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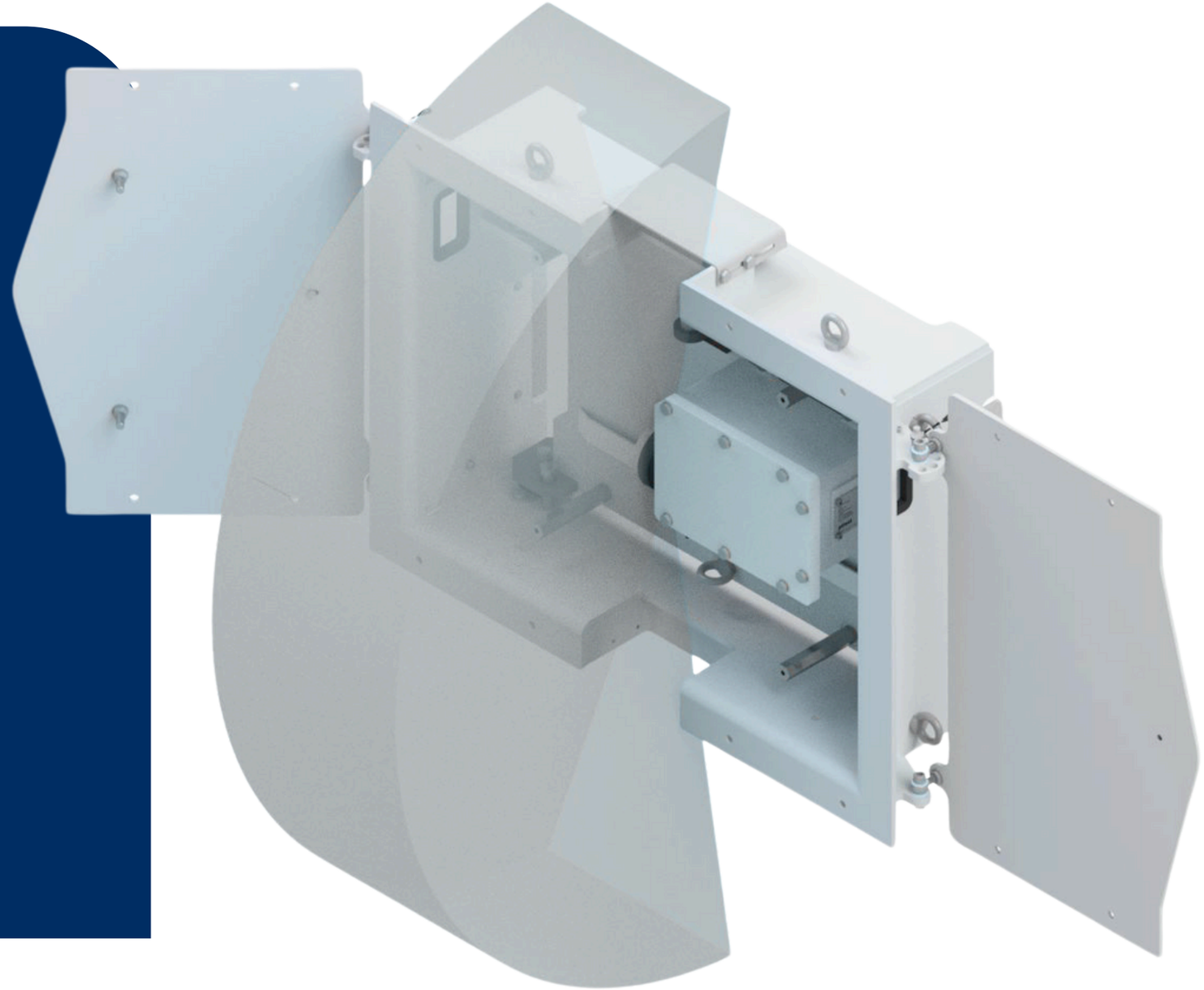
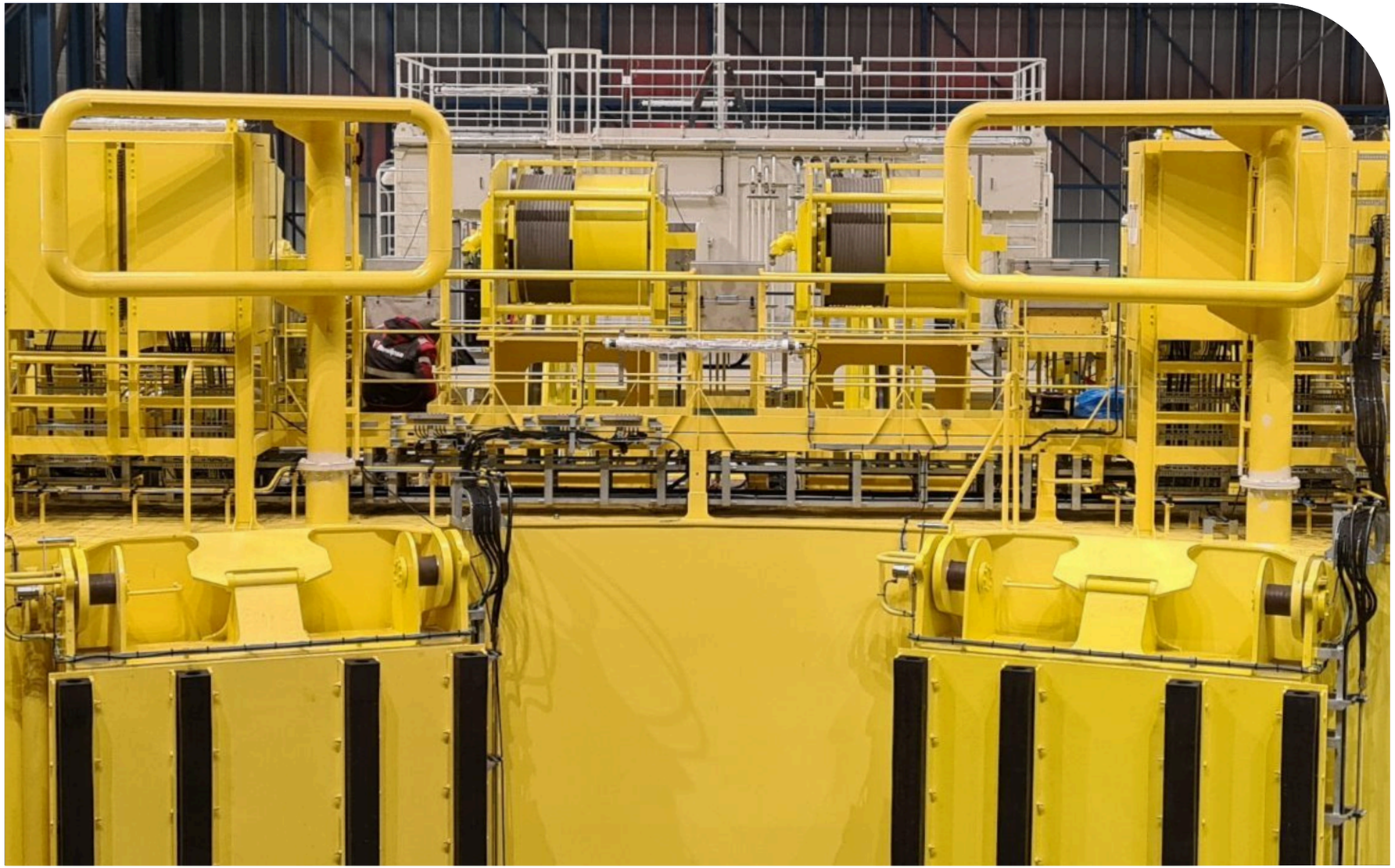
OFFSHORE

RTPMS

Real-Time Pile Measurement System



Designed for integration on motion compensated pile grippers



01 INTRODUCING
RTPMS

The Real-Time Pile Measurement System is especially designed for integration on motion compensated pile grippers. The system measures inclination, height and position of the pile. Using RTPMS assures accurate installation of the mono pile.

The device is already successfully used on offshore windfarms.

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02 FEATURES

RTPMS

The RTPMS system consist of 2 or 4 scan units with lidar sensors and motion sensors placed on a tunable damped platform positioned on the pile gripper for optimal visibility. Two oppositely placed scan units are connected to a power distribution box which connects to the server performing all calculations.

The server runs software using Pliant Offshores patented motion compensation technique for high accurate 3D pile model fitting algorithms yielding unprecendented accuracy. Typically the system is installed in dual/ redundant setup or can optionally be equipped with additional scan units.

01
Inclination accuracy 0.05°

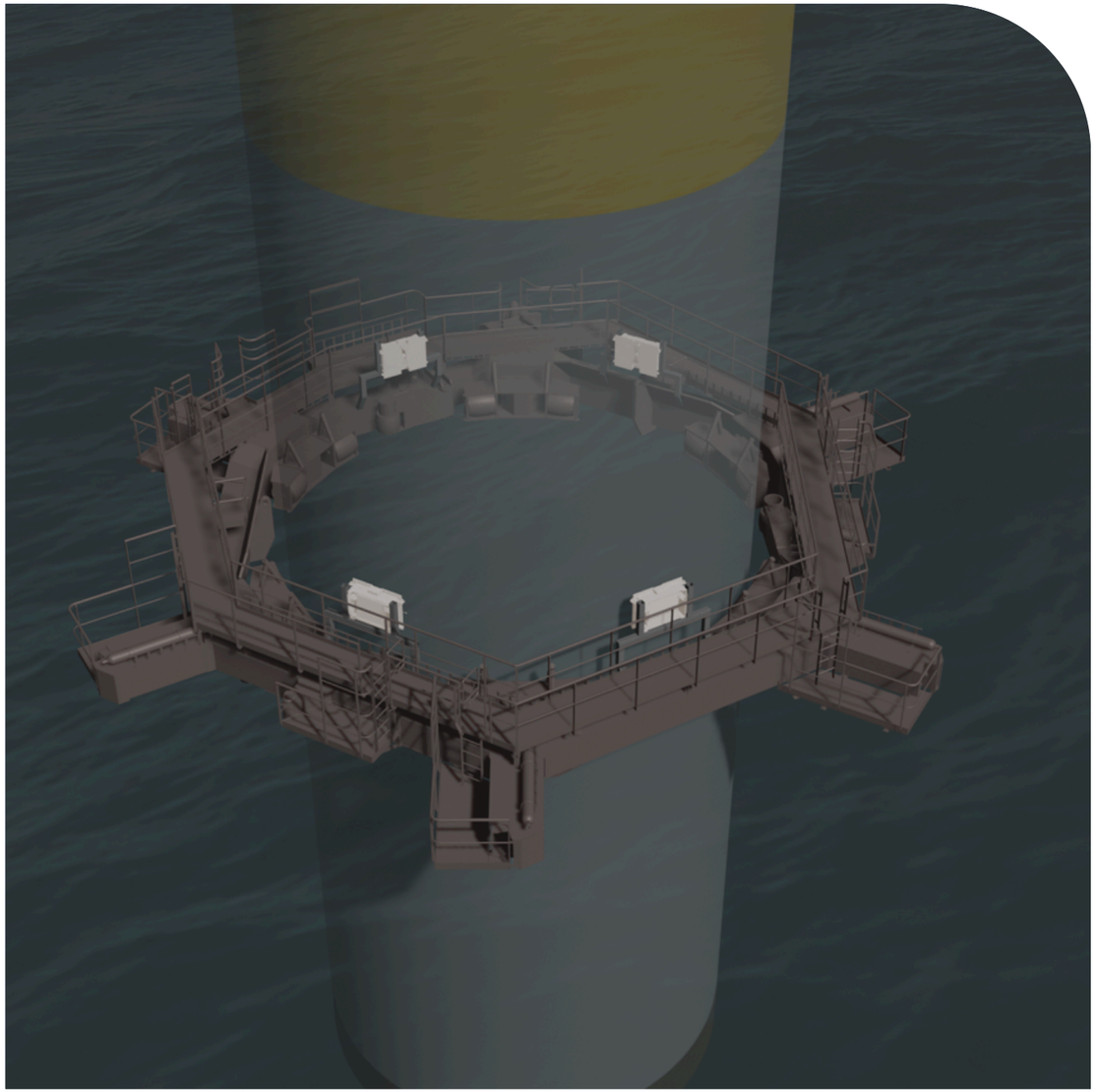
02
Pile evelation accuracy 0.10m

03
Pile horizontal position accuracy 0.05m

04
Measurement speed 20Hz

05
Reliable in all offshore weather conditions

06
Supports local, vessel and world coordintes



03 INFORMATION

RTPMS

Proven technology

The RTPMS system has been succesfully used for installation of monopiles from 2022 onwards on several vessels. The underlying technology is shared with the Pliant Offshore Installation Monitoring System (IMS) which has already been used for installation of over 1000 monopiles on different projects with various vessels.

Gripper control loop integration

The system communicates NMEA UDP or binary message for easy PLC and SCADA system integration with measurement values, quality indicators and system status.

Easy to use

The Graphical User Interface features a dashboard showing measurements and visualizes the point cloud data in 3D with fitted pile model. This allows easy insight in system performance and allow system optimizations if required. Any operator is able to quickly understand and operate the RTPMS.

High accuracy

RTPMS is able to measure inclination with an accuracy of 0.05° by combining high density Lidar measurements and extremely accuracy motion sensing. Misalignment of error detection mechanism are integratde and will signalize if the signal quality is reduced.

RTMPS

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