Horse Power(SHP) required to Cruse at Hull Speed

3 3

SHP=[disp(in lbs)X (SL ratio)] / (10.665)

.5

Hull Speed= (SLratio)(dynamic waterline) THUS: (SLratio)=6.14/4.59=1.33

3

SHP = 2400lbs X (1.33) / 1213.06

SHP = 4.65 HP