

US Patent Pending

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TSVLS – Formerly called Torque Stabilized Vertical Lifting System but is currently referred to as

# Torque Stabilized, Vortex Lifting System

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The TSVLS basically consists of 1. a lift rotor, 2. a center mount, an 3. array of main airfoils with the leading edge pointing upward, and 4. a shroud surrounding the lift rotor, extending the length of the main airfoils, 5. stubby airfoils attached only to the shroud.

The lift rotor is rigidly attached at the center to a motor for the purpose of generating rotational motion. Between the lift rotor and the motor, rigidly attached, is a center mount attached with a bearing to allow the lift rotor to rotate. The center mount attached at the center to the motor and at its outer perimiter is attached to a shroud by airfoils. So that the airfoils are attached to the center mount at one end and to the shroud at the other end. There is a equal number of airfoils on each side of the 360 degree shroud.

There are stubby adjustable airfoils attached at one end to the shroud. The are attached so a person can the angle of attack relative to the downdraft of the rotor.

When a rotor rotates and creates lift, it creates a vortex in its downdraft. That downdraft with the vortex, goes over and around the airfoils and creates horizontal lift in the same direction as the rotor. This horizontal lift provides an anti-torque to approximately equalize the torque with the stubby adjustable airfoils providing the fine tuning anti-torque balance.