

Seatrax Electro-Hydraulic Cranes

Prime Mover Packages

The Seatrax Electro-Hydraulic Prime Mover Packages are equipped with high pressure, **variable displacement hydraulic systems**. The standard **electric motor** sizes are single or dual 250 HP, 300 HP and 400 HP. Seatrax cranes with **electro-hydraulic prime movers** are operating in a wide variety of offshore environments including the North Sea, Gulf of Mexico, South America, Southeast Asia and Nova Scotia.



Dedicated **hydraulic pumps** are used for the **primary crane functions**. The **hydraulic pumps** are driven via a **quad-pump drive**, which is coupled to the **electric motor** by a **flexible coupling**.

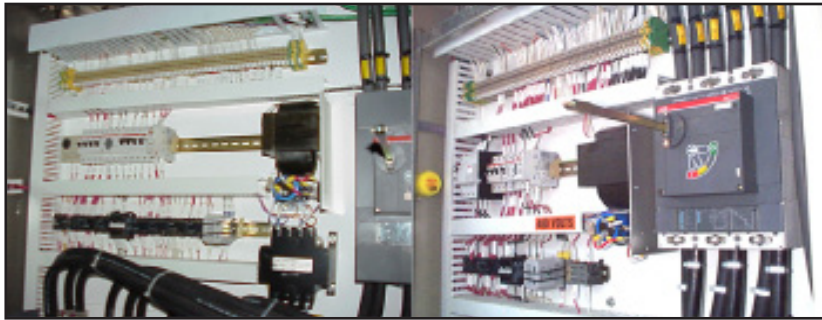


Electric motors are available for 60 Hz or 50 Hz applications. An **auxiliary electric motor** powers the fan for the **hydraulic heat exchanger**.



Motor starter and **controls** are contained in fiberglass or 316 stainless steel enclosures. The motor starter is a soft start type to reduce inrush current.

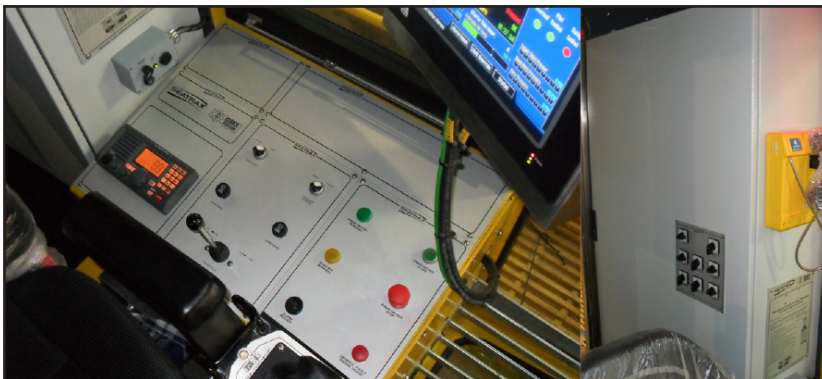




Wiring is permanently tagged and color coded for ready identification.



The **collector ring assembly** is located at the top of the **kingpost/gantry**. To the left is a **collector ring** for Zone 2.

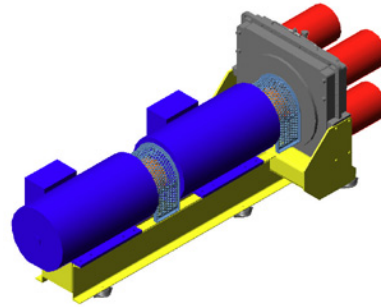


Electro-hydraulic crane standard cab control panel and electrical enclosures.

Dual Electric Prime Mover

This system consists of two 250, 300 or 400 horsepower electric motors coupled in tandem to the hydraulic pump drive. In this configuration, the electric motors are capable of delivering up to 800 horsepower to the cranes pump drive provided each motor is supplied with 480 VAC power supply. This dual motor concept has several advantages over the use of a single 800 horsepower motor.

- Reduced inrush current
- Reduced breaker sizes
- Reduced cable sizes
- Reduced slip ring size
- Reduced soft starter size
- Reduced motor control cabinet size
- Motors more readily available



Start-Up Procedure

The single shaft motor (Motor A) is wired to the soft starter, which when given the signal to start, performs a reduced voltage startup of Motor A. Since the motors are coupled, they simultaneously reach 1800 RPM prior to the point at which the soft starter pulls in the internal bypass contactor. Once the soft starter is in bypass mode, a signal is sent to the D.O.L. starter coil of the dual shaft motor (Motor B) causing power to be applied to Motor B without any inrush current since Motor A is already running at 1800 RPM.



Diesel vs. Electric Prime Mover

	Electric Prime Mover	Diesel Prime Mover
Lowest maintenance costs	✓	
Highest Reliability	✓	
No fuel required	✓	
Exempt from fluctuating emissions regulations	✓	
Lowest noise levels	✓	
Simplest driveline	✓	
Does not require outside power source		✓