Pearson 31-2 Speed Polar Reference

Masthead Sloop · 1987–1991 · Designer: William Shaw / W.G. Richards · PHRF 156–165

VESSEL SPECIFICATIONS

LOA	**30.67 ft (9.35 m)**
LWL	**25.42 ft (7.75 m)**
Beam	**10.67 ft (3.25 m)**
Draft (std / shoal)	**5.80 ft / 4.0 ft**
Displacement	**10,000 lb (4,536 kg)**
Ballast / Ratio	**3,800 lb · 38%**
Sail Area (total)	**492.8 ft²**
Mainsail (P × E)	**36.8 × 12.0 ft · 220.8 ft²**
Foretriangle (I × J)	**42.5 × 12.8 ft · 272.0 ft²**
SA/D ratio	**17.05**
Disp/Length ratio	**271.8**
Comfort ratio	**24.45**
Capsize screen (CSF)	**1.98**
Hull Speed	**6.76 kn**
PHRF (avg)	**156 – 165 s/nm**

VMG OPTIMUM ANGLES & TARGET SPEEDS

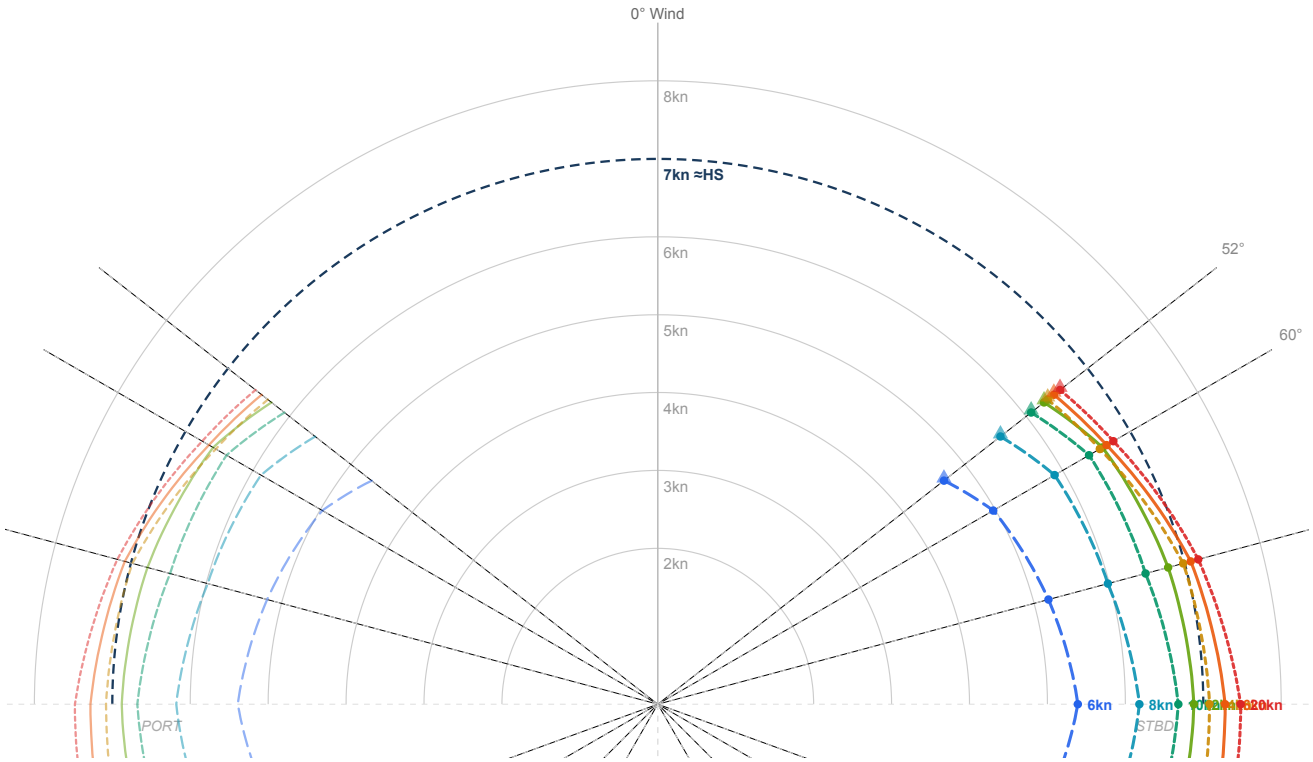
TWS	Beat °	BSP↑	VMG↑	Run °	BSP↓	VMG↓
6 kn	52°	4.66	2.87	150°	3.60	3.12
8 kn	52°	5.58	3.44	150°	4.57	3.96
10 kn	52°	6.08	3.74	150°	5.35	4.63
12 kn	52°	6.29	3.87	150°	6.03	5.22
14 kn	52°	6.35	3.91	150°	6.42	5.56
16 kn	52°	6.45	3.97	150°	6.80	5.89
20 kn	52°	6.55	4.03	150°	7.49	6.49

Beat/Run ° = True wind angle from dead upwind/downwind at best VMG.
BSP = Boat speed (kn) at that angle. **VMG** = Velocity made good (kn).

BOAT SPEED (KNOTS) BY TRUE WIND ANGLE & TRUE WIND SPEED

TWA → TWS ↓	52° Close-hauled	60°	75°	90° Beam	110°	120°	135°	150° Broad reach
6 kn	4.66	4.97	5.19	5.39	5.05	4.86	4.28	3.60
8 kn	5.58	5.88	5.98	6.18	5.93	5.73	5.25	4.57
10 kn	6.08	6.39	**6.48**	**6.68**	**6.51**	6.31	6.03	5.35
12 kn	6.29	**6.59**	**6.78**	**6.88**	**6.80**	**6.80**	**6.51**	6.03
14 kn	6.35	**6.55**	**6.98**	**7.08**	**7.09**	**7.09**	**6.90**	6.42
16 kn	6.45	**6.65**	**7.08**	**7.28**	**7.29**	**7.38**	**7.19**	**6.80**
20 kn	**6.55**	**6.75**	**7.18**	**7.48**	**7.48**	**7.77**	**7.78**	**7.49**

SPEED POLAR DIAGRAM — ALL WIND SPEEDS



Data source & methodology: No official VPP data exists for the Pearson 31-2. These polars were computed by scaling the Pearson 33 reference polar (Seapilot polar database) using hull speed ratio ($\sqrt{LWL}_{31\text{-}2}/\sqrt{LWL}_{33}$ = 0.970), SA/D, and displacement ratios with angle-dependent weighting. **Indicative performance only** — actual speeds vary with sail trim, sea state, crew weight, canvas selection, and bottom condition. Upwind angles assume working jib; downwind angles assume poled-out headsail or reacher. · Spec data: *sailboatdata.com/sailboat/pearson-31-2* · Created with Perplexity Computer — perplexity.ai/computer