

# BR270

## BOW ROTOR STEERING HULL UNIT

### DESCRIPTION:

A rotor steering hull unit is the energy transfer device in Quantum’s rotor tracking systems. The hull unit is installed in the bottom of the vessel’s bow with its main shaft penetrating through the hull to connect to the rotor. It uses a hydraulic cylinder to swing the rotor out of a stowage pocket into water flowing around the hull. Once deployed the rotor spins about its own axis, via hydraulic motor. The rotor’s spinning coupled with water flow around the hull results in hydrodynamic forces due to the Magnus Effect, and serve to steer the vessel while it is underway. The BR270 is a rugged machine utilizing a unique concept that is capable of significantly steering vessels during both underway and maneuvering operations.

### FEATURES:

- **SIMPLE INSTALLATION:** The hull unit is delivered partially assembled for easy installation into the vessel’s structure, via the supplied welding bushing.
- **PRECISE FITS:** The BR270 hull unit stores into an enclosed pocket to remove it from water flow around the hull, reducing the drag of the rotor while not in use.
- **SAFETY PRECAUTIONS:** The BR270 is built with sensors and control systems which swing the rotor safely into its stowage pocket if struck by a large object, avoiding excessive damage to the unit or hull.
- **LOAD HANDLING:** Four bearings on the main shaft and rotor shaft are utilized to distribute the dynamic loads imposed on the hull unit.
- **MINIMAL MAINTENANCE:** The hull unit is simple to maintain during normal operation, with stainless steel components used as much as possible to minimize corrosion. Easily accessible grease nipples are built-in with internal porting to facilitate regular greasing of the bearings. The unit is designed for replacement of o-rings, seals, and bearings during vessel haul-outs every other year.

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



<b>Rotor Length</b>	1100mm (43")
<b>Rotor Diameter</b>	280mm (11")
<b>Angular Travel (total mechanical)</b>	90°
<b>Length (overall, includes pocket)**</b>	1900mm (74")
<b>Width (overall, includes pocket)**</b>	1210mm (48")
<b>Height (overall, retracted)**</b>	640mm (25")
<b>Height (overall, deployed)**</b>	1825mm (72")

*\*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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INNOVATION

