

Propulsion Control Systems



The Wärtsilä PCS (Propulsion Control System) is a comprehensive system of levers, touch-screen interfaces, displays, indicators and modules designed to suit all the possible propulsion configurations of a modern ship.

Wärtsilä ProTouch is the human interface of the Wärtsilä PCS. It represents a state-of-the-art response to market demands for control devices that are modern and compact. With its safe and intuitive arrangement it gives the power to the user.



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The solid ergonomics of the Wärtsilä ProTouch enables flexible bridge arrangements that can be optimized to suit the operator's position.

ProTouch gives power to

Main display
with bracket



Compact design

The components to be installed at the operator stations of the bridge and engine control room are interconnected by field bus technology (CAN OPEN) and thus require a minimum of cables.

The entire system's footprint is reduced significantly, thereby allowing the designers more flexibility to place the propulsion components according to the operators' ergonomic needs and for meeting the functional requirements of the complete operator station.

Modularity/Flexibility

The extended modularity of hardware and graphic user interfaces offers a flexible solution for any vessel layout. The system fits all propulsion

products and, as a result, all types of vessels.

The components of the system can be combined into configurations suitable for a wide range of applications to meet the requirements of redundancy and independency needed for merchant shipping, as well as more complex offshore applications.

Safety

By removing the visual challenge of finding critical information in large panels of buttons and gauges, and by giving the user relevant information as and when needed, the system improves safety, both at sea and in port.

In case of a control transfer, the levers are automatically lined-

up enabling operators to remain focused on their navigational tasks. The main propulsion levers are provided with back-up facilities integrated in the same lever allowing the operator to respond adequately and control smoothly in case the back-up system needs to be activated.

User friendly, intuitive operations

The modern displays feature touch-screen technology, thus allowing the operator simple access to all functions and information, and providing full and easy control.

The system will guide the user when a more complex sequence or action is required.

the user

Steerable Thruster lever & side display – Night mode



Captain's view – Night mode



Immediate feedback is given also by the led colour on the lever, showing the current status of the selected propulsor.

Simpler installation and maintenance

The PCS is fully pre-configurable, thereby minimizing installation time and costs, simplifying commissioning, and reducing maintenance needs.

Integration with other systems: The system enables easy integration via serial interfaces with other systems at bridge level. Protocols like MODBUS RTU RS485 and NMEA 0183 are supported for VDR, IAMCS and centralized dimming.

The system is suitable for being adapted to control competitor (OEM) propulsors.

Main display – Day mode



Side display – Day mode



Side display – Night mode



RGB status LED – colour range

The RGB LED supports operators and pilots by giving instant visual information regarding the selected mode and status.



Configurations and options

Wärtsilä PCS configurations:

- Up to 8 propulsion units (all types of propulsors)
- Up to 5 stations

Wärtsilä ProTouch options:

- 2 display sizes 4.3" and 10", day/night mode, portrait or landscape position
- 6 types of levers (TT, CPP, ST, WJ). Six different levers have been developed using a modular approach:
 - Single and double levers for fixed pitch / controllable pitch (FPP/ CPP) main propellers
 - Single and double levers for Tunnel thrusters (TT)
 - Steerable thrusters (ST) and waterjets (WJ).



Statement by the Design Award jury

“The design of this propulsion control system achieves the reduction of complexity in an impressive manner. Levers and touch-screen interfaces are ergonomically well thought out and all information is clearly arranged. The clear design vocabulary as well as the quality of the user interfaces of this propulsion control system create a comfortable environment.”

