

## **Retractable bow foils**





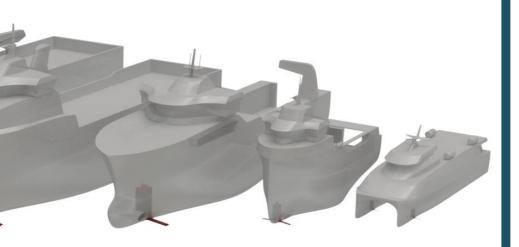


Model tests with Havila Kystruten.

Wavefoil delivers retractable bow foils that reduce fuel consumption and ship motions in waves. Fuel saving for suitable ships is in the range of 5-15%, while ship motions are reduced by 10-20%, and up to 30% for high-speed vessels.

Our unique and patent-pending retraction mechanism allows the foils to be retracted vertically, thus allowing the foil module to be placed far forward in the bow, where the benefit of the foils is the greatest.

Wavefoil delivers complete foil modules including hydraulic or electric motor, control system and bridge panel.



5-15%

fuel saving and emission reduction

10-20%

motion damping

The foils are made of a composite material to provide flexibility and robustness. Connected to the vessel through a flexible polyurethane support structure, the foil module can handle extreme loads from slamming events.

Bearings and thrust washers are made of a composite material and do not need any maintenance.

All movable parts are available from a platform above the waterline for inspection when the foils are retracted.



### Standard foil modules

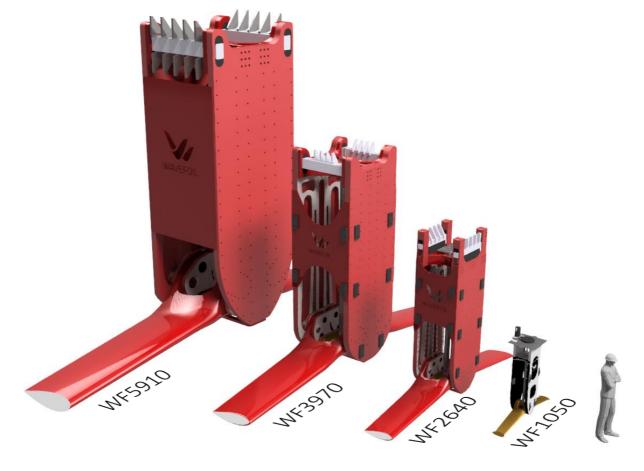
Wavefoil's range of foil modules is divided into two categories: foil modules for standard ships and foil modules for high-speed vessels. For standard ships we offer the following foil modules:

The **WF1050** is a set of foil modules suitable for catamarans between 20 and 40 meters.

The **WF2640** is a foil module suitable for fishing vessels, small ferries and yachts from 35 to 55 meters.

The **WF3970** is a medium size foil module suitable for yachts, large fishing vessels and ferries between 55 and 90 meters.

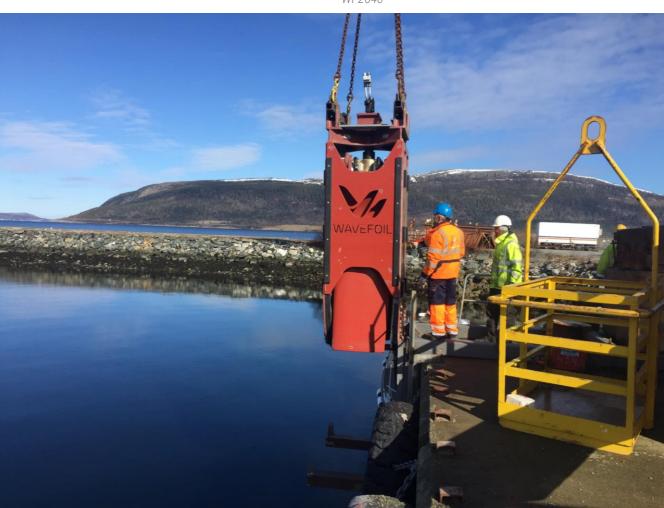
The **WF5910** is a large size foil module suitable for cruise ships, offshore vessels and cargo vessels above 90 meters.







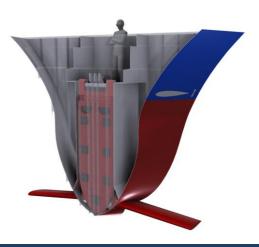
WF2640





M/F Teistin with the bow foils deployed at MEST Shipyard in Tórshavn





WF2640 in M/F Teistin

Our very first foil module, the WF2640, was installed in M/F Teistin, a 45 meter RoPax vessel, in the Faroe Islands in September 2019.



M/F Teistin on her way out of Skopun Harbour in the Faroe Islands with the foils deployed.





# Our foil module for high-speed vessels

High-speed catamarans achieve a significant motion damping by installing our WF1050 foil module in each hull. Simulations have shown up to 30% reduction of vertical motion. The WF1050 fits catamarans between 20 and 40 meters, and the relative motion damping is in the same order of magnitude for all high-speed catamarans in this range.

With the foils deployed, the crew may operate the vessel at up to 10 knots higher speed, or in up to 50% higher waves, and achieve the same comfort level as a vessel without our foils.

30%

reduction in vertical motion

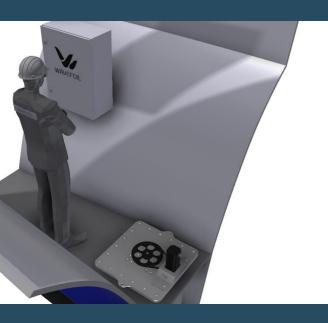
50%

higher waves at a given comfort level

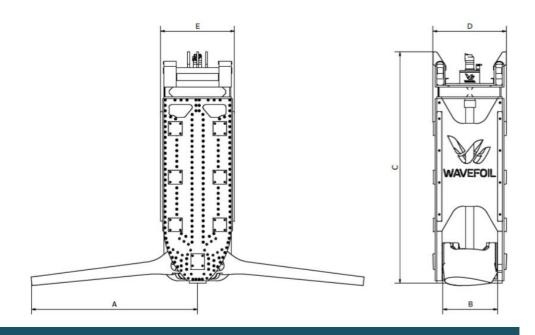


The clean design, combined with NiAl-bronze, POM and aluminium ensures high strength, light weight and reliability.

The foil modules are installed from above through the tank top. They can easily be lifted up for maintenance while the vessel is docked.







# **Technical specifications**

	WF1050	WF2640	WF3970	WF5910
A [mm]	1050	2640	3970	5910
B [mm]	289	874	1380	1930
C [mm]	1685	3795	5195	7890
D [mm]	475	1200	1800	2400
E [mm]	460	1270	1920	2940
Weight [tonnes]	0,42*	7,2	25	75

<sup>\*</sup> Weight per foil module

Dimensions are subject to change.

#### **Contact info**



CEO Eirik Bøckmann eirik@wavefoil.com + 47 45263411



Product Developer
Erlend N. Vastveit
erlend@wavefoil.com
+ 47 48286069



CTO
Audun Yrke
audun@wavefoil.com
+ 47 48251432



Sales Engineer
Michael N. Paulsen
michael@wavefoil.com
+ 47 98414075

www.wavefoil.com Havnegata 77010 Trondheim Org nr 917 810 508

