

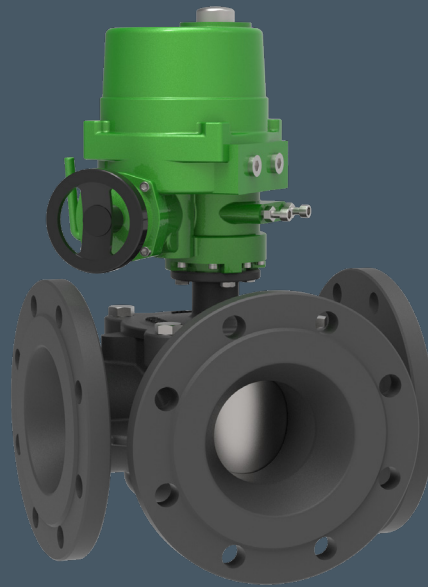
BROEN

CLORIUS

**CO2 REDUCTION
AND FUEL SAVING**



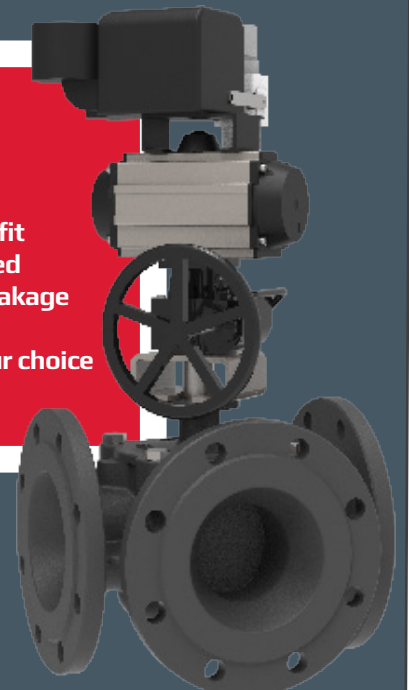
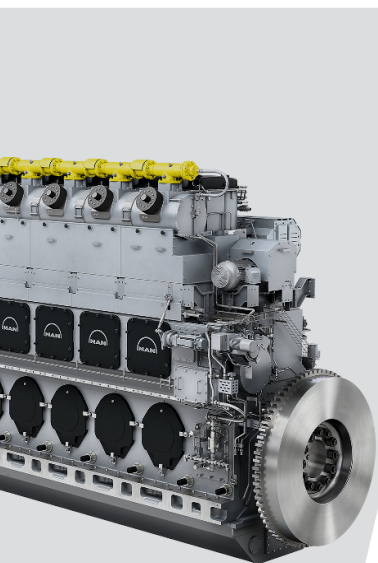
PLUG 'N PLAY SOLUTION FOR
ENERGY OPTIMIZATION



**NEW 3 WAY VALVE
ULTRA LOW LEAKAGE**

BENEFITS:

- Save fuel and reduce Co2 emissions
- Available in Ultra Low leakage
- Ansi Class IV <0,01%
- Most compact valve for plug'n play retrofit
- No hot work and re-classification required
- Flexible configuration with Ultra Low Leakage on all ports
- Delivered with actuator according to your choice
- Can replace any 3 way valve



WITH THE NEW PLUG 'N' PLAY VALVE FROM BROEN CLORIUS CONTROLS YOU GET THE MOST COMPACT AND FLEXIBLE VALVE ON THE MARKET, AND IT CAN BE RETROFITTED INTO ANY SYSTEM, ALSO OUTSIDE PLANNED DOCKING SCHEDULE WITH LESS YARD WORK AND THUS LOWER COST.

NEW 3 WAY VALVE: Plug'n play solution to reduce fuel consumption and Co2 emission from your fleet.

SITUATION: The maritime industry is standing in front of two major challenges.

1. Reaching the IMO goal of a 70% reduction in carbon emission by 2050.
2. High fuel prices, affecting the operating cost.

From 2023 the new EEXI and CII regulations will start being implemented, requiring shipowners to take actions on their fleet to reduce the fuel consumption and Co2 emissions.

Out of approximately 75.000 vessels in operation worldwide, nearly 50% are expected to fall into categories which requires them to find new solution to reduce the fuel consumption in order to meet the new regulations.

All of them are facing the impact on the operating expenses due to the high fuel cost.

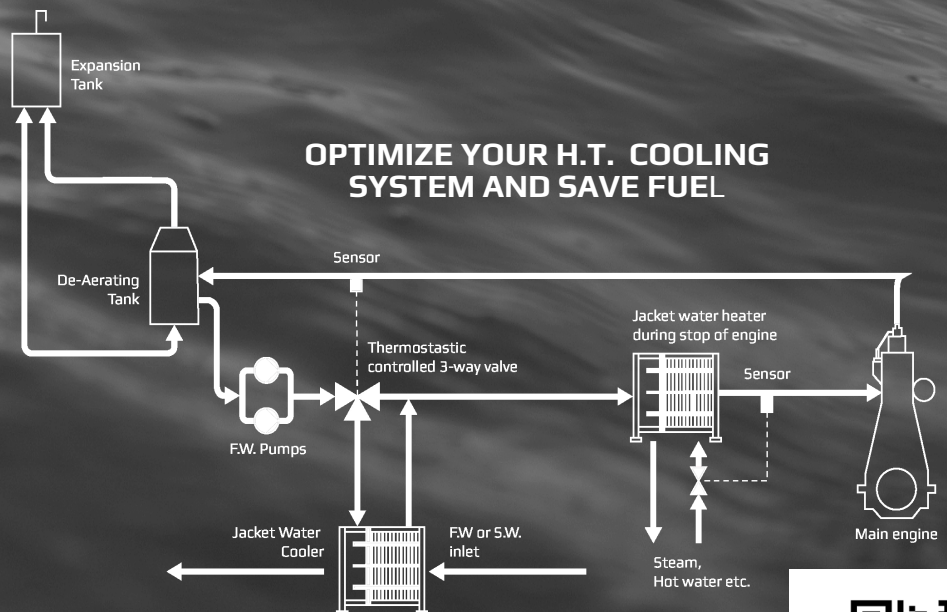
CHALLENGE: During port stay, or at anchor when the pre-heater is running to maintain adequate temperature of the engine, the 3 way control valve, controlling the temperature of the Jacket Water cooling system will close the port towards the LT cooling system.

Due to the standard 3 way valves not being 100% tight when closed, a certain amount of water is forced through the closed port, creating an unwanted cooling in the system, leading to an increased fuel consumption as the pre-heater needs to compensate for this unwanted cooling.

SOLUTION: The new Ultra Low Leakage valve from BROEN - Clorius Controls, has a leakage rate of less than 0,01%, and thereby removes the energy loss, giving you a direct saving on the fuel consumption and Co2 emissions.

With the new plug 'n' play valve from Broen - Clorius Controls you get the most compact and flexible valve on the market, which can easily be retrofitted into any systems - also outside scheduled dockings.

For calculation of possible savings, Please contact BROEN - Clorius Controls.



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