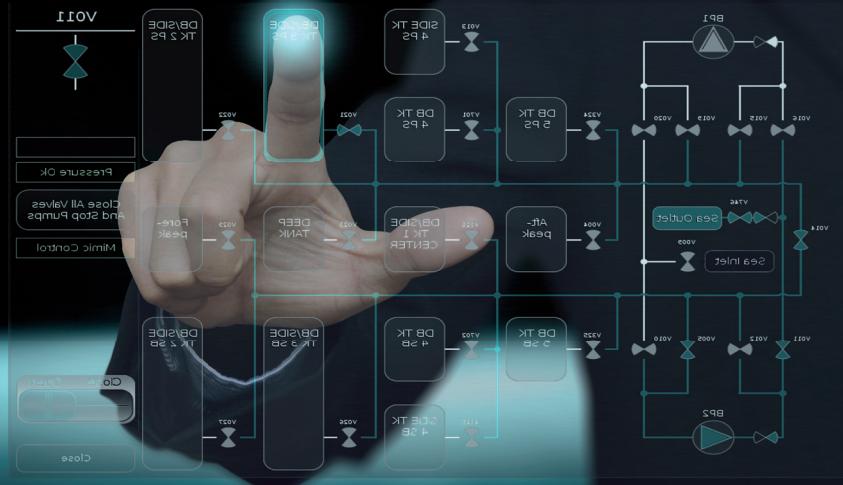# MARPOWER®
Automation

Marpower Valve Control System (VCS)

Fluid management on board is crucial. The Marpower Valve Control System helps to maintain equilibrium, during loading and unloading and at open sea. It fully automatically manages and controls valves for the various fluid systems.

The Marpower Valve Control System puts an end to time-consuming manual tasks and it increases safety. Together with the measurement of liquid levels and pressures, this is a complete solution for checking fluid flows. The operator sees which connections (routes) between which tanks are open (path tracing) on the touch screen. This prevents insight into the status at a glance and it also prevents wrong fluid routing. Together with specialists in pneumatic valves, we offer a total solution of valve, sensor and software.

The solution can be integrated in the Marpower Automation System (MAS). This is a complete information system for complete control of the ship, our so called Total Ship Automation.
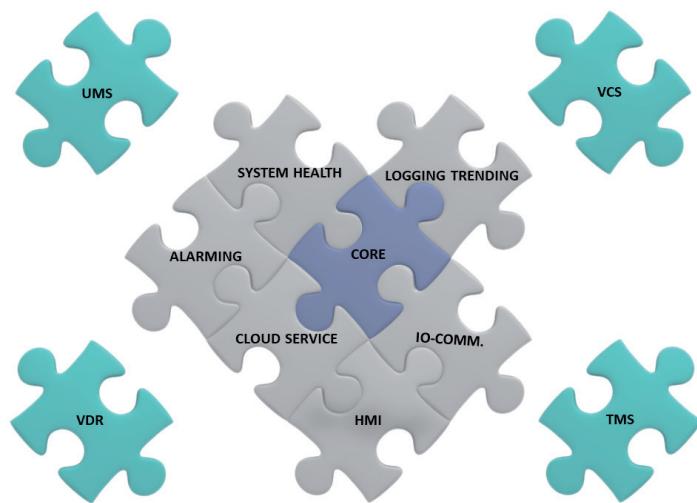

Advantages of the Marpower Valve Control System

✓ Flow- and pressure monitoring
✓ Different control-strategies
✓ Detailed item-status
✓ Remote controlled
✓ Fully automatic
✓ Path tracing
✓ Source / target liquid control
✓ Custom built

Our Valve Control System (VCS) is actually more than remote controlling a valve. The valves are visualized on the mimics and operated via the screen.

Our VCS has the possibility to limit the operation through an authorization system. The control can be claimed via a control-take-over method. An alarm will be generated when a valve does not reach the end-position. It is possible to manually force control if a valve is in alarm but be able to operate. Various methods of controlling valves are possible; i.e. electrically operated, hydraulically operated, pneumatically operated or through serial connections to external valve controllers. Because the control module is required, at least a comfort MAS system will be required as a condition for a valve control system. The same control module is also used for controlling pumps, since valve and pump controls are both part of the system. The pumps to be controlled can then also be protected by the same authorization level as the valves. In this way the operator can use the entire mimic of the VCS system at its location and other workstations are blocked in terms of operation.

Marpower is a brand name for automation systems, frequency converters, electronics and power converters which are produced in-house.

The Marpower Automation System is a flexible and scalable platform for alarming, monitoring and control of systems. The graphical user interface is intuitive, user-friendly and scalable, it can be adapted to user specific requirements. A unique feature of the Marpower Automation System is ability to configure the system in a multiple redundant configuration. In addition, the software components are hot-standby, so seamless redundant services can provide an optimal user experience in case of a system failure. The minimum system consists of 2 industrial workstations or industrial panel PCs, combined with PLC hardware and remote I/O.

The Marpower Automation System can process large I/O amounts (> 10000) without losing reaction speed. With optimum tuning of the system components via a gigabit network, reaction times of 250 ms maximum can be realized. The system is executed from a Linux environment for optimum speed, stability and security. Due to this operating system, no licenses are needed for our software. Another advantage is the use of commercial off-the-shelf hardware which is world-wide available. With the Marpower Automation System, a suitable solution can be offered for each ship, from coaster to cruise ship!

Marpower Automatisering System

BCS	- Ballast control system
EMS	- Energy management system
FOMS	- Fuel oil monitoring system
PMS	- Power management system
TMS	- Tank monitoring system
VCS	- Valve control system