



## FLOATING BLADE EXCHANGE

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The demand for expected and unexpected maintenance work increases with every newly installed offshore wind turbine, and with a potential of 5.000 sub-5MW blades which need to be exchanged in the coming years; a cost-effective solution is required.

By replacing the jack-up vessel with a floating solution with similar workability, significant costs and time can be saved. With the design of a dedicated turbine maintenance system, TWD together with Royal Wagenborg have come up with an innovative floating removal and installation method.

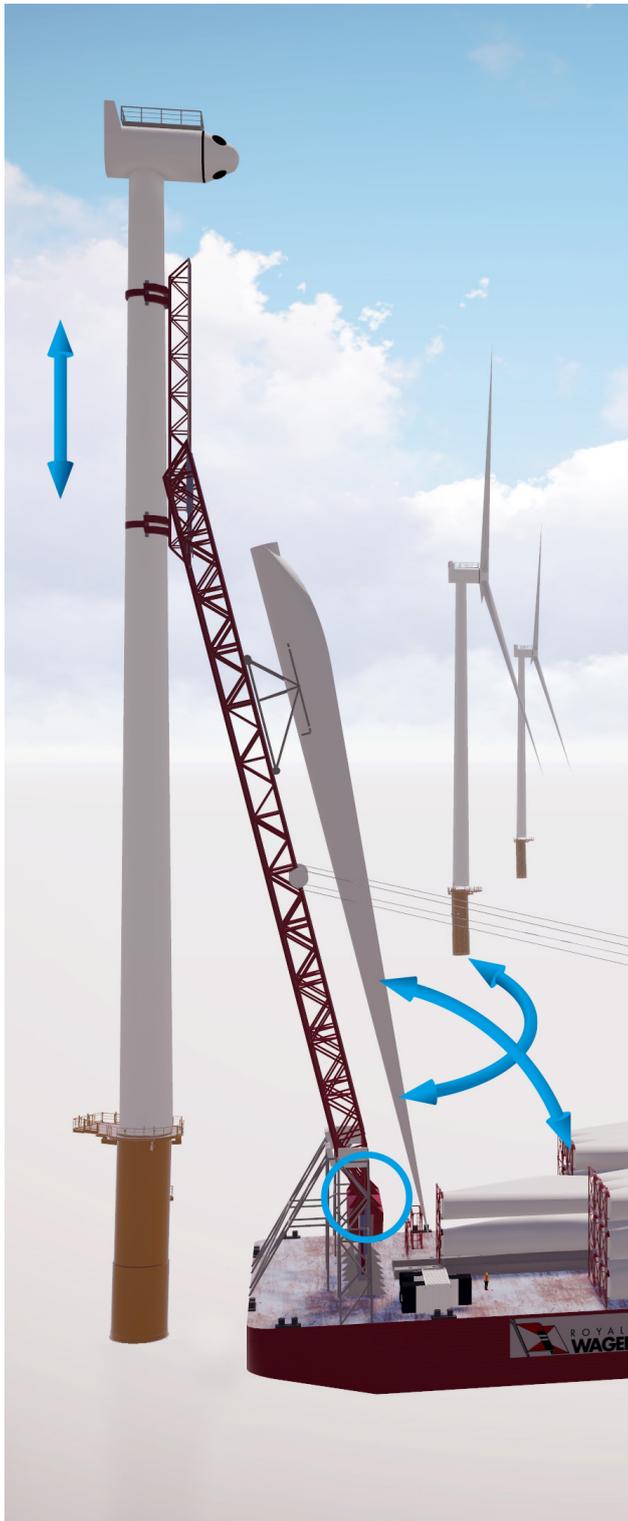
The vessel independent tool is equipped with a motion compensation system to mitigate relative motions during turbine

approach and allows for a safe connection. Once connected, a smart blade handling cart can collect, transport and place blades and other heavy components of the nacelle.

## ADVANTAGES

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- LOW DAY-RATE
- LARGE DECK SPACE
- PERFORM REPAIRS OFFSHORE (OPTIONAL)
- INCREASED WORKABILITY COMPARED TO OTHER LIFTING SOLUTIONS
- VESSEL INDEPENDENT; ON BARGE OR VESSEL



## MOTION COMPENSATION

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With our extensive knowledge of motion compensation systems we have come up with an effective solution to transport blades and other heavy turbine components from a moving vessel up to the static nacelle. The heave motion of the vessel is mitigated in the top part and the remaining motions at deck level.

Once connected to the turbine, a kart will pick up and transport the blade towards the nacelle. Without relative motions the blades can be safely inserted or exchanged. An automated seafastening system will be used to transport and load the blades onto the boom.

## AVAILABILITY

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At the moment we have successfully performed a technical feasibility study of the concept. We are specialized in creating custom-designed tools and are ready to provide you a cost-effective solution for the upcoming WTG maintenance work. Our team is looking forward to further support in improving and expanding your businesses.

### GET IN TOUCH

#### TEMPORARY WORKS DESIGN

T +31 10 294 03 74

W [www.twd.nl](http://www.twd.nl)

E [info@twd.nl](mailto:info@twd.nl)

Rotterdam Science Tower - Marconistraat 16

3029 AK Rotterdam

The Netherlands