

# foil assist

by Hull Vane



WE MASTER HYDRODYNAMICS

# benefits

UP TO  
**20%**  
LESS FUEL  
CONSUMPTION

UP TO  
**30%**  
LESS PITCHING  
MOTIONS



Ride comfort & safety in waves

## Froude numbers (Blue = Foil Assist applicable)

length (m)	speed (knots)								
	10	15	20	25	30	35	40	45	50
10	0.5	0.8	1.0	1.3	1.6	1.8	2.1	2.3	2.6
15	0.4	0.6	0.5	1.1	1.3	1.5	1.7	1.9	2.1
20	0.4	0.6	0.7	0.9	1.1	1.3	1.5	1.7	1.8
25	0.3	0.5	0.7	0.8	1.0	1.1	1.3	1.5	1.6
30	0.3	0.4	0.6	0.7	0.9	1.0	1.2	1.3	1.5

Foil Assist by Hull Vane is applicable to boats with a speed-to-length ratio (Froude number) above ca 1.0. Above table shows this in terms of boat length and speed.



Increased speed & fuel efficiency

# how

## The power of performance

A shock absorber for your boat, for a smoother ride through waves. That's what you get with Foil Assist by Hull Vane. Foil Assist is a partial hydrofoiling application for planing boats. It consists of a small, passive wing, built of solid stainless steel and mounted amidships under the boat's hull.

The hull will not be lifted completely out of the water and the boat will behave like a normal planing boat, but much more comfortable. By carrying up to 60% of the boat's weight on the wing at maximum speed, rather than on the waterline, your boat sails lighter, with less spray and less resistance. The pitching motions are significantly reduced, leading to less seasickness, and slamming events are less frequent and less severe.

Foil Assist is available both for the pleasure craft market and the professional boat market, such as pilot boats, fast patrol boats, sea rescue boats and naval interceptors.

## We master Hydrodynamics

The size and position of the Foil Assist are critical, and therefore Foil Assist is truly a custom-built product. Through many years of research and a simulation with Computational Fluid Dynamics for each boat, the exact size, shape and position of the wing are determined. Each Foil Assist is engineered to have sufficient strength for all the loads it will encounter.

**FOIL ASSIST IS THE NEXT STEP IN INCREASING SPEED AND EFFICIENCY FOR HIGH SPEED BOATS, WITH THE BENEFIT OF MUCH MORE COMFORT IN WAVES. THIS MAKES FOIL ASSIST THE FUTURE-PROOF ENHANCEMENT TO ALL PLANING BOATS.**

# hullvane

WE MASTER HYDRODYNAMICS

**Hull Vane B.V.** Nude 46. 6702 DM Wageningen, The Netherlands

**T** +31(0)317425818 **E** [info@hullvane.com](mailto:info@hullvane.com) **W** [hullvane.com](http://hullvane.com)