

# Tech Section

## Glossary of useful terms.

**Seat Tower or “Tower”** – The seat on which you sit when riding the hydrofoil. May be referred to as a “Shock Tower”, or “Rock Tower”, depending on which model it is.

**Board** – This is what the Tower is bolted to, and the bindings are mounted. When sitting on the seat tower your feet are secured in the bindings on the front of the board.

**Bindings** – The bindings are like shoes that are mounted to the front of the board. The bindings secure your feet and allow the rider to control the hydrofoil while riding.

**Hydrofoil** - The assembly that passes through the board and mounts into the seat tower, extending down into the water and provides lift so the rider can fly above the waters’ surface.

**Strut** – The vertical part of the Hydrofoil that extends down into the water, joining the board to the lower end of the hydrofoil. The strut is made in various different lengths.

**Fuselage** – The horizontal piece at the bottom of the hydrofoil, bolts to the bottom of the strut and has tapped holes to facilitate the mounting of the front & rear wing.

**Front Wing** - The Front wing which provides the lift and enables the rider to rise/jump the ski off the surface of the water.

**Rear Wing** - The rear wing which stabilizes/counterbalances the lift from the front wing.

**Lift** – This is what enables a hydrofoil rider to rise up off the waters’ surface. Lift is effected by many things, ranging from stance & placement over the foil, speed, rider weight & size, water temperature & conditions.

**Shims** – Small plastic or metal pieces that can be inserted between the rear wing and the mounting surface on the fuselage to slightly change the pitch of the rear wing, effecting the amount of lift the foil has naturally. Generally you only shim the rear wing as when shimming the front wing the effect is too drastic due to the increased wing surface.

**“Pop”** – When performing a jump or other aerial trick, this is how the Hydrofoil releases from the water. When it releases hard and fast it is said to have “good pop”. When it releases sluggishly it is said to be “dead”, or no pop.

**“Bat” or “Flat”-wing** – A style of cutting a wing, either front or rear. The “bat” refers to the trailing edge being cut in a curved fashion on each side, making the wing more aggressive and responsive.

**“Wet Strut Length”** - The amount of vertical strut that is actually useable when the unit is completely assembled and ridden in the water. (Some of the actual strut length is lost due to being sandwiched into the seat tower when assembled)

**“Wing Length”** -The distance (in inches) from the foremost leading edge to the rearmost trailing edge of the wing.

**“Wing Span”** - The distance from wing tip to wingtip on a wing. On wingleted wings the wingspan does not include the winglets.

**“Re-Flight”** – This is what happens upon landing a jump or aerial trick, upon landing the foil regains flight. If a hydrofoil has quick re-flight it often will begin flying so soon the board will not touch the water at all.

**Cavitate** – When a foil loses lift for no apparent reason and the rider is dropped down to the board. Cavitations can be mild, moderate or extreme. Sometimes the cavitations can be felt by the rider as a shudder, or vibration. (ALL hydrofoils will cavitate to some extent in the prop-wash, or other areas of aerated water, as well as in water colder than 50 degrees) Cavitate can also be known as “Suck-down)

**Drag** – Resistance on the hydrofoil as it flies thru the water.