Valve Remote Control System
Valve Remote Control System

**System Overview**

The system is designed for remote control of pneumatic, hydraulic, electro-hydraulic, or electrically operated valves as well as pumps used in ballast, bilge, fuel oil, and liquid cargo systems.

The state of the art PLC unit HOMIP provides the signal hub between all process components and control workstations or other centralized ship management systems with serial Ethernet or RS 485 interfaces. The integrated 6” touch screen display offers a clearly structured and simple interface for system configuration, parameter settings, and full back-up operation. The system setup is especially designed for decentralized installations.

Widescreen work stations are available for various operation locations and provide clear and structured visualisation of the numerous fluid systems including piping, valves, pumps, switches, treatment units, as well as tank contents.

Components are engineered and produced completely in-house. This allows on-going research and development activities for product improvements and system optimization, the fundamental base for our reliable, flexible, and tailor-made products. Hoppe systems are perfectly suited to all kinds of marine applications.

**Key Features**

- Modern hardware and software for flexible control
- In-house design & engineering of all major components
- Reliable valve & actuator units for easy operation
- Source/Target fluid control
- Optimization of ballast pump operation
- Saves installation costs by using intelligent decentralized design and Bus-type actuators
- Type approved control and measuring system

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![System Diagram](https://www.hoppe-marine.com/)

**Ship Management Systems**

- Ethernet/RS485 System Bus

**Hoppe Workstations**

- Control Unit HOMIP

**Substations**

- Substation 1 with I/O-Modules
- Substation N with I/O-Modules

**Pumps**

- Pneumatic
- Hydraulic
- Electro-hydraulic

**Bus-type Actuators**

- HOBUS-V

**Pneumatic, Hydraulic, Electro-hydraulic, Pump**

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Components

• Workstations with system visualisation on widescreen monitors
• Control cabinets including I/O and PLC units with serial connection
• Valve & Actuator units for various power drives
• Pressure sensors, level switches, emergency operation tools
• HOCAB hybrid cable for state-of-the-art connection of pneumatic actuators

Pneumatic Actuators – HOPAC
Hoppe's pneumatic actuators (HOPAC) operate with a clean working air supply and are available with quarter-turn and linear function for remote operation of all kinds of butterfly, ball, and globe valves. These actuators are especially designed for marine use with high-quality seawater resistant materials. Solid bronze executions are available for submerged installation.

The type approved hybrid cable (HOCAB), invented by Hoppe, contains flexible tubes for air supply, as well as cable for direct feedback indication of actuator position. It ensures by far the most reliable, cost-efficient, and maintenance friendly installation of pneumatic systems.

Electro-Hydraulic Actuators – HOHEA
The electro-hydraulic concept is based on individual electric power packs fixed to hydraulic actuators with cable connection only. Alternatively, HOHEA actuators can be used for standard cable connection or serial bus application, allowing for cost saving cable loop installations. The system's compact component design and high-quality parts ensure a long-lasting lifetime and enable easy and cost efficient maintenance.

Hydraulic Actuators – HOHAC
Hoppe's pure hydraulic actuators (HOHAC) are also available for all kinds of remote valve operation. The compact and intelligent design includes all hydraulic functions necessary for safe operation and easy installation without the need for additional exterior parts. A magnetic limit switch design and high-quality materials ensure reliable installations even under rough environmental conditions.
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**Upgrade Options**

**Ballast Water Management System**

The Ballast Water Management System considers the vessel’s loading, stability, hull stress, and floating criteria, and offers optimized solutions for ballast water transfer and tank distribution. This results in reduced treatment plant operation times and gives additionally benefits of fuel savings by draught reductions. The system is completed by sophisticated simulation routines and is producing a ballast operation report that is in conformance with IMO requirements.

**Floating Dock Control System**

By combining the Tank Content and Draught Measuring Systems, Hoppe provides intelligent and highly sophisticated dock or vessel floating monitoring and control. The system can be used in port or under offshore conditions and includes Hoppe’s inertial measuring system (HOSIM) for precise monitoring of the vessel’s dynamic floating conditions. It provides professional support with widescreen visualisation for safer operation and can be individually designed for all types of special vessels, such as semi-submersibles, crane ships for heavy loads, or floating docks.

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**Fluid Management**
- Valve Remote Control
- Tank Content Measuring
- Bunker Management
- Ballast Management
- Water Ingress Detection

**Motion Control**
- Anti-Heeling
- Blower Anti-Heeling
- Flume Stabilization
- U-Tank Stabilization
- Dynamic Floating Monitoring
- Dynamic Trim and Conning Measuring
- Draught Measuring
- Stability Test

**Ship Performance**
- Maihak Shaft Power Meter
- Torque Power Meter
- Maihak Performance Meter
- Maihak Performance Monitoring
- Maihak Performance Optimization

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