

Ship-to-Ship active heave- compensation/ auto-tensioning (AHC/AT)

winch compensation system



At your service



MACGREGOR

Designed to perform with the sea

Precise position control for ship-to-ship load transfers

MacGregor has developed a ship-to-ship active heave-compensation/auto-tensioning system (STS AHC/AT), which extends a crane's existing AHC/AT functions. It features precise, auto-tensioning and position control for accurate load hook-on, pick-up landing and hook-off operations during ship-to-ship load handling.

When transferring loads between two vessels, waves cause the vessels to move independently. These unpredictable motions make ship-to-ship load transfers extremely challenging and hazardous. As a result, they are mainly performed by highly skilled crane operators. However, risks to crew safety and damage to loads, equipment and vessels is high, especially in rough weather.

The crane's capacity is also effectively de-rated because of the conservative approach required to minimise risks associated with the relative movements of the vessels.

MacGregor understands the complexity of these operations and the limitations imposed by unpredictable,

non-synchronised movements in a seaway. Its innovative ship-to-ship system compensates for the relative movement between two floating vessels; keeping the distance between the hook and the second vessel constant.

A high degree of accuracy is achieved using two motion reference units (MRU). One MRU is located inside the crane pedestal and the other is located in a protective box on the secondary vessel with a redundant wireless radio-transmitter. Once the second MRU box is in place and switched on, it is linked to the crane control system and operations can begin.

Safety is much improved for the deck crew working in the load-handling zone. Load pick-up and landing is precise, fast and smooth and a substantial increase in weather windows for ship-to-ship operations is achieved.

The system can be cost-effectively retrofitted to existing MacGregor offshore cranes and can be used with other MacGregor crane advances.

Included in delivery

- Plug-and-play box with MRU, radio-links, UPS and battery charger
- Updated HMI application software
- Updated PLC application software
- Updated user manual

Advantages

- Safe landing and pick-up of loads between vessels
- Widened operational envelope
- Faster completion of lifting operations
- High-degree of compensation accuracy
- Maximum utilisation of the crane's capacity, independent of predicted significant wave height

MacGregor shapes the offshore and marine industries by offering world-leading engineering solutions and services with a strong portfolio of MacGregor, Hatlapa, Porsgrunn, Pusnes and Triplex brands.

MacGregor is part of Cargotec (Nasdaq Helsinki: CGCBV)

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