
AERO
WING SAIL
RONDAL
ULTIMATE RELIABILITY

PLAN FOR THE UNEXPECTED

PRODUCTS THAT ENSURE ULTIMATE RELIABILITY IN ANY SITUATION

We design and manufactures high-performance sailing systems and equipment for superyachts. We are recognized as the best for unrivaled Dutch build quality and innovative technical solutions, achieved through a dedicated focus on continuous improvement in both products and services.

As a building partner, Rondal leverages decades of experience and relieves the client by taking on turnkey projects. The products of Rondal ensure ultimate reliability in any situation.

The Rondal team consists of approximately 75 professionals, including highly qualified engineers, composite workers, CNC machine operators, welders, and mechanics as well as a host of complementary specialists.

With decades of experience in composite and aluminum engineering and manufacturing, Rondal serves the market with specialized products for both sailing yachts and motor yachts.

Aero Wing Sail

AERO
WING SAIL

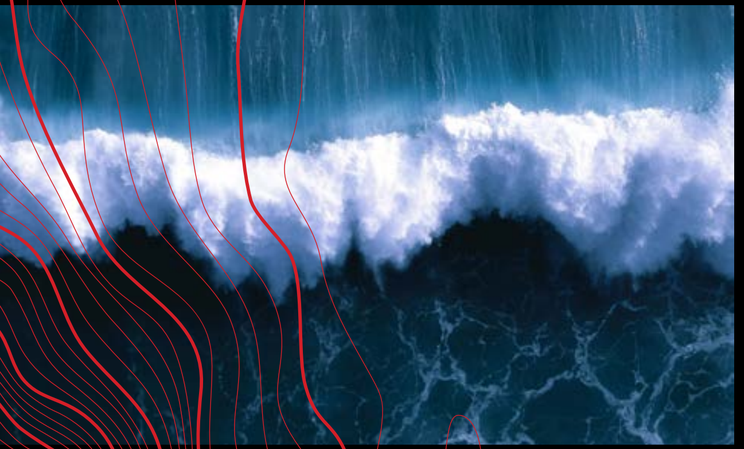
The Aero Wing Sail is an innovative designed to harness the power of the wind, enabling a more sustainable approach to yachting. It is crafted with ease of use, comfort, and design flexibility in mind. The Aero Wing Sail is suitable for multihulls and as wind-assisted applications, allowing every yacht owner to benefit from its advantages.

Wind will always be a free and a sustainable source of energy, available everywhere and independent of any infrastructure.

THE ROOTS OF THE AERO WING SAIL

The Aero Wing Sail represent the first generation of an unstayed structural wing. Developed in collaboration with Artemis Technologies, it is derived from technology used in wing sails in the America's Cup and Sail GP.

Artemis Technologies contributes expertise in aerodynamic analysis, simulations, and automatic control. Combined with Rondal's expertise in composite spar manufacturing and in designing electric and hydraulic drive systems, this collaboration has led to a high-potential product.



DEVELOPMENT STATUS

After thorough research, design, and simulations, a prototype was successfully crafted in-house. Extensive testing delivered promising results, and currently, full-scale wing designs are in progress.

Next year, our focus will be on finalizing the full-scale wing design, which includes:

- Wing structural design
- Flap and wing rotation mechanism
- Wing automation
- Production process

To validate these designs, we plan to construct two prototypes: one to assess structural integrity and another to test the wing's automation capabilities.

Our goal is to launch the Aero Wing Sail at METSTRADE in 2025.

HOW IT WORKS

The Aero Wing Sail is crafted from lightweight materials, similar in fabrication to an aircraft wing. It is free-standing with the ability to rotate fully around its vertical axis. Multiple flaps adjust the camber to control the wing's power. To depower, these flaps can twist along the span, even inverting at the top to create a righting moment. When at rest, the wing feathers freely, and for extreme weather conditions, it can tilt horizontally.

A control system actively orients the wing and flaps for optimal efficiency and comfort, whether sailing or at rest.

THE ADVANTAGES

Revolutionary Aero Wing Sail compared to a conventional rig:

- Quick sailing: be under sail within 10 seconds
- User-friendly & comfortable: automated control simplifies handling
- Safe: no lines or blocks required
- Low maintenance and cost-effective: fewer components mean reduced wear, with no need for sail replacement

60% more efficient than a conventional sail

Unstayed and infinite rotation

Individual flap control to manage thrust, heel and roll

Feathering when stationary

Foldable in extreme weather

ADVENTURE IS WAITING FOR YOU THERE

WITH PRODUCTS THAT ENSURE ULTIMATE RELIABILITY IN ANY SITUATION

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