

MIROS PredictifAI

PREDICTION OF WAVES AND VESSEL MOTION – PAIRING RADAR TECHNOLOGY WITH AI



DATASHEET

Miros' new-generation PredictifAI wave and vessel motion prediction technology automatically adapts to varying sea and weather conditions and reliably handles multimodal sea states.

The solution provides a real-time, in-operation prediction of the wave field your vessel will encounter, and the associated wave-induced vessel motion up to a couple of minutes in advance.

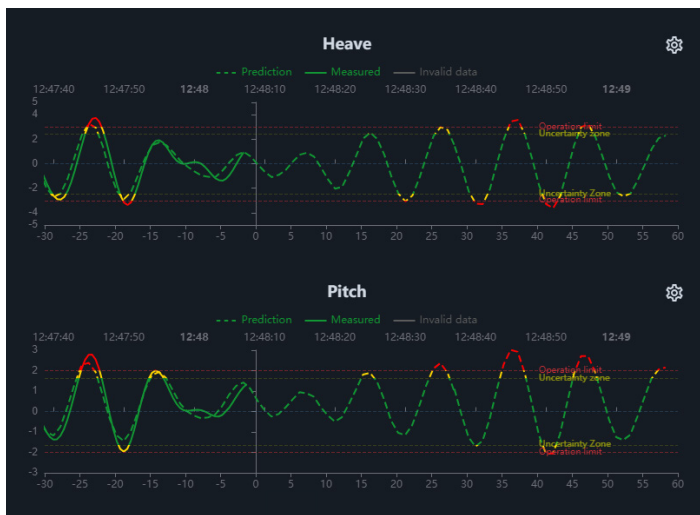
PredictifAI reduces the unknowns from measured statistical wave parameters and forecasts.

KEY FEATURES

- Real-time verified prediction accuracy
- Reliable in simple and complex sea states
- Add-on to WaveSystem
- Multi-source input
- No calibration needed
- No modeling needed
- No digital twin needed

ESSENTIAL FOR

- Anticipate waves and vessel motion that exceed operating limits ahead of time
- Better timing of operations (e.g. crane, heavy lift)
- Increased safety and operability (e.g. anchor-handling)
- Safe crew transfer for gangway operations (e.g. walk-to-work)
- Optimize instrument deployment (e.g. ROV)
- Assist in dynamic positioning (DP)



PredictifAI technology automatically adapts to varying sea and weather conditions to continuously provide optimal results.

Be prepared to handle waves and vessel motions exceeding operating limits - Avoid quick and uninformed decisions

PredictifAI provides deterministic prediction of ocean waves and vessel motion.

We apply the unique dual measurement concept in Miros WaveSystem to achieve the needed accuracy and reliability to be relevant for the safe conduct of critical operations.

Combining AI with X-band radar remote measurement of incoming waves and local alpha-factor approved downward wave measurements enables the WaveSystem to continuously monitor the accuracy of the prediction and achieve the highest prediction quality.

WHO CAN BENEFIT?

Vessel owners and operators in need of short-term highly accurate wave and motion prediction to safeguard their critical operations.

Optimize your operational efficiency in activities such as lifting operations, wind turbine installation, jacking operations, cable and pipelay campaigns, diving support operations, ROV launch and recovery, gangway transfers, and any other weather-critical operations where understanding wave and current-induced vessel movements is essential.

FUNCTIONAL REQUIREMENTS

- WaveSystem installed
 - Internet connection
 - For best performance, we recommend installing a dedicated X-Band navigation radar. Nevertheless, you may also use an existing X-Band radar.
- Kindly contact us for advice.

OPERATIONAL REQUIREMENTS

- $H_m0 \geq 2.0$ m
- $T_s \geq 6.5$ s
- Wind speed ≥ 3 m/s (6 kn)
- Vessel speed ≤ 2 m/s (4 kn)
- The wave radar must have a clear view of incoming waves.

Specifications are subject to change without prior notice.