

# Wärtsilä Wichmatic and Wichtronic propulsion controls upgrade kit



Over time, control-system elements deteriorate and spare parts become obsolete and difficult to source. This can lead to unplanned downtime for maintenance and repair, increasing operational costs and off-hire. At Wärtsilä we are committed to supporting our customers throughout the entire lifecycle of the supplied equipment, so we have developed a upgrade kit for Wärtsilä Wichmatic and Wichtronic propulsion systems that is not only quick and easy to install, but also offers the potential for considerable savings.

## TECHNICAL CONCEPT

The upgrade kit optimises the entire propulsion control installation. It includes upgrading the old system cards with a modern digital system, with no need to replace control panels or external cabling. The result is improved accuracy and a modern system controller.

The custom upgrade solution is based on standardised components. It can be configured to provide the same functionality as the old propulsion control system and to add new functionality. The solution uses modern hardware and software components that are employed in a wide range of installations, ensuring excellent long-term support for spare parts and technical enquiries.

## KEY BENEFITS

- Cut fuel consumption by optimising combinator curves
- Lower maintenance costs by avoiding too quick loading and unloading of machinery for running-up and down
- Reduce engine and propulsor wear with more effective load control
- Minimise downtime and costs with a standardised upgrade kit backed by excellent spares availability and first-class technical support



## AVAILABLE FUNCTIONS INCLUDE:

- Cruise control
- Pitch fine-tuning
- Load acceptance
- Combinator
- Load limit (constant load mode)
- Frequency variation (50–60 Hz floating frequency)
- Flow meter (measured consumption)
- Estimated flow (calculated consumption)
- Windmilling protection
- Other area-specific demands, such as St. Lawrence regulation alarms
- Communication to other devices via industrial protocols
- Other tailor-made functionality

## DELIVERY AND INSTALLATION

The hardware components are normally available from our stock, so the delivery time will depend on the time required for class approval, engineering and testing, taking into account the complexity and functionality of the existing system.

The upgrade kit is both quick and safe to install, keeping vessel downtime to a minimum. It is delivered as a single unit to be installed in the existing control system cabinet. While some changes to internal connections are required, all of the existing cabinet cabling can be re-used. Docking is not required for this upgrade.

## SCOPE OF SUPPLY

The standard scope of supply covers all obsolete parts for the existing Wärtsilä Wichmatic or Wichtronic main controller cards on board the vessel. Other important obsolete components, such as the PLC system for clutch and engine start/stop and the propeller RPM indication system, can also be included in the scope of the upgrade kit.

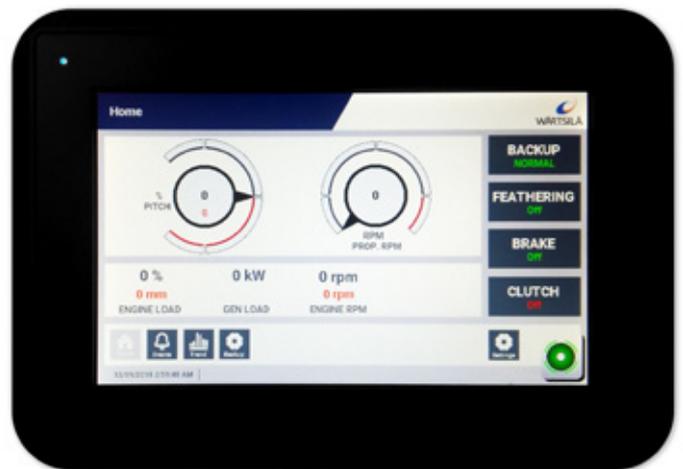
Wärtsilä can provide a screening report detailing parts availability and advice on possible upgrades to ensure continued operational reliability. Our experts can also evaluate the future needs of the control system to identify where further changes may be required in order to ensure the vessel can continue to meet charter requirements.

## A CLEAR OVERVIEW OF SYSTEM STATUS WITH WÄRTSILÄ HMI SOLUTIONS

Our range of HMI solutions uses the latest technology and provides you with a clear overview of propulsion system status as well as the possibility to monitor system parameter trends, both during operation and when performing maintenance work.

The scope of delivery can include:

- Overview of all essential parameters
- Overview of the entire pitch and load control loop for fast and easy monitoring and troubleshooting
- System parameter trend views
- System parameter logging with the possibility to export data for remote analysis
- Fuel-consumption overview, either by calculating it from the existing flow meters, or based on our estimated fuel calculation system that calculates consumption based on the engine parameters



## WHY CHOOSE WÄRTSILÄ?

Original Wärtsilä replacement parts comply with the latest specifications and prolong the lifecycle of your installation. Continuous research and development, as well as professional support from Wärtsilä's global network, ensure that you always get the latest applicable parts and ensured reliability.