

JET CONTROL SYSTEM - EXTENDED



KONGSBERG



CONTROL SYSTEM FOR KONGSBERG WATERJETS

Jet Control System - Extended

Advanced control system for waterjet propulsion systems

Jet Control System – Extended (JCS Extended) is an advanced and compact control system for operating waterjets steering, reversing bucket and optional interceptor movement. One to three control stations and including up to four waterjet propulsion units, Port and Starboard sides redundant, synchronized and safely.

The Extended control system provides accurate and reliable operation of the waterjet hydraulic valves using integrated feedback signals and optional GNSS antenna. The system together with waterjet propulsion and engine interface, provides accurate operation combined with integrated advanced support and maneuvering functions.

The JCS Extended is easy to install due to the size of components, standardized plug-in assembly and designed, requiring only short time for commissioning and startup.

Operation made easy

Jet Control System – Extended has been designed for operators with special focus on craft operability and advanced operating functions. The built-in optional functions, such as Auto positioning, Anchor point, Auto heading, Interceptor steering, Trim assist and Park mode, provide easy and reliable operation.

When maintaining position, the control system provides accurate **Auto positioning** with **Auto heading**, or an imaginary **Anchor point** can be activated whereas the craft falls in with the direction of the wind while keeping the desired distance to the position.

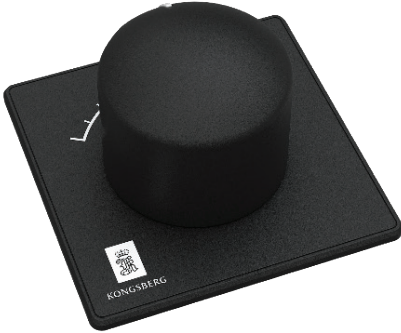
During high speed commuting, the **Auto heading** function can be activated for keeping the desired course and together with activating **Interceptor steering** and **Trim assist** completes in a smooth and stable ride. Interceptor steering control and trim assisting functions provides additional benefits for fuel saving. Auto heading integrates with an override function when manually operating the steering device, the auto heading function can

KEY PRODUCT BENEFITS

- Auto positioning
- Auto heading
- Anchor point
- Trim Assist
- Interceptor steering
- Park mode
- Remote service access readiness
- Up to three control stations
- Up to four waterjets
- Integrated joystick
- High contrast display with keypad and touch
- Compact design
- Plug-in assembly



Auto positioning view



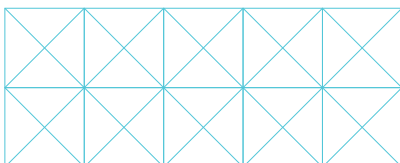
Steering knob



Twin lever



3-axis Joystick



thus automatically fall back into operation within seconds after a stable course has been locked.

When docked in marine areas with risk of sea-growth, the **Park mode** can be activated to automatically withdrawing cylinders, in order to lower risk of contamination on hydraulic cylinder rods.

The bridge devices have been updated with respect of armrest integration and ergonomy. Functional keypads provide clear selection and system indications for each propulsion line and for joystick. The waterjet indications, alarms and settings are visualized in the high contrast 7" display, one display per control station. Synchronized dimming covering display, panels and keypads is made possible to provide clear visibility in bright sun light as well as night operations.

The optional built in secure remote access solution offers KONGSBERG remote access services for maintenance and updates.

System delivery

The JCS Extended control system is factory tested and pre-calibrated including the waterjet unit and hydraulic components, before delivery.

The main electrical components, located close to the waterjet and at the bridge, are installed using tailored cable harness and interacts over included communication lines.

System power supply is required at the waterjet unit and at the bridge. In multi waterjet applications the system is thoroughly planned to have Port and Starboard sides redundant in power supply and maneuvering of each waterjet propulsion line in case of any unexpected issue on one propulsion line.

PRODUCT DATA

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| Waterjet systems | For Single, Twin, Twin with Booster or Quad waterjet installations. (Kamewa Aluminum and Steel series, mid to large sizes). |
| Bridge devices | Steering wheel, steering knob or steering tiller. Single-, twin- or twin- with booster- levers. One 7" display with pushbuttons for visual indication of waterjets actual behavior and alarms. Rocker switch for optional interceptor operation. Keypads for engines clutch, idle, dimming. |
| Optional functions | Joystick, Auto positioning*, Anchor point*, Auto heading*, Trim assist*, Interceptor steering, Remote access readiness. DP- interface or External control- interface. *requiring optional GNSS antenna. |
| Typical applications | Work boats, rescue boats, patrol boats, crew transfer vessels, leisure boats. |