



New rockerline: slightly lifted for smoother ride over chop

New outline concept: reduced width at 67cm for improved glide and improved raling effect, combined with Bat-Wing tail design to still gain in early-planing and upwind power.

Reduced volume for better efficiency and reduced weight

Biaxial Carbon 150g is used on both the deck and bottom for improved strength, impact resistance and vibration absorption.

No-paint finish for minimum weight

New slanted adjustable mast track: the front section is raised, helping the board to roll up onto its rail quickly in lightwinds. The back section is sunk below deck level, to improve control in full planing mode.

WATER FLOW AT LOW SPEED  
WATER FLOW AT HIGH SPEED

# PHANTOM RACE

## ROCKET SCIENCE

The Phantom Race 377 Bat Wing and 320 are Starboard's raceboards. Raceboarding is the classic racing class that is thriving with renewed enthusiasm at the moment.

Raceboarding, organized and sanctioned by ISAF, has always been popular thanks to its ability to deliver exciting racing in both planing and non-planing conditions. Through natural evolution, the winning designs tend to be long and slender, and they always include daggerboards and adjustable mast tracks. The list of eligible boards is available on ISAF's website. As the newest board to be registered, Starboard's new Phantom Race 377 is race-legal from January 2012 onwards. The largest sail size allowed for raceboarding is 9.5m<sup>2</sup>.

The Phantom Race 377 Bat Wing is the third generation raceboard that replaces the outgoing 380. It has been developed by Remi Vila's team over a two year period. The board is truly innovative in many aspects, featuring bat-wings, slanted mast tracks and heel extensions.

The Phantom Race 320 is designed to win the Hybrid 320 segment of the Raceboard class. This hybrid segment limits the maximum length to 320cm and allows for designs up to 100cm wide.

- ▶ Starboard's raceboards
- ▶ Phantom Race 377 Bat Wing is designed for the Raceboard 380 segment of the class
- ▶ Phantom Race 320 is designed for the Hybrid 320 segment of the class



### Bat Wing Design

At low speeds, the Bat-Wings sink below the water to allow the water to flow around the narrow, streamlined section of the tail. The board glides like a narrow missile with a smooth water exit off the tail.



In slightly more wind, the board starts to lift on to its rail, so one wing lifts out of the water while the leeward wing continues to travel below the water surface.



As the board increases speed with in more wind, the wide planing surface starts to generate lift, allowing the board to transition smoothly into planing mode. Because the wings are wide, the planing surface is wide. So the transition into planing happens earlier than other narrow-tail raceboards. In full planing mode, the board planes high above the water, rides fast and free, allows for deeper fins to be used and for deeper upwind/downwind angles to be reached.



Phantom Race 320

- ▶ The design starts with the 380 shortened down to 320. The rocker, the nose vee, the daggerboard and mast track positions were adjusted to match the new length.
- ▶ Super-sized 2cm high heel extensions help the board roll up on to its rail quickly.

The new Phantom Race 377 Bat Wing

Model	Volume	Length	Width	Tail width	Fin	Finbox	Fin range	Sail range
Phantom Race 320	260	320	71	43.9	Drake R13 Race NR 440 + Daggerboard 780	Deep Tuttle	40-48	6.5-9.5
Phantom Race 377	263	377	67	49.1	Drake R13 Race NR 520 + Daggerboard 780	Deep Tuttle	45-55	6.5-9.5



