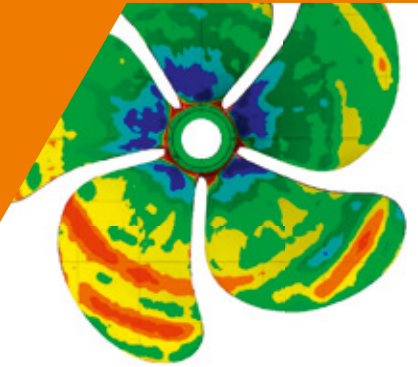


# Wärtsilä 3D Measurement and scanning services



Ship owners have a range of critical questions to consider when it comes to the condition of their assets: Is the equipment 100% reliable? Will it perform without risk of breakdown? Is the current solution still the most efficient design for current operations? Will new parts or complete systems fit in the intended void space, and will any modification be needed? Resolving issues like these requires the support of technical experts that not only understand your equipment, but your business as well. With Wärtsilä's 3D Measurement and scanning services, we can answer your questions and support you in making the best decisions to optimize your vessel's propulsion equipment.

## TAKE THE GUESSWORK OUT OF DECISION MAKING

Take advantage of our expertise and specialised knowledge as a major producer of equipment for the marine industry. Our 3D measurement and scanning services provide you with the best available technology for 3D measurements, scanning and engineered solutions with a short lead time – minimising any disruption to your operations.

Our 3D measurement and scanning services result in fast, accurate capture of your vessel's geometry and propulsion equipment geometry. Combined with our expert analysis, you get the information you need to make decisions on equipment health checks, design optimization, remanufacturing and upgrading of complex machinery like propellers, thrusters, engine rooms and vessel hulls.

## KEY BENEFITS

Wärtsilä 3D Measurement and scanning services can accurately diagnose any dimensional issues or 3D shape acquisition requirement you may have with your installation or equipment. In addition, we process and analyse the collected data and can also provide practical recommendations and new designs for your installation.

- Get the convenience of an all-in-one service – Wärtsilä handles the entire process from measurement to final recommendations
- Minimise vessel downtime with our cost- and time-efficient approach
- Get more comprehensive and precise measurements, ensuring all parts fit the first time
- Rely on solutions backed up by advanced techniques, including computational fluid dynamics (CFD) and finite element model (FEM) validation



## GET THINGS RIGHT THE FIRST TIME

We offer a full service approach – from measurement to final recommendations – using only the best available measurement and design tools handled by our qualified personnel. We not only inspect your equipment with accurate full-scale measurement data, but can also reverse engineer components for further engineering, or re-manufacture parts if needed. The end result is parts that install correctly the first time – and help you to meet the expected performance gains.

## A THREE-STEP PROCESS – MEASURE, ANALYSE AND REPORT

Our technical experts will perform on-site measurements with 3D laser or scanning technology. Scans are then visualised with 3D CAD models to improve the accuracy of our analysis and make the measurements easier to interpret. Depending on the level of agreed services, Wärtsilä will provide a report that contains:

- Measured results and findings
- Analysis
- Corrective proposals
- Recommendations
- Drawings
- Technical support

## SCOPE OF SUPPLY

Wärtsilä offers three levels of 3D measurement and scanning services depending on your needs.

<b>VALUE</b> <b>Maintenance support</b>  Basic measurements or scans, including a report with data about the checked equipment  <b>! You need to resolve a critical issue now</b>	<b>FEATURE</b> <b>Diagnostic services</b>  Analysis of findings, conclusions, and corrective proposals, along with generation of 3D models from scan data  <b>! You would like to outsource some parts of required service work</b>	<b>PREMIUM</b> <b>Engineered solutions</b>  Complete engineered solutions, repair proposals and/or new designs that include specifications and drawings  <b>! You want to focus on your core business</b>
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