



REDUCE YOUR DRAG FACTOR

A new aerodynamic sculling blade targets efficiency in and out of the water.

BY TOPHER BORDEAU

TWO THINGS AFFECT THE SPEED OF ROWERS and their equipment: propulsion and drag. And while there's only one source of propulsion, drag comes from two places: the water through which you propel your shell, and the air moved by you and everything not in the water. The faster you go, the greater the drag. And while shells have always been designed to reduce the drag of water on the hull, few products have sought to increase aerodynamic efficiency.

Dreher's new DreherAero sculls utilize the same design trick to get more aerodynamically friendly and increase propulsive force. The secret is a shaft and blade design manufactured in a continuous shape that makes the oar less visible to the wind on the recovery and lets it grip the water better on the drive. It's reminiscent of the cycling industry's early attempts at aerodynamic shapes, when vertically bladed frame designs made bikes invisible to headwinds but tough to handle in crosswinds.

The DreherAero sculls won't suffer the same fate, however, since they flatten out along the horizontal axis (while bike tubes flatten out along the vertical axis). The idea of reducing drag on the part of the machine that moves the fastest makes sense. It's unclear if the new shape would make it tougher to row on the square or the quarter-feather, but either way the tradeoff is likely worthwhile.

In addition to the aerodynamic and hydrodynamic benefits of the "continuous shape" design, Dreher claims that since the profile of the shaft matches the profile of the blade, the blade pitch will always match the sleeve pitch, eliminating the need to check pitch on the blades. □