

# HU2500R

## Stabilizer Hull Unit

### DESCRIPTION

A stabilizer hull unit is the energy transfer device in Quantum’s fin 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 stabilizer fin. It uses hydraulic cylinders to rotate the main shaft, which deflects the fin to reduce roll.

The QC2500R, rack and pinion (noted by the “R”) is a rugged machine capable of significantly reducing vessel roll, both underway and at Zero Speed™. The shift from cylinder-tiller actuation to rack-and-pinion actuation dramatically extends maintenance intervals and raises performance through greater fin travel and efficient force transfer through the entire range.

The QC2500R can be made available with built-in porting and electronics to allow this unit to be used with Quantum’s extendable (XT™) fin system to optimize performance at any speed.

### FEATURES

**SIMPLE INSTALLATION:** The hull unit is delivered fully assembled for easy installation into the vessel’s structure, bolting on to the supplied welding bushing.

**PRECISE FITS AND CLEARANCES:** The main shaft features a tapered cut for a powerful stabilizer fin connection utilizing hydraulic cone expansion for a press fit. A spline connection fits a pinion gear with two racks using four single-acting hydraulic cylinders. The precise fit results in a smooth transfer of energy from the hydraulic cylinders to the stabilizer fin.

**SAFETY PRECAUTIONS:** A hydraulic locking pin maintains the center position with a manual backup for maintenance operations. A stand-alone hand pump can be connected to the servo manifold to actuate the hydraulic locking pin as well.

**LOAD HANDLING:** Two tapered roller bearings and one straight roller bearing bear the brunt of the load transfer from the fin to the vessel while the precision cut pinion gear and racks maintain a steady force on the fin.

**MINIMAL MAINTENANCE:** The hull unit is simple to maintain with stainless steel components to minimize corrosion. Easily accessible grease nipples are built-in with internal porting for greasing the bearings. The unit is designed for replacement of o-rings, seals, and bearings during vessel haul-outs every 15,000 hours

Typical Vessel Length (for a pair)*	60m - 120m (200ft - 400ft)
Typical Fin Size Range**	6.5m <sup>2</sup> - 8.0m <sup>2</sup> (70.0 - 86.1ft <sup>2</sup> )
Typical XT™ Fin Size Range**	6.5m <sup>2</sup> - 11.7m <sup>2</sup> (70.0 - 125.9ft <sup>2</sup> )
Hull Unit Height (Overall)***	2132mm (83.9")
Dimensions (L x W x H) (inside vessel after installation)***	1962mm x 1189mm x 813mm (77.2" x 46.8" x 32.0")
Hull Unit Weight***	2489kg (5487lbs)

*\* Provided for reference only. Consult a Quantum representative for system sizing.  
 \*\* Size may be limited for higher speed vessels; see a Quantum representative for more information.  
 \*\*\*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*