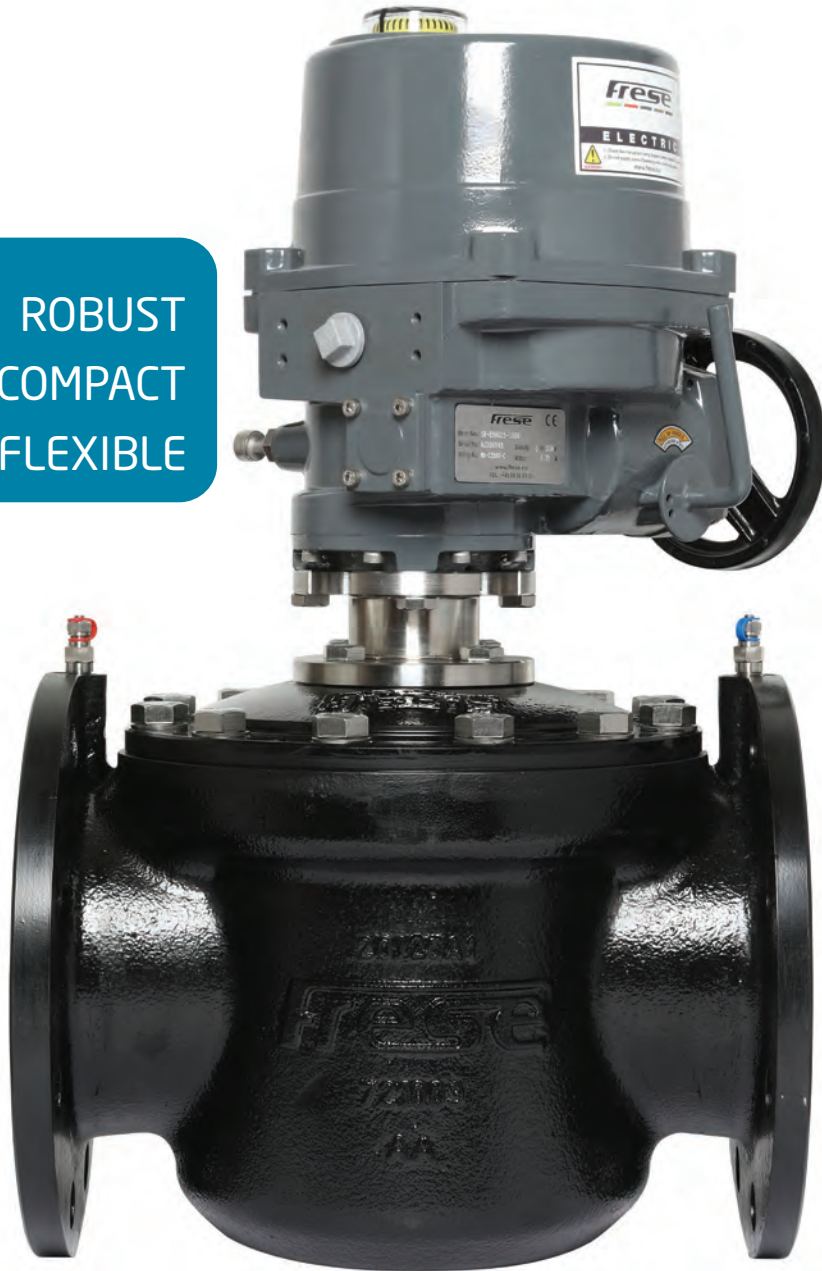




# OMEGA Compact

## 3-way Rotary Control Valve

ROBUST  
COMPACT  
FLEXIBLE



### Frese OMEGA Compact

With the OMEGA Compact Frese becomes your one supplier of a comprehensive temperature and flow regulating solution for the Marine market.

OMEGA Compact is Frese's 3-way rotary control valve, which provides simple, accurate, and reliable temperature regulation for both diverting and mixing applications in high and low temperature cooling systems.

It interacts perfectly with our dynamic valve technology to maintain full temperature and flow control, and helps you achieve significant energy savings. This will improve your CO2 emissions as well as your bottom line.

OMEGA Compact is by far the most compact 3-way rotary control valve on the market. Along with its low weight and equally compact actuator, this makes it much easier to install and handle in cramped engine room spaces.

Like all Frese products, OMEGA Compact is designed with energy savings as a central target. It is optimized for minimum pressure drop and is therefore market leading in terms of high kV values.

However, the main energy saving potential comes from Frese's LeakGuard™ technology, which is rated as Class IV and ensures very tight sealing in the valve, even over time. This reduces fuel oil consumption on the main engine in low temperature cooling systems, as well as on boilers in high temperature freshwater cooling systems.

With OMEGA Compact, Frese moves one step further in our ambition to act in close collaboration with customers by offering more than just high-quality components. In addition to the valve itself, our in-house flow control experts will provide optimized valve selection and calculations, ensuring your peace of mind about both performance and energy savings.

### Our story

Frese's ability to adapt our technology to meet the demands of the marine sector, where it must perform flawlessly in the most arduous environments, stems from our extensive knowledge of materials, products and applications, which we have built up over 75 years.

Since the company started in 1944 as a small foundry in a local basement, we have grown and developed into a prominent position

as one of the world's leading providers of innovative fluid control and component solutions.

Our core business today is dynamic valve technology, but we remain true to our history and our values: Knowledge, quality, innovation, manufacturing excellence and customer focus.

### Differential pressure measurement ports

Ensuring easy onsite diagnostics and troubleshooting.

### Lowest pressure drop in the market

Frese OMEGA Compact is optimised for minimum pressure drop by use of advanced CFD simulation tools and is therefore market leading in terms of high kVs values. The highest kVs Value and lowest pressure drop is achieved when installed as a mixing valve. For typical marine cooling water systems this will result in 30-50% pump energy through the valve.



### Wide range of actuators available

Apart from electrical actuators, Frese can also deliver a range of pneumatic actuators. The compact and optimised design results in a valve which requires less torque. This allows for the use of smaller actuators, which leads to a more cost effective valve solution.

### Flexible maintenance

A special topflange ensures easy maintenance of the valve at installation site.

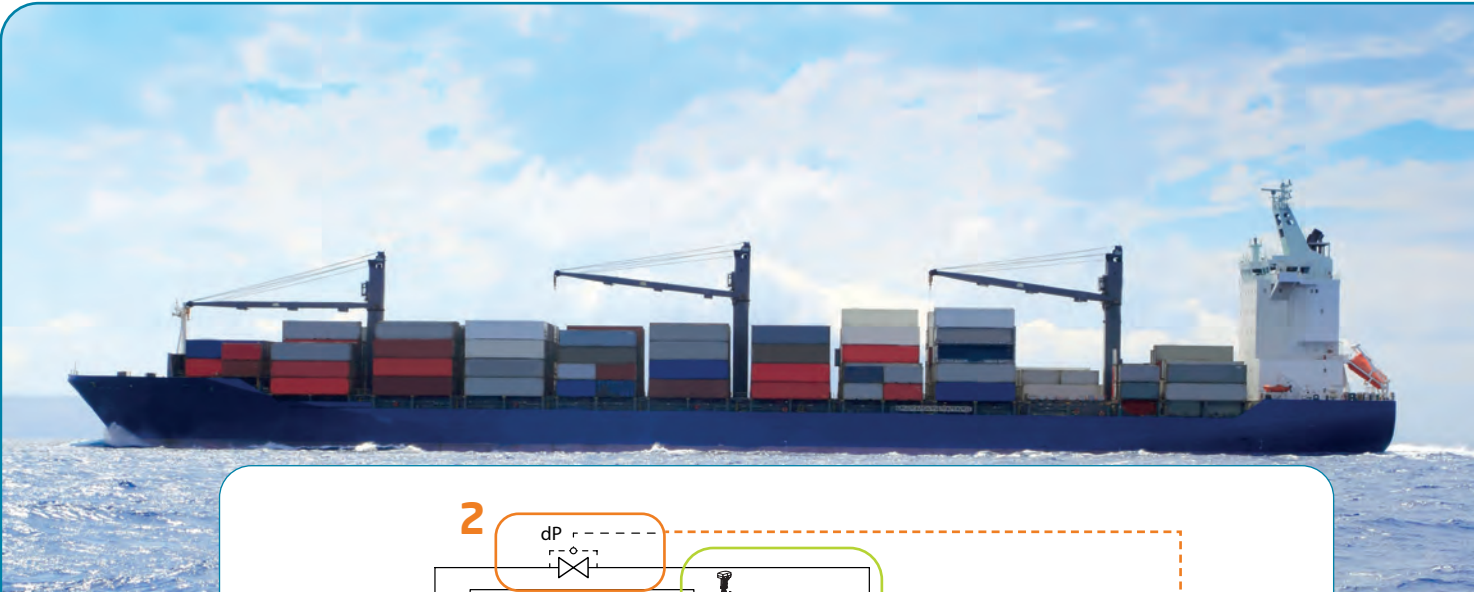
### Leakage rate Class IV (0.01%)

Frese's 3-way rotary control valve is designed to finest tolerances. The embedded LeakGuard™ technology ensures leakage rate Class IV in the entire lifetime of the valve.

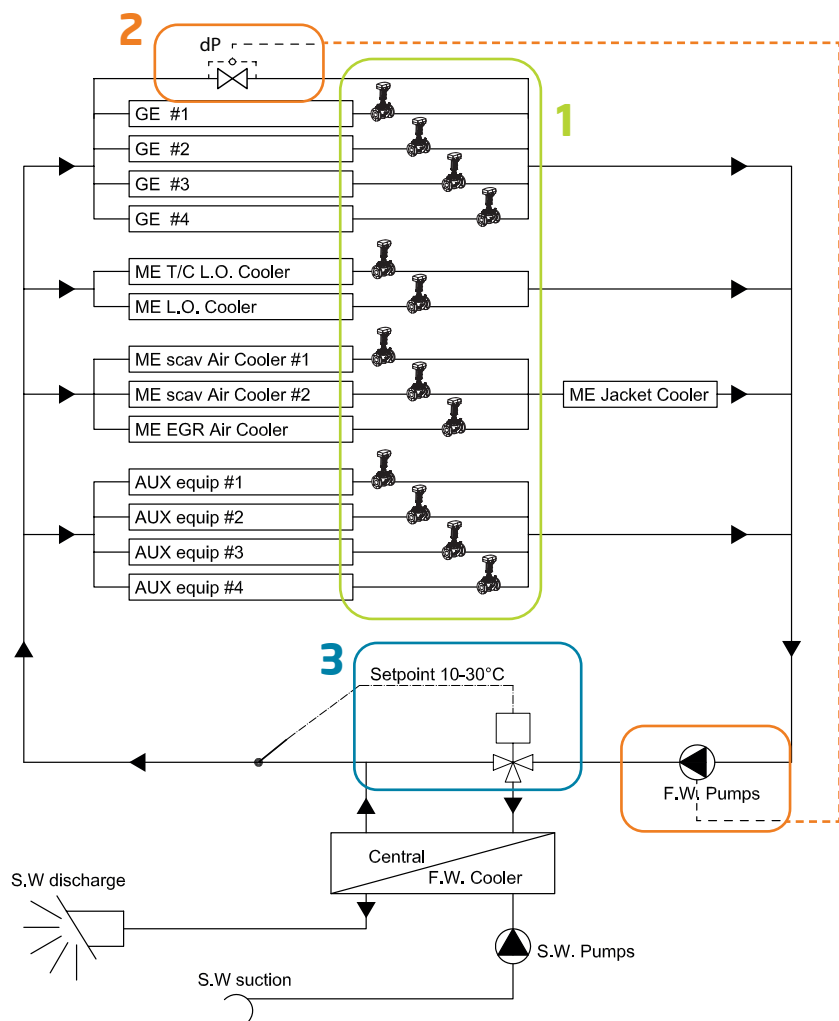
## Low leakage benefits

Standard 3-way valves will often have a high leakage rate between ports in closed position. This leads to increased pump energy consumption, reduced freshwater production and even increasing main engine fuel consumption. For below standard applications the benefits of a low leakage 3-way valve are described.

System / Application	Effect of high leakage
Low temperature freshwater cooling system	A leaking 3-way valve will result in energy loss due to increased supply temperature. This leads to an increased specific fuel oil consumption (SFOC) on the main engine.
Freshwater generator	A leaking 3-way valve results in increased flow bypassing the freshwater generator, which decreases freshwater production onboard.
HT FW cooling water system (2-stroke engines)	In port and under main engine low load operation the cooler should be in full bypass mode. When a 3-way valve is leaking excess heating from electric or oil fired heaters is needed to maintain temperature in the cooling system for the main engine.



# ENGINE ROOM



**1**

The flow is distributed by dynamic valves positioned at each client. No valves in serial connection.

**2**

Optimum pump savings are obtained by running the pump via signal from external pressure transmitter positioned at critical point in system.

**3**

Overall temperature is controlled by Frese 3-way valve leakage rate Class IV.



### OMEGA Compact - 3-way Rotary Control Valve

- Size: DN 65-800
- Pressure Class: PN10/16
- Valve Housing: Nodular Cast Iron
- Leakage Rate: Class IV acc. to EN1349



### Electric Rotary Actuator - ROL-series

- Electric Rotary Actuator for accurate valve control with feedback information to local or central control system.
- Robust design with protection class IP67.
- Optional items: Explosion proof, IP68, additional limit switches and modbus RTU communication.



### Pneumatic Rotary Actuator - ROP-series

- Pneumatic Rotary Actuator for accurate control with complementary positioner and filter regulator.



### ELCO-100 - Local Electric Controller

- Local PID Controller for control of supply temperature.
- Communication with central control system possible.
- Complementary marine type temperature sensors.



KNOWLEDGE

QUALITY

INNOVATION

MANUFACTURING  
EXCELLENCE

CUSTOMER  
FOCUS



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