

BAR TECHNOLOGIES



BAR Americas Cup 2017



Dynamic Foils on Princess R35



BAR Tech 30 workboat with Foils



Surface to Wet Submarine



BARTech WindWings® 37.5m



BARTech WindWings® 20 & 24m



BARTech AeroBridge®



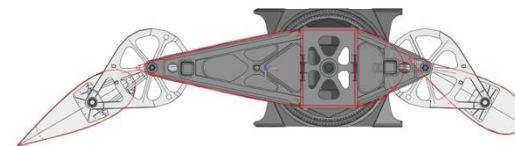
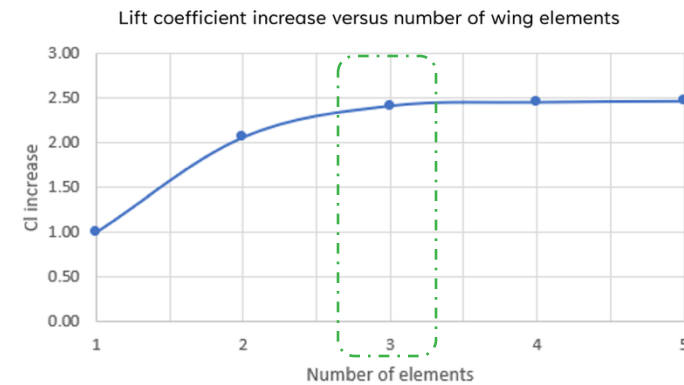
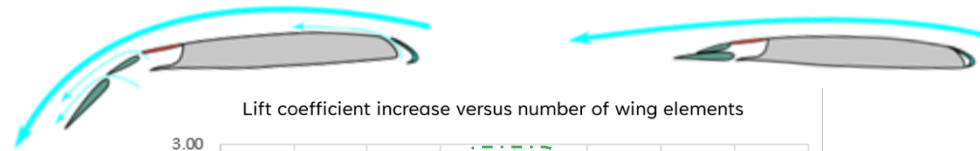
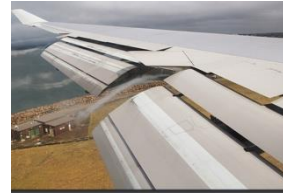
BARTech Spirit F35:
Electric foiling launch

INSPIRED BY AEROSPACE:
THREE ELEMENT
HIGH LIFT
RIGID WING

2.5X THRUST OF
SINGLE ELEMENT

WINDWINGS®
**FULLY ADJUSTABLE CAMBER
& ANGLE OF ATTACK**

MAXIMISE
REAL WORLD
PERFORMANCE



DESIGN PHILOSOPHY



THE WORLD'S MOST POWERFUL WIND ASSISTED PROPULSION SYSTEM

- Three element, rigid wing sail (global patent)
- Fully automated camber and alignment adjustment
- Fail-safe feathering and folding to deck
- Very low power consumption
- Principle dimensions

Model		37.5	24	20
Aerodynamic Span	m	37.5	24.0	20.0
Chord	m	20.0	10.0	10.0
Planform area	m ²	750	240	200
Power system	-	Hydraulic	Electric	Electric

- Robust design, class approved
- Average daily savings of:
 - 37.5m: 1.5t fuel and 5t CO₂
 - 24m: 0.7t fuel and 2t CO₂



NAME: Pyxis Ocean
VESSEL: Kamsarmax
LAUNCH: Q3 2023
OWNER: MC Shipping
CHARTER: Cargill
TRADE: Global



NAME: Brands Hatch
VESSEL: LR2 Tanker with 3x WindWings®
SHIPYARD: SWS
LAUNCH: June 2025
OWNER: Union Maritime Limited



NAME: Berge Olympus
VESSEL: NewcastleMax
LAUNCH: Q3 2023
OWNER: Bergesbulk
CHARTER: Vale
TRADE: China Brazil

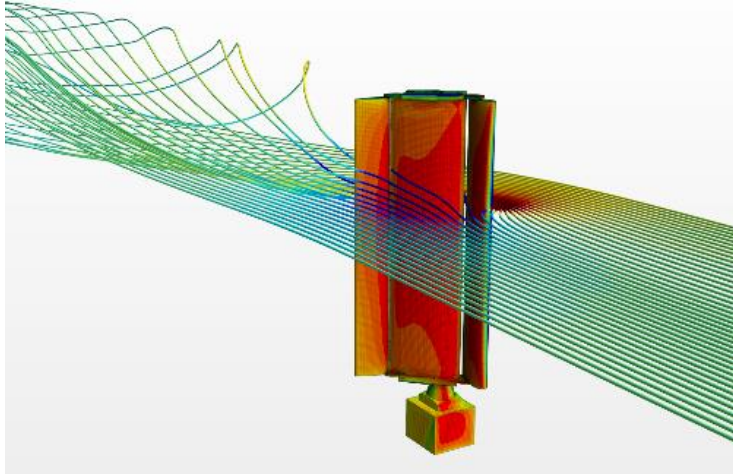


- Current Fleet – 2 Retrofits and 1 New Build
- 22 Further vessels either contracted or firm agreements (with integration work already underway)

The Most Powerful Sailing Cargo Ship in the World

WindWings®

PERFORMANCE GUARANTEE ✓



Thrust is generated by aerodynamic lift on the WindWings® and will be measured using strain-gauges mounted on the inside of the wing structure

Example Matrix of Guaranteed Thrust Values:

Thrust (kN)		True Wind Angle, TWA (Degrees, relative to vessel bow)				
		30	60	90	120	150
True Wind Speed, TWS (knots)	10		X	X	X	
	15	X	X	X	X	
	20	X	X	X	X	X
	25		X	X	X	X
	30			X	X	X
TWS & TWA measured 10m above sea surface						
Thrust figures shown are for a single wing						
Vessel speed is 14 knots						
Vessel draft is 15 m						

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