



**ZF  
Retractable  
Azimuth  
Tunnel  
Thruster  
Technology  
For R/V  
Roger Revelle**

*Miramar, FL USA – The research vessel Roger Revelle is currently going through an extensive mid-life refit. One of the upgrades to the vessel is the installation of telescoping thruster technology from ZF Marine. The R/V Roger Revelle is a globally capable oceanographic research vessel, designed as a platform to support many different facets of ocean-based scientific research. The vessel is owned by the US Navy and operated by the Scripps Institute of Oceanography under a charter agreement with the Office of Naval Research. In the pursuit of its mission, the crew of the R/V Roger Revelle depends on world-class navigation and station-keeping systems on a daily basis. To meet this need the vessel was built with a powerful propulsion system designed to keep it in position anywhere around the globe, in varied weather and sea states.*

*Currently undergoing a major dry dock period as part of a mid-life upgrade, the vessel is receiving an 1100 horsepower ZF Marine ZF AT 5011 RT TT-FP L-Drive Retractable Thruster. The telescoping design allows it to extend downward from the hull, where it can operate as an azimuth thruster, rotating 360 degrees. When retracted, it operates as a standard tunnel thruster. The result is a multi-functional solution that provides traditional bow maneuvering in port while increasing station-keeping performance of the vessel when on station at sea. Operational control of the unit will be through ZF ThrusterCommand® electronic controls. ZF Marine will be supplying the same system for the sister-ship, R/V Atlantis, during that vessel's mid-life refit, scheduled to start in 2020.*

**Part of the family:** ZF Marine's retractable thruster family has eight different models with a performance range from 136 to 2680hp. The product line of commercial thrusters from ZF includes; Well Mounted, Contra Rotation, Deck and Stern Mounted azimuth thrusters, Fixed and Controllable Pitch Tunnel thrusters, as well as a line of Shallow Draft thrusters.

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