

STEERPROP COMPLETES PROPULSION PACKAGE FOR NEW POLARSTERN ICEBREAKER WITH TUNNEL THRUSTERS ORDER

Finnish propulsion expert Steerprop has received a further thruster order from shipbuilder TKMS for the new German Research Vessel Polarstern. The addition of two Steerprop SP 40 TT ARC tunnel thrusters means that Steerprop will now provide the complete, fully-integrated propulsion thruster package for one of the world's most advanced research icebreakers.

The order builds on [Steerprop's earlier contract to deliver two Steerprop SP 160 Pull azimuth thrusters and hydrodynamic design of shaftline integration](#) for the new vessel. It means that the new Polarstern will be the first ever Polar Class (PC) 2 icebreaker project in which main propulsion, tunnel thrusters and hydrodynamic integration have been awarded to a single supplier.

A complete, integrated propulsion package

"Steerprop's integrated propulsion approach and their capability to meet stringent ice-class and noise specifications made them a natural fit for this project. We value the close cooperation and the technical competence they bring to this highly demanding vessel," says Yngvar Frodell, Polarstern Project Director, TKMS.

Polarstern is being built for the Alfred Wegener Institute, Helmholtz Center for Polar and Marine Research (AWI). The new order is a result of the strong working relationship developed between Steerprop, TKMS and AWI during discussions around design and delivery of the vessel's main propulsion units.

"The new Polarstern is a long-term investment in advancing polar science under the most challenging environmental conditions on Earth. Reliable, quiet and efficient propulsion is essential for our research missions, especially in sensitive polar ecosystems. Steerprop's solutions support our ability to operate safely and effectively in both Arctic and Antarctic waters," says Detlef Wilde, Polarstern Project Director at the Alfred Wegener Institute.

A key strategic milestone for Steerprop

The extended order reinforces Steerprop's strategy of playing a leading role in the development and construction of propulsion concepts for ice-going and special-purpose vessels, positioning the company at the forefront of technically demanding research-icebreaker projects.

"This project represents a defining moment for Steerprop," says Riku-Pekka Hägg, CEO of Steerprop. "Being the first company to be entrusted with the complete propulsion thruster package and hydrodynamic integration responsibility for a PC2 icebreaker demonstrates the value of delivering a unified, carefully engineered propulsion concept—and underscores the strength of our expertise in ice-class and research-vessel applications."

A vessel built for extreme polar research

Steerprop's gridless SP 40 TT ARC tunnel thrusters are specifically engineered for heavy ice operation engineered. They will work seamlessly with the main azimuthing units to meet the vessel's demanding operational requirements.

The ICES 209 acoustic requirements applicable for the vessel are among the strictest ever set for a polar research vessel, meaning that all potential sources of underwater radiated noise (URN) to be minimised. For thrusters, this is influenced by propeller design, but more significantly through optimizing tunnel design and ship structure together to eliminate propeller cavitation. Flexible mountings for the tunnel thrusters further reduce URN by preventing propeller vibrations from reverberating against the ship's hull.

The delivery also includes a full bridge propulsion control system and tunnel extensions, ensuring seamless integration with the vessel's hydrodynamic design. Deliveries are scheduled for 2027.

The new Polarstern is designed to operate self sufficiently during extensive scientific expeditions in some of the harshest environments on the planet, in both the High Arctic (including the North Pole) and Antarctica. It will be among the largest and most capable polar research icebreakers ever constructed, with a length of approximately 160 metres, a beam of 27 metres, a draught of nearly 11 metres and a gross tonnage of about 26,300 tons.



Caption 1: Polarstern, the new polar research icebreaker, will feature Steerprop's complete propulsion package, including main propulsion, tunnel thrusters and hydrodynamic integration.



Caption 2: Steerprop SP 40 TT tunnel thruster.

For more information, please contact:

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ABOUT STEERPROP OY

Steerprop is a leading designer and manufacturer of marine propulsion systems for the most demanding applications and toughest conditions.

Since our founding in Finland in 2000, we have delivered purpose-built units for hundreds of vessels, including every third icebreaker in operation around the world.

Our unrivaled arctic experience and fit-for-purpose solutions are a testament to our commitment to continuous development, steadfast dedication to meet our customers' needs and our unwavering resolve to perform.

www.steerprop.com

ABOUT TKMS

TKMS is one of the world's leading naval companies with over 9,100 employees at three shipyards in Kiel, Wismar and Itajaí (Brazil) with locations worldwide. The company is active as a systems supplier for submarines and naval surface vessels as well as for maritime electronics and security technologies. Around 3,300 people work at the Kiel site, making it the largest shipyard location in Germany. 185 years of history and the constant striving for improvement allow the company to set new standards time and time again.

TKMS offers its customers worldwide tailored solutions to meet the highly complex challenges of a changing world. The driving forces behind this innovative energy are the company's employees, who shape the future of TKMS with passion and commitment every day.

www.tkmsgroup.com

ABOUT AWI

The Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research (AWI) conducts research in the Arctic, Antarctic and oceans of the high and mid-latitudes. It coordinates polar research in Germany and provides major infrastructure to the international scientific community, such as the research icebreaker Polarstern and stations in the Arctic and Antarctica. The Alfred Wegener Institute is one of the 18 research centres of the Helmholtz Association, the largest scientific organisation in Germany.

www.awi.de/en/