



DYNAMIC POSITIONING:

KEEP POSITION



Manufacturer of TYPE APPROVED PRODUCTS:
- STEERING GEARS
- ANCHOR WINCHES

PETTER'S MARINE HYDRAULICS has since 1967 manufactured and delivered equipment to the off-shore, fishing, shipping and aquaculture industries, and has in the latest years focused on technologies for advanced control systems for vessel control and maneuvering. Our DP-0 systems known as **KP (KEEP POSITION)** are easy to integrate in the popular maneuvering systems such as PMHs **MPTC (MOTOR, PITCH AND THRUSTER CONTROL)** and **EPC (ENGINE AND PITCH CONTROL)**. The system can also be integrated to other control systems. With **PETTER'S MARINE HYDRAULICS'** vessel control systems a vessel will be able to operate in more demanding environments and tougher conditions, providing **EXCELLENT** performance and high **RELIABILITY** in a **COST EFFICIENT** way.

KP-100



KP Control Panel - Model 2016

KEEP POSITION

The "KEEP POSITION" (KP) dynamic positioning system is one of **PETTER'S MARINE HYDRAULICS'** newest technologies in positioning and maneuvering. The KEEP POSITION system is specified and designed around the requirements presented by the aquaculture industries, which daily are involved in many different types of operations. One of the many advantages with this system is its flexibility, where **PETTER'S MARINE HYDRAULICS** present three different options with a variety of functionality, at the most competitive price in the market.

KP and Joystick-mode

The KP-100 system is a dynamic positioning system with the most basic functions, for vessels without special requirements for extra features. KP-mode keeps your vessel in a desired position and heading, where the joystick lets you step your position in prefixed steps. Using Joystick-mode makes docking and maneuvering both quick and easy, as the KP system directs all propulsion and maneuvering equipment to move the vessel in the desired direction.

The KP system is now available with its brand new panel with an improved and more userfriendly graphical user interface (GUI). The GUI only displays data necessary to the operator for the given operation, reducing the risk for information overload and contributes to a better working environment for the users.



Operator display for KP-200 and KP-300

For each and every KP-vessel, and before the system is commissioned, **PETTER'S MARINE HYDRAULICS** simulates and analyzes the vessel according to environmental requirements and available maneuvering power. Based on these results, the tuning of the vessel becomes easier and quicker, and if necessary; recommendations can be made at an early stage and actions taken to increase maneuverability. The KP system is tailor-made to each individual vessel, and optimized with respect to the vessel's area of operation. This reduces the wear of the vessels propulsion equipment and lower the fuel costs.

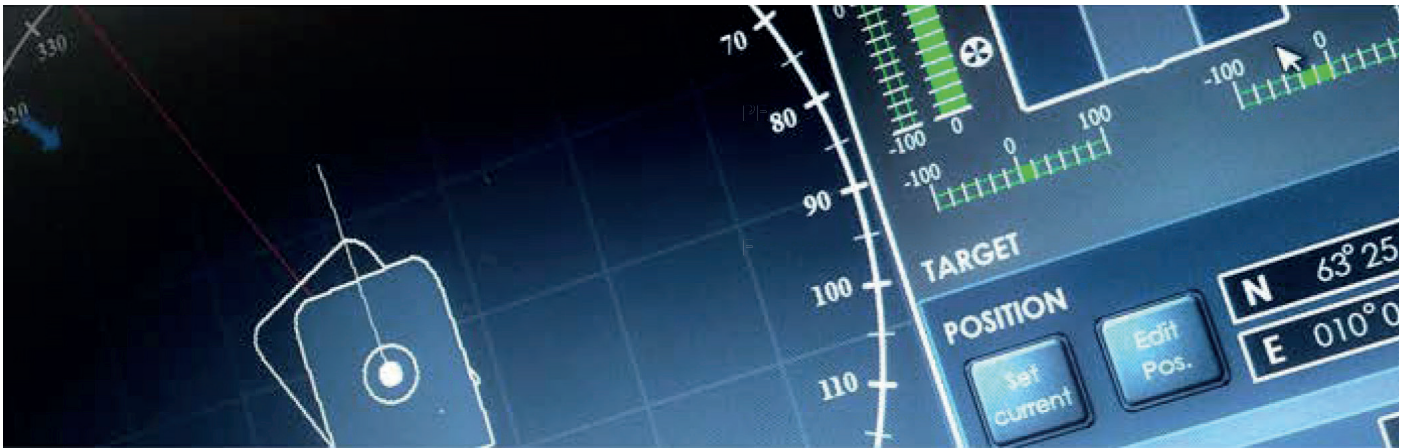
KP-200

KP, Joystick, Auto Heading and Auto Speed-mode

The KP-200 adds the Auto Heading and Auto Speed-mode to the system, together with a Graphic User Interface (GUI) that displays a variety of data from weather sensors, positioning systems, feedback from propulsion equipment etc. The GUI also lets you configure a variety of parameters to prepare the vessel for a specific operation, with respect to weather, position accuracy and safety. The Auto Heading/Auto Speed-mode lets you direct the vessel in a desired heading and speed, compensated for drift due to wind and current.

When the weather forces manual operations due to increased risk, **PETTER'S MARINE HYDRAULICS'** KP system will expand the window of operation, making the operation both safe and reliable. Being able to perform an operation in difficult conditions reduces non-operational working hours, ensures cost efficiency and keeps the project or delivery on schedule.

PETTER'S MARINE HYDRAULICS has developed a new **KP** panel, that has a touch screen integrated on the panel. The panel is compact, easy to install and is user friendly.



KP-300

KP. Joystick. Auto Heading. Auto Speed. Go-To-Target. Follow Route. Follow ROV and ECO-mode. In addition to all functions included in the KP-100 and KP-200, the KP-300 adds Go-To-Target. Follow Route. Follow ROV and ECO-mode, together with an extended GUI. Go-to-Target and Follow Route-mode let the vessel go to a defined position or follow a given route. If the operation calls for a fixed heading whilst moving, this can be forced with a simple push of a button. Once the vessel has reached its target position, a notification is given and KP-mode is enabled. Follow ROV-mode enables the vessel to follow in the tracks of a ROV/target engaged in an operation, at a fixed distance, heading and bearing. While in Follow ROV-mode, the vessel's altitude can be changed by the joystick and optimized relative to the ROV's position to stay clear of the umbilical or obstacles. ECO-mode presents slacken requirements in regard to position accuracy and drift compensating response, allowing for slower ramp rates and lower RPMs. This eases stress on the machinery, gives less wear and tear and contributes to reduced fuel costs.

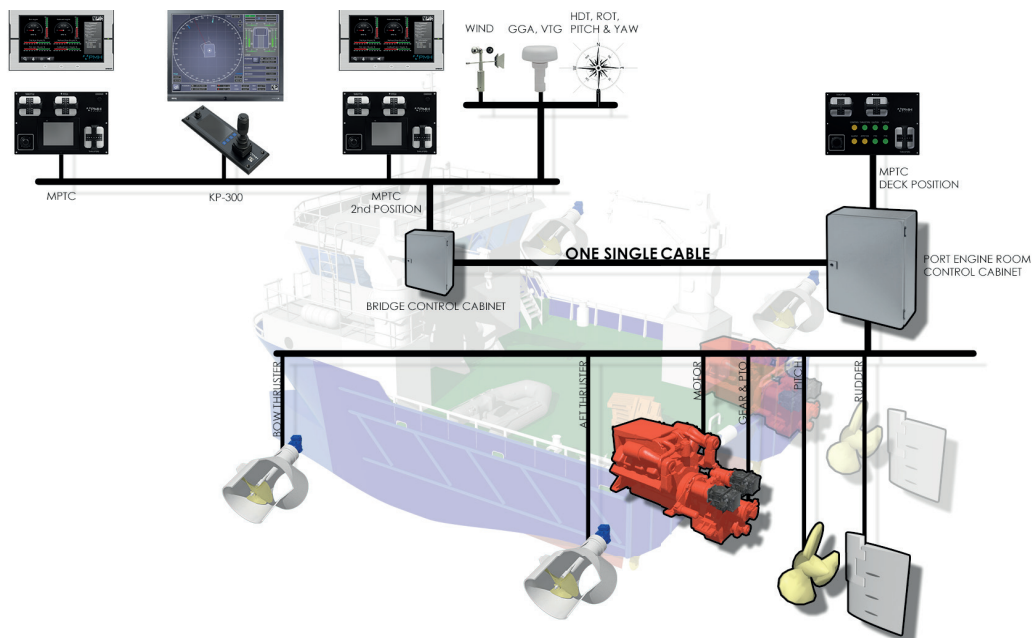
PETTER'S MARINE HYDRAULICS does also deliver other the (EPC) ENGINE AND PITCH CONTROL system and MPTC (MOTOR, PITCH AND THRUSTER CONTROL) system, which are highly advanced systems for ship maneuvering and can easily installed together with the KP.

MPTC

The MPTC (MOTOR, PITCH AND THRUSTER CONTROL) system is a vessel control system that allows for both total and individual control of bow and a thrusters, rudders, pods, propellers pitch, PTOs, gears, clutches and engines frequency converters. This system also monitors oil and fuel tanks, tank levels, oil temperature and so on. For hydraulic systems, the MPTC system acts as an insurance against mechanical breakdown and wrong use of your hydraulic equipment, where the system never allows you to overload you PTOs. All system configuration options and monitored parameters are displayed on operator stations, where the operator gets a complete overview of all commands given, amount of thrust both applied and available, together with other desired information which is critical to the current operation. The MPTC system supports multiple operator stations. Every installation is tailored to the individual vessel, ensuring full maneuvering capability and control over the vessel's propulsion and hydraulic equipment.

EPC

The EPC system is a simple motor and pitch vessel control system. A flexible and user-friendly system. It gives the user total control of engines and propeller-pitch. Can easily be installed on old and new boats. Is suitable for single and twin engine motors. It's also one of the cheapest control systems in the marked.



PMH has produced and supplied robust, high quality solutions for maritime vessels for over 50 years.

Our customers know PMH products as stable and robust. Our employees are rich in know-how, solution-oriented, receptive and have a wide range of mechanical and technical skills. Equipment from PMH is supplied to customers within the offshore, personnel transportation, fishing, freight and aquaculture industries.

Our products include maneuvering systems, hydraulics, total concepts, thrusters, capstans, winches and safety equipment.



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