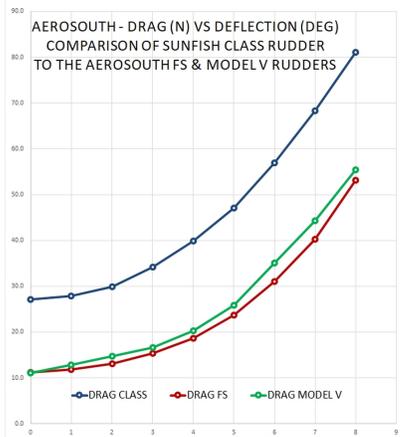
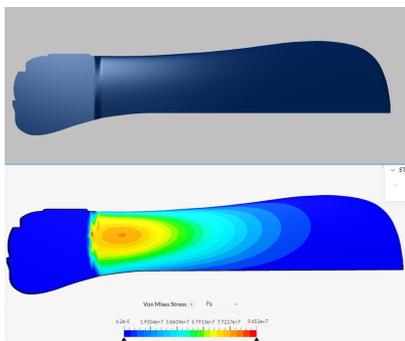




## The Latest News from AeroSouth - November 2022



### Model V Rudder Blade - The NextGen Solution for Sunfish and SOL Class Racing

As reported in our October newsletter, AeroSouth is progressing well with our new **"Model V" rudder blade**. "V" for Vertical, for higher performance, lower drag, and low weather helm. **"V" for Victory** for those who sail with it.

The top image here shows the **overall shape** of the Model V, which was derived from our world-leading **Model FS rudder blade**. The middle image depicts the **stress analysis** we performed, aimed at providing sufficient strength without the use of expensive carbon fiber as was necessary in the FS blade. The bottom image depicts the blade's **drag as the deflection angle increases**. Not only has drag been reduced at all angles for the Model V (green) compared to the current Class blade (blue), but it is only marginally higher than the drag of the FS blade (red). Both the Model V and FS blades exhibit significantly lower weather helm than the current Class design.

The Model V is thus the ideal **"NextGen" rudder blade** for Class racing of the Sunfish and its clones as well as the new **SOL sailboat from SERO Innovation**.

The new Model V will be available by the end of 2022, so watch for further news!

**AeroSouth Collaborates with**



## Sky Designs Engineering

As the "[About Us](#)" section of our web site explains, AeroSouth's activities are not limited to designing and manufacturing the world's most advanced components for small sailing craft.

Of equal interest is aviation, a passion & profession of AeroSouth Owner & President

Kent Misegades since his early childhood. Another such individual is our friend Ken Krueger, founder and president of [Sky Designs Engineering](#) of Anacortes, WA, a location popular among sailors in the Pacific Northwest. A world-renown designer of light aircraft (the RV series of Kitplanes), Ken today makes a growing array of advanced components for light aircraft, [which can be seen here](#).

To help Sky Designs keep up with demand for their products, AeroSouth has **entered into an agreement** to produce the largest of these from our new workshop in [Seven Lakes, NC](#). Why is this of any importance though to sailors? This expansion gives us more space, additional equipment, skills and manpower to expand our own sailboat-related activities. We have a number of new products in the pipeline as a result - stay tuned for news!



## AeroSouth Academy Launches in January 2023

Addressing a lack of basic engineering education in south-central North Carolina, AeroSouth is pleased to announce the upcoming opening of the **AeroSouth Academy** in January 2023. These evening classes will be held in our new shop facility in beautiful Seven Lakes, NC.

Taking a cue from the popular "[Volkshochschulen](#)" of Germany and other European countries, the AeroSouth Academy will initially offer courses in basic engineering drawing, computer-aided design (CAD), computer-aided engineering (CAE), 3D Printing and related CNC manufacturing technologies. Classes in classical watercolor painting, taught by [Ulli Misegades](#), have already begun. Instructors are experts in their fields and the cost for these evening classes will be very affordable. Students age 15 and older are welcome to attend.

[Contact Us](#) if you'd like to receive more details as they become available. See also our "[Shop and Engineering](#)" curriculum, based on the coursework we created for the [Thales Academies](#), low-cost, world-class K-12 schools..

## Can Turkeys Swim?

According to [Adrian Volenik of Untamed Animals](#):

"Yes, they can, and they really like water! Researchers found that turkeys need water on a daily basis. Hens with chickens are never farther away than a quarter of a mile



from the nearest water source and even adult turkeys never put more distance than half a mile between themselves and a body of water. While they mostly come to ponds and lakes to drink, they are actually quite good at swimming. They move through the water by tucking their wings close to their body for a streamlined shape, spreading their tails, and kicking."

The Turkey on our Thanksgiving Feast Table will be swimming in gravy perhaps, but not in the water! Everyone at AeroSouth wishes you and your family a **Blessed, restful Thanksgiving Holiday**. Due to our own plans for getting some R&R after a busy year, **our**

**offices will be closed from 21-29 November**. Any orders placed during this time will be fulfilled as soon as possible upon our return on 30 November.



## The Science of Sailing: Where's the Wind?

Is there anything more frustrating than when the wind stops while sailing? Yes - it's when some other sailor manages to find a puff of wind and you don't! The upper picture here shows competitors waiting for that puff at the February, 2013 Regatta hosted by the **Bitter Ends** of Venice, FL.



Our friend **Sonya Dean of Cary, NC** recently related this experience while participating in the **2022 Southeast Regionals / Midlands Regatta** on Lake Murray near Columbia, SC. Despite a great start in one of the six races held, when the wind died there was little she could do but watch others pass her, sailors that were on a different location of the course. One of them was **Conner Blouin** of the Charleston Yacht Club, who remarkably won all six races!

Clearly Connor's sailing skills, his knowledge of Lake Murray wind conditions, and his masterful ability to find that elusive puff of wind explain his success. For those of us who will never live long enough to acquire even a fraction of his vast experience and wisdom, there are books, many

books. One of our favorites is **High Performance Sailing** by the late Frank Bethwaite. In Chapter Three, he describes **The Two Surface Winds**:

"So far, I have described how and why the winds blow. Sailors use only ten, or at most thirty metres of the wind at the very bottom of an atmosphere which is many thousands of metres deep. The behaviour of this surface wind is unique. It adopts one or the other of two forms. It curves, pulses, and oscillates with a patterned beauty found at no other level.

"The two forms are *'light air'* and *'breeze'*. The basic **light air** patterns are *'steady, unsteady, pulsing, oscillating and ribboning'*. The **basic breeze** patterns are *'steady, wandering, pulsing, convergent/divergent, channelling, and harsh'*.

As a WWII RAAF pilot, sailboat designer and successful competitor in many classes, Bethwaite knew a great deal about this topic and has documented it well in *High Performance Sailing*. The images in Chapter Three show how he used lightweight ribbons attached to a line from the masthead to the deck to demonstrate light surface winds.

Likewise we use very light ribbons on our **Breezy** low-wind indicator, shown in the lower image here and available for only \$25 at the [AeroSouth Store](#).

**SAIL FASTER - HAVE MORE FUN**  
**AeroSouth Technology LLC**

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