

Foil Assist

A 3D rendering of a ship's hull and propellers in blue water, illustrating the 'Foil Assist' concept. The hull is dark blue and sleek, with two large propellers visible at the stern. The water is a vibrant blue, and the overall scene is set against a bright blue sky.

WE MASTER HYDRODYNAMICS

Foil Assist

Foil Assist is our next step in increasing speed and efficiency for high-speed planing boats, offering hugely improved onboard comfort when travelling through waves. In short, Foil Assist is the latest future-proof enhancement for planing boats up to 25 metres.

BENEFITS

- Increased sailing comfort and safety
- Reduced pitching and slamming
- Improved sailing behaviour
- Less spray for a drier ride
- Higher speed when sailing through waves



POWER IN PERFORMANCE

A shock absorber for your boat, creating a smoother ride through waves. That's what you get with Foil Assist. Foil Assist is a partial hydrofoiling application for high-speed planing boats. It consists of a small, passive wing built of solid stainless steel, aluminium or composite which is mounted amidships under the boat's hull.

With Foil Assist, the hull is not lifted completely out of the water and the boat behaves like a normal planing boat but with one key difference: it is far more comfortable. By carrying up to 60% of the boat's weight on the wing, rather than on the waterline, your boat sails lighter, with less spray and less resistance.

Pitching motions are significantly reduced, leading to less seasickness, and experiences of slamming for those on board are less frequent and less severe.

In addition, Foil Assist also reduces the risk of back injuries for professional users.

As a product with a wide range of applications, Foil Assist is available both for the yachting and the commercial markets and is suitable for pilot boats, fast patrol boats, sea rescue boats, naval interceptors and more.

HYDRODYNAMICS MASTERED

The size and position of each Foil Assist are crucial, making it a truly custom-built product.

Harnessing data from many years of research and by running a computational fluid dynamics simulation for each boat, we determine the perfect size, shape and position for the wing. Naturally, each Foil Assist is carefully engineered to have sufficient strength to carry all of the loads it will encounter.

CHOOSE YOUR OWN ADVENTURE

We offer the Foil Assist in a wide range of different options. To find the perfect Foil Assist for your vessel, choose from the following:

The **Fixed Foil Assist** is designed for and then bolted to your vessel. We determine the best possible position and the best geometry for your boat.

The **Adaptive Foil Assist** is designed for more flexibility across a wider range of speeds, whereas the Fixed Foil Assist is optimised for a specific speed. At a lower speed, the Adaptive Foil Assist increases efficiency by altering angle of attack. By adjusting the angle of the foil, we can create more or less lift as needed.

The **Retractable Foil Assist** is the foil created for vessels that need more flexibility. When immersion depth is an issue, this is where the Retractable Foil Assist comes into its own. The design is based on the Fixed Foil Assist, with one key difference: the wing can also be retracted into the hull, for example when stowing the boat on board your superyacht.



*"At Hull Vane, we believe in
continuous improvement, high efficiency
and sustainable design."*



hullvane

WE MASTER HYDRODYNAMICS

Nude 46, 6702 DM Wageningen, The Netherlands

T +31(0)317425818 **E** info@hullvane.com **W** hullvane.com