

Introduction

The Neil Pryde RS-X is driven from the belief that the Olympics, as the pinnacle of nearly all major sporting achievements, should also be the pinnacle of achievement in windsurfing. The Olympics should present the best athletes, on the best equipment, in a showcase for the very best performances in the sport.

To attract the best athletes in the world we need to create a contest format that will enable the best possible performances, and this requires state-of-the-art equipment. The main priority of the Neil Pryde RS-X is to ensure that the equipment used in the Olympics is both representative of the equipment used by most recreational windsurfers today, and still performance orientated and fun in the potentially wide wind range of most Olympic regattas, ie. from 3-30 knots.

The RS-X board has been shaped by Jean Bouldoires, a shaper well known in the windsurfing industry for producing very innovative and successful board shapes. The RS-X is a true cross over board in that it makes the best compromise between traditional raceboard sailing in sub-planing conditions, and exciting "Formula" racing in planing conditions starting from 8-10 knots.

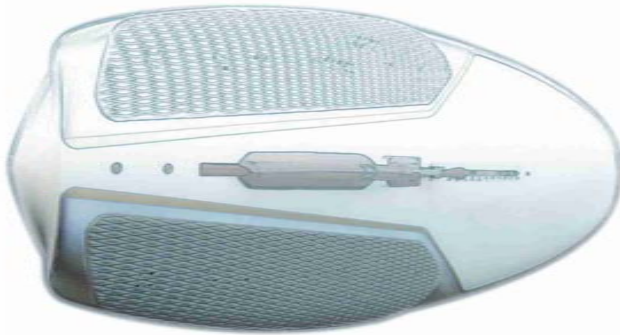
The RS-X sail is closely based on the shaping and design of the RS4 Racing sail, a sail which is currently used by a large proportion of the world's top Formula Windsurfing racers. The RS-X takes it's draft stability from the RS4 to give it a "high performance" locked-in feel in planing conditions. At the same time, it has been further refined and developed to ensure that it has the softness needed for ease of handling in sub-planing conditions. Combined with the lightweight and high performance RS-X rig components, this sail performs exceptionally in both planing and non-planing conditions.

The RS-X enables Olympic sailors – both men and women – the chance to compete at the highest performance levels in the sport of windsurfing. Through doing so, the Olympic windsurfing class will attract the best windsurfers to these events and create the most interest from the general public and the Windsurfing community as a whole.

Board

The RS-X is a true cross over board in that it makes the best compromise between traditional raceboard sailing in sub-planing conditions, and exciting "Formula" racing in planing conditions starting from 8-10 knots.

Design Objective:



- To develop a board that offers exciting Formula Windsurfing planing performance, while still performing well in non-planing, light-wind conditions.
- Board must have a huge wind range, from 3 to 30 knots. It should be suitable for all potential conditions of Olympic and Qualifying regattas: low wind finishes, entry into narrow harbour ports, races in disturbed water/air conditions.
- Board should start to plane as early as possible.

How was it done? Design & Shaping Features:

I) Sub-Planing Conditions, Dagger-board Down (up to 8-10 knots)



- In comparison to a Formula Windsurfing board, the RS-X is both narrower and longer
- Narrow outline allows the board to be easily set on the rail for good up-wind performance.
- Longer water line with more parallel rails helps directional stability and is more efficient through the water.



- Single concave bottom shaping in the nose further emphasises the bite of the rail for tracking upwind.



- "Convex Tail" shaping improves control while on the rail and tracking upwind. Off the rail, the rounded tail (on the water line) allows for a smoother water flow.

II) Planing Conditions, Dagger-board Up (8-10 knots & above)



- Traditional "Formula" shaping of the nose of the board promotes greater lift for earlier planing. Helps the board to sit slightly higher on the water and as the water flows directly underneath the nose, the board is pushed onto the plane.



- Convex shaping of the tail of the board

a) Reduces the wetted area further aiding early planing.



b) Places the footstraps more towards the outer edge of the board providing greater drive off the fin, especially important for planing performance and driving upwind.



- "Flat panel to V" shaping in the tail section of the bottom of the board further promotes lift in planing conditions. "V" shaping helps the board to sit on the water in strong wind / rough water conditions.

Board

II) Planing Conditions, Dagger-board Up (8-10 knots & above)

- Adjustable mast track for optimal trim in all conditions.



Performance Characteristics:

I) Sub-Planing Conditions, Dagger-board down (up to 8-10 knots)

- In light-wind sailing the RS-X board behaves in a similar fashion to a traditional race board. However, due to the shorter length in comparison to a traditional raceboard, the ease of manoeuvrability in tacking and gybing is significantly improved.
- Upwind: In a little breeze with the dagger-board down, the rider can pump the board onto the rail for good tracking upwind. On the rail, the "Convex Tail" allows the board to be rolled with the gusts and swells. Side footstraps help to give the rider more stability and control.
- Startline tactics: many Olympic racers often sail the board backwards in order to keep a good position on the start line. The rounded tail on the back of the board, in addition to improving the flow of water, makes it easier to sail the board backwards!
- Downwind: With the daggerboard up for going downwind, the board provides good stability for pumping (if necessary).

II) Planing Conditions, Dagger-board up (8-10 knots & above)

- In planing conditions, the board behaves largely like a Formula Windsurfing board, thus giving much faster performance and a more exciting ride.
- In downwind conditions with the adjustable mast track set to the back, the board sails both with good speed and a very steep angle.

Construction Features: Sandwich Technology



- Sandwich Construction for optimal stiffness to pricepoint ratio.
- Carbon Sandwich on the deck and Kevlar Sandwich on the bottom for the best lightweight to performance ratio.
- Carbon sandwich deck for a "stiffer" / faster feel.
- Kevlar Sandwich used on the underside for maximum durability in less than ideal rigging conditions (eg. Yacht Club car park).

Board Specifications

Length	Max.Width	Weight	Volume	Centreboard	Fins	Fin Attachmet
279 cm	93 cm	13 kg	220 litres	carbon-sandwich	64 / 70 cm	Deep Tuttle

Sails

The RS-X sail is closely based on the race-track proven, high performance, RS4 designs developed for Formula Windsurfing. The RS-X has taken these designs and put them into a package that has a similar top-end potential, but due to its lightweight configuration is easier to use in light wind conditions and on a larger "Hybrid" board.

Design Objective:

- The sail chosen for the Olympics must have a huge wind range when used on the RS-X Board, from 3-30 knots.
- Great low-end performance should ensure that the board planes as soon as possible and provides good speed and acceleration in sub-planing conditions.
- While the sail should have a locked in "high performance" feel, it should also feel softer for easier handling in light wind conditions.

How was it done? Design & Shaping Features:

- Wide luff sleeve concept (compared to traditional "freeride" sails) for high efficiency and a locked in draft stability. A deep profile ensures early planing.
- Soft battens in combination with a relatively tight leech ensure improved light-wind performance and pumping ability.
- 2 cam / 7 batten configuration for stability, softness and light weight.



Key Performance Enhancing Features:



A. A flexible head configuration with the use of a tube/rod component batten which allows the head of the sail to adjust dynamically to the wind by allowing twist along the horizontal and vertical axes. This dynamic twist helps to reduce drag in the head of the sail, therefore increasing top end speed and performance.



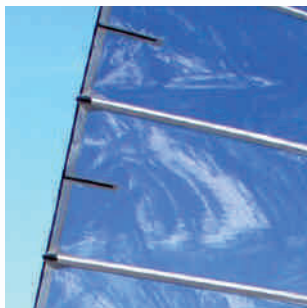
B. An innovative system using molded spacers that allow sailors to perfectly adjust the pressure on the cambers to fit their individual needs. Because not every sailor is the same size or needs the same amount of cam pressure, and because sails are not rigid structures and stretch throughout their life, this system allows the sailor to always have the perfect mast/sail tuning.



C. Wide shouldered cams providing ample support area for superior leading edge development and draft stability combined with soft rotation.

1. Flexhead Configuration. (see picture A)
2. Cam Pressure Adjustment System. (see picture B)
3. Supercam II (see picture C)
4. Tube specific batten tension adjustment system.
5. Luffglide luff pocket material.
6. Component luff pocket construction.
7. Neil Pryde component batten system.

Construction Features:



1. Silver metalized monofilm for UV Resistance: Using a process called Vacuum Metalization, the monofilm material now includes a metallic coating that greatly reduces the damaging effects of UV rays through reflection.



2. 3D moulded tack fairing.



3. Mast tip chafe protector and 3D moulded head fairings.



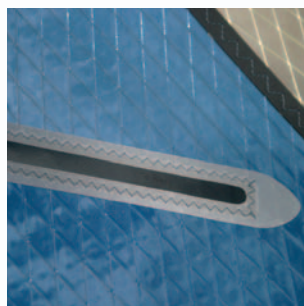
4. PU moulded batten end chafe protectors.



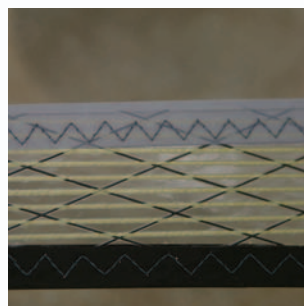
5. High grade plastic batcams (UV resistant).



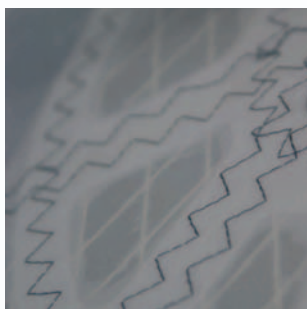
6. Rubber foot piping.



7. Integrated mini leech composite battens.



8. Kevlar SP construction.



9. Chain lock patch construction.



10. Multi position clew.



11. Triple roller tack fairing.

Sails Specifications

Size	Weight	Luff	Boom	Battens	Cams	Base	Ideal Mast
RS-X 8.5	tbc	tbc	RS-X 225-275	7	2	tbc	RS-X 490
RS-X 10.0	tbc	tbc	RS-X 225-275	7	2	tbc	RS-X 530

Masts



The RS-X mast is based closely on the masts used in Neil Pryde Windsurfing's existing mast range. The RS-X is a 90-100% carbon mast that has the same bend curves and tapers of the performance proven, X9 mast range. The RS-X is a high performance mast designed to work in all wind conditions, both planing and non-planing.

Design Features:

- RS-X Mast
- Construction Process: Filament winding
 - Carbon content 490: 90%
 - Carbon content 520: 100%
 - Reduced diameter for ideal strength/weight/reflex ratio.
 - For those looking for a high performance mast that works well in all conditions.

Masts Specification

Size	Length	IMCS	Weight	Carbon Content	Finish	Bag
RS-X 490	490	29	2.20	90%	Semi Gloss	Silver
RS-X 520	520	32	2.40	100%	Semi Gloss	Silver

Booms

The RS-X Carbon Booms have been developed to achieve the best light weight to stiffness ratio available on the market today.



Design Features:



- Carbon Monocoque (1 piece) boom body for increased stiffness and smoother transmission of the power from the rig through to the board. One piece construction eliminates the play between the joints and reduces the point loading at the screws.



- Oversized Mast Cup increases the contact area onto the mast resulting in stiffer, wider, safer load distribution and more direct transmission of power from the boom through the mast and onto the board. Mast cup constructed in carbon for light weight and stiffness.



- Twin Pin Trim Lock Adjustment System

- Increased overall boom stiffness due to reduction of head movement on the mast giving the whole rig a super responsive feel.
- Standard diameter hand grip and oversized tail end for optimum stiffness in the longer lengths.
- Monocoque Tail Extension – Carbon.
- Booms supplied with an adjustable outhaul system for maximum tuning range.
- For those who demand the ultimate in performance and no compromises.

Booms Specification

Size	Adjustment (cm)	Length	Weight	Diameter	Material	Front	Front Attach	Back End
RS-X 225-275	50	225-275	3.05	OverS & 30	65% Carbon	Monocoque	Carbon Head	Monoc. Carbon