

# ML220

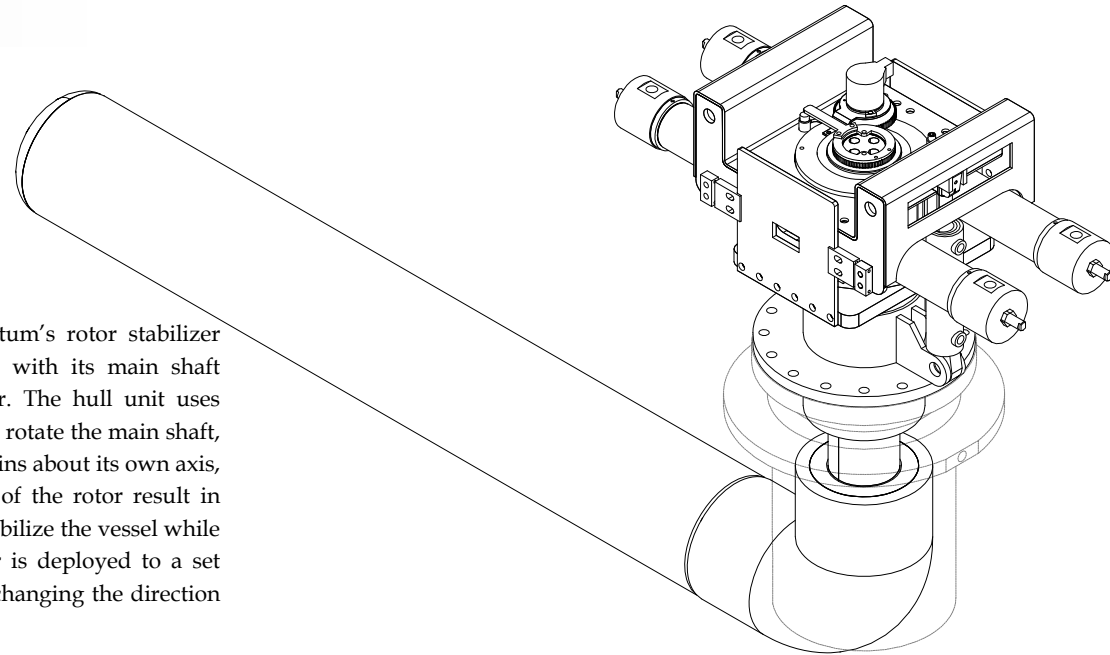
## ROTOR STABILIZER HULL UNIT

### DESCRIPTION:

A stabilizer hull unit is the energy transfer device in Quantum's rotor stabilizer systems. The hull unit is installed in the turn of the bilge with its main shaft penetrating through the vessel's hull to connect to the rotor. The hull unit uses custom made hydraulic cylinders joined to a rack and pinion to rotate the main shaft, which swings the rotor in a large arc. Additionally, the rotor spins about its own axis, via hydraulic motor. The combined swinging and spinning of the rotor result in hydrodynamic forces due to the Magnus Effect, and serve to stabilize the vessel while it is at Zero Speed™. During underway operations, the rotor is deployed to a set position, and the righting force direction is altered by simply changing the direction of rotor spin.

### FEATURES:

- **EXCELLENT LOW SPEED PERFORMANCE:** The ML220 exhibits excellent performance during low speed underway and Zero Speed™ operations, even more effective than comparably sized fin stabilizer solutions.
- **CONVENIENT STOWAGE:** The ML220 hull unit includes a pair of hydraulic cylinders dedicated to deploying and retracting the rotor, to stow it in a pocket beneath the vessel's hull when not in operation. Stowing the device while the system is not in use reduces appendage drag and minimizes the impact on the vessel's immersed dimensions.
- **SAFETY PRECAUTIONS:** The ML220 comes standard with seven sensors in order to monitor the rotor's position, angular velocity and rotation speed at all times.
- **LOAD HANDLING:** Five bearings on the main shaft are utilized to distribute the dynamic loads imposed on the hull unit.



<b>Typical Vessel Length*</b>	25-40m (80-130ft)
<b>Maximum Underway Operating Speed</b>	14 knots
<b>Rotor Length</b>	1500mm (59")
<b>Rotor Diameter</b>	217mm (8.5")
<b>Angular Travel (total mechanical)</b>	150°
<b>Length (inside vessel after installation)**</b>	920mm (36")
<b>Width**</b>	450mm (18")
<b>Height (overall)**</b>	1110mm (44")
<b>Height (inside vessel, retracted)**</b>	890mm (35")

*\*Provided for reference only. Consult a Quantum representative for system sizing.*

*\*\* Dimensions are of the equipment, and do not include service allowances.*

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*Equipment is covered by Quantum's 1 year comprehensive warranty.  
Service and technical support are available worldwide.*

