



NORSEPOWER

# Norsepower Rotor Sail™

## Saving fuel – and the planet

For bulkers, tankers, RoRos, ferries,  
LNG carriers, RoPaxes, passenger ships  
– and peace of mind



**5–25% typical fuel savings &  
emission reductions – even  
more in good conditions**

→ More information at [norsepower.com](https://norsepower.com)

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# Norsepower Rotor Sail™

save fuel, cut emissions,  
help with compliance  
– and make your crew smile

Norsepower Rotor Sail™ uses a minimal amount of the ship's electric power to rotate cylindrical sails on the deck. It packs the air behind the sail – and thins it from the front side. This creates a powerful thrust and raises the top speed – or allows the engine to be throttled down.



**Make the energy efficiency regulations your friend, gain financial regulatory benefits**

Norsepower, as the industry pioneer and the original provider of rotor sails, has influenced the regulations world-wide – so we know how you can benefit from them. Whether you are a ship owner, charterer, ship designer or a shipyard, you need to be future proof. By using wind as your fuel, the Norsepower Rotor Sail™ supports your compliance with marine regulations, be it CII, EEDI, FuelEU maritime, EU ETS – or the upcoming GFS.

Norsepower is the original, pioneering company that started the whole modern wind propulsion market. Due to our 10+ year track record the Norsepower Rotor Sail™ is the most trustworthy and efficient product on the market. The considerable savings it produces are not just talk. They have been verified during extensive measurement and analysis campaigns by well-known third-party companies. These include RISE, LR, NAPA and ABB.

## A prestudy for your ship or fleet

Our sophisticated, accurate prestudies are based on your ship data, our real-life performance data, advanced simulations and the best weather data available. The number and size of the Norsepower Rotor Sails™ on a vessel depends on the ship size, speed, operating profile, and the route's wind conditions.

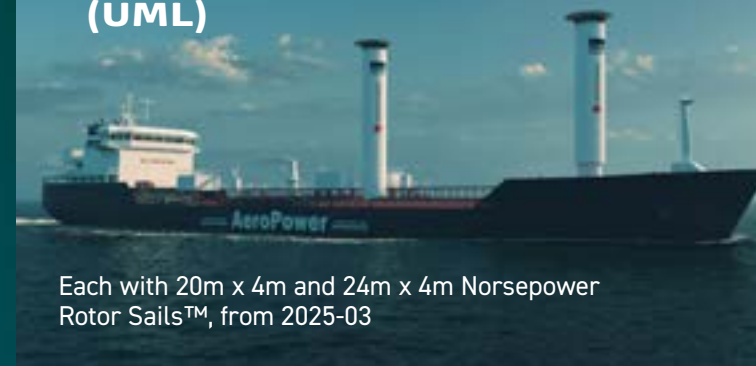
## Options to suit your needs



Going under bridges or need space for loading operations? The Norsepower Tilting Foundation™ is available as an option. Other options include EX proof design and ice prevention.

**Try our simple fuel savings simulator:** [norsepower.com/simulator](https://norsepower.com/simulator)

## Example of fleetwide deal: Six 18.5k dwt tankers for Union Maritime Ltd (UML)



Each with 20m x 4m and 24m x 4m Norsepower Rotor Sails™, from 2025-03

## RoRo SC Connector, Sea-Cargo

Two tilting 35m x 5m  
Norsepower Rotor Sails™,  
2021-01



## VLOC Sea Zhoushan, Pan Ocean

Five tilting 24m x 4m  
Norsepower Rotor Sails™,  
2021-05



## Hybrid Ferries M/V Copenhagen & M/V Berlin, Scandlines

One 30m x 5m  
Norsepower Rotor Sail™  
each, from 2020-06



**32 Norsepower Rotor Sails™ installed on 18 ships since 2014, with 40 more to follow soon.** As of 2025-03

**Extensive reference list of industry leaders and more than 10 years of real-world wind propulsion experience**

**Norsepower Rotor Sail™ Factory guarantees high-quality serial production.**

**Third-party verified fuel savings and emission reductions of typically 5–25% – and even more in good conditions**

**Norsepower Sentient Control™: Self-optimizing & autonomous system to guarantee maximum savings**

**IPR portfolio of 70 patents (20+ pending) to keep us at the forefront of the industry**

Norsepower Rotor Sail	20m x 4m	24m x 4m	28m x 4m	30m x 5m	35m x 5m
Material	Composite	Composite	Composite	Composite	Composite
Rotor speed [rpm]	0-225	0-225	0-225	0-180	0-180
Foundation height (indicative) [m]	2.5	2.5	2.5	3	3
Weight of typical foundation [tons]	13	13	15	17	24
Electric motor nominal power [kW]	80	100	115	115	175
Variable speed drive [V/Hz]	380-690V, 50/60 Hz	380-690V, 50/60 Hz	380-690V, 50/60 Hz	380-690V, 50/60 Hz	380-690V, 50/60 Hz
Total weight without foundation [tons]	29	33	36	50	56
Maximum continuous thrust force [kN]	175	175	205	270	350

### Ambient conditions

Operational temperature [C°] (basic version)	- 20...+50	- 20...+50	- 20...+50	- 20...+50	- 20...+50
Survival wind speed [m/s]	70	70	70	70	70

**Example: Thrust in 10 m/s wind. To put it simply: Wind from side is good.**



## The market leader

Norsepower is the global market leader in wind propulsion. Our customers have been using the Norsepower Rotor Sail™ for more than ten years in harsh sea conditions.

Our factory – the first rotor sail factory in the world – is located in Dafeng, China. It removes the needs for compromises and guarantees our serial production capability and highest quality.

## Norsepower locations globally

Global HQ in Finland. Asian HQ in Hong Kong. Factory and Asia Office in China. Production hub in Poland. Presence in South Korea, Japan, Greece, Canada, USA, UAE, Oman, Turkey, Italy, Germany, Singapore, Norway, and Vietnam. HQ address: Tammasaarenlaituri 3, FI-00180 Helsinki, Finland, Europe.



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