

WINDKEEPER

Offshore wind farm support & maintenance vessel



ENIM
Innovate and Act



DELIVER ENERGY AT ITS BEST UNIT COST



**Highest safety levels
for transfer**



**Guarantee well-being
and comfort on board**



**Increase reactivity
for unscheduled maintenance**



**Spread planned maintenance
over the year**





GET FULL ENERGY PRODUCTION



300 Days
Of crew operability



24/7
Availability for interventions



3 m
Significant wave height



1 Month
Of autonomy at sea



3000 Miles
Range at 6 knots



**Operability 24/7
Up to 3m significant
wave height**



DEDICATED SOLUTION FOR MAINTENANCE



Safe transfer of personnel & material

WindKeeper's design complies with **high safety levels** during the personnel transfer on the wind turbine, up to 3m significant wave height.

To increase safety and processes on board, Bertin Ergonomics focussed on Ergonomics & Human factors. A special attention was paid to the design and conception of the wheelhouse and transfer system.



Towing tank tests

Towing tank tests have been performed in November 2014 in order to demonstrate WindKeeper's excellent sea keeping performances.



**Safety & comfort
as priorities**



INNOVATION FOR WIND FARMS

Active day & night transfer system

WindKeeper's **patented** active transfer system is designed to ensure a **smooth hanging** to the boat landing, without damaging it. This system provides a **motion compensation** to transfer safely personnel on the wind turbine.



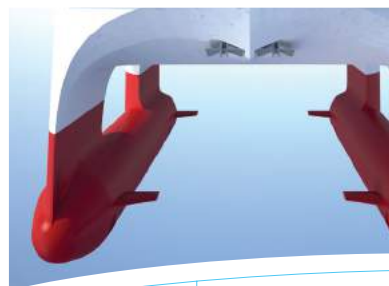
Wide deck space for working area

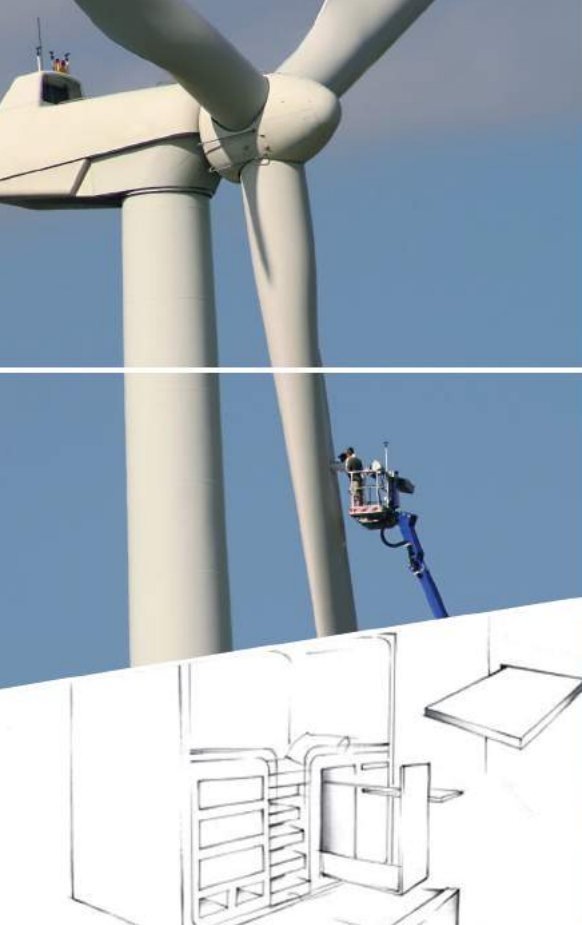
WindKeeper offers sufficient workshop to become a **technical offshore base**. Stores for spare parts and a workshop are available in order to allow parts maintenance on board.



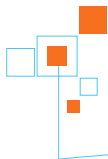
SWATH design with dynamic positioning system

WindKeeper has **excellent sea keeping performances** due to her SWATH hull. The vessel is also equipped with a dynamic positioning system **DP2** to guarantee a safe approach to the windmill.





OPTIMIZED SPACES FOR SAFE & EFFICIENT WORK



WindKeeper, a place to work

Areas dedicated to work

- Open deck
- Workshop with spare parts

350m² storage capacities

- Maintenance stores
- 10' container storages

Customization available

- Cable inspection
- Foundation inspection (ROV/AUV)



WindKeeper, a place to live

Comfortable accommodation

WindKeeper prevents technicians from seasickness due to her SWATH hull and her excellent seakeeping behaviour.

The vessel's accommodation spaces are designed to provide crew with **maximum safety and comfort** during their one month stay on board.

[illegible]

Technical drawing of the 'Mikado' locomotive, showing a side elevation and a front view. The side elevation includes dimensions: 19000 (width), 141000 (height), and 600 (wheel diameter). The front view shows the locomotive's profile with large wheels and a complex boiler structure.

Main deck

Single bedroom n°24 - 7.3m
Sleep box 20090

Single bedroom n°18 - 12.7m

Single bedroom n°32 - 7.4m
Sleep box 20090

Single bedroom n°20 - 7.4m
Sleep box 20090

Double bedroom n°18 - 12.7m
Sleep box 20090

Single bedroom n°13 - 7.4m
Sleep box 20090

Single bedroom n°15 - 7.4m
Sleep box 20090

Single bedroom n°17 - 7.4m
Sleep box 20090

Single bedroom n°19 - 12.7m

Single bedroom n°21 - 7.4m
Sleep box 20090

Single bedroom n°23 - 7.4m
Sleep box 20090

Single bedroom n°25 - 7.4m
Sleep box 20090

Single bedroom n°27 - 7.3m

Sickroom 12.5m

Single bedroom n°10 - 7.4m
Sleep box 20090

Single bedroom n°14 - 7.4m
Sleep box 20090

Single bedroom n°16 - 7.4m
Sleep box 20090

Single bedroom n°19 - 7.4m
Sleep box 20090

Single bedroom n°22 - 7.4m

Single bedroom n°11 - 7.4m
Sleep box 20090

Single bedroom n°13 - 7.4m
Sleep box 20090

Single bedroom n°15 - 7.4m
Sleep box 20090

Single bedroom n°17 - 7.4m
Sleep box 20090

Single bedroom n°19 - 12.9m

Water heater

18.6m

12.6m

Laundry 9m

Gym 11.5m

16.7m

Water and sewage room

Transformer ASD

Expansion tank

Electric generator motor VCUVD water cooling

Day tanks

Churn locker

Electric generator motor VCUVD water cooling

Expansion tank

Transformer

Ballast water treatment

See EOP drill

braking resistor

27m

14m

15m

16m

17m

18m

19m

20m

21m

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24m

25m

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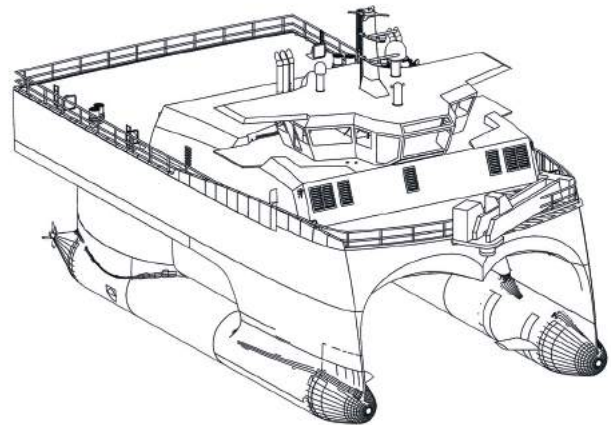
339m

340m

341m

342m

343m



Characteristics of WindKeeper

Dimensions

Overall length	40 m
Beam	20 m
Draft	5 m

Capacities

Displacement	850 tons
Payload	30 tons
Speed	12 knots
Crew	up to 12
Special persons	24

Propellers

CPP
Dynamic Positioning 2
Active compensation systems
for stabilization

Generators

4 x Volvo D16 477 kW/60 Hz
1 x Volvo D9 170 kW/60 Hz

Working Areas

Open deck	240 m ²
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Crew Areas

Conference room	20m ²
Lockers	21 m ²
Rest areas & gym	58 m ²
Infirmary	13 m ²

Accommodation

Double guest cabin	5
Single cabins	27
Superior cabins	5

Classification

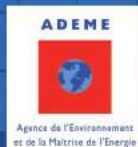
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