

A perfectly balanced technology  
for seagoing vessels.



**AVENTICS™ Marex VCS**  
Pneumatic valve control and tank sounding system.



# AVENTICS Marex VCS

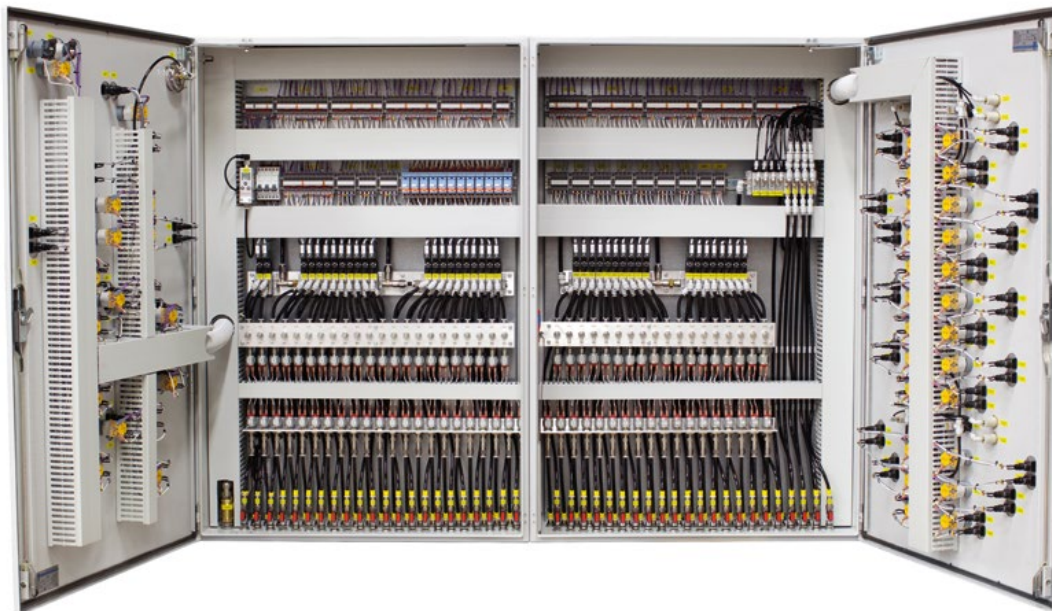
## A proven technology for seagoing vessels

Emerson's AVENTICS products combine 70 years of experience and state-of-the-art technology made in Germany. Customers worldwide value our know-how in pneumatic and electronic ship control solutions and rely on our expertise and consultancy.

Using pneumatics for the control of ballast tanks and tank level gauging is a proven concept. In fact AVENTICS has been equipping ships with pneumatic valve control and tank sounding systems for more than 30 years. Our customers are convinced of the technology for numerous reasons. Especially in hardworking vessels which undergo a lot of wear and tear pneumatic systems are proven. The rugged

technology of Marex VCS is easy to install and requires low maintenance. It can be used for tanks of all sizes and for a wide range of materials such as

- fresh water / potable water
- seawater / bilge water
- black / grey sewage
- diesel oil, petroleum, gas oil, dirty oil, sludge
- liquid heavy fuel oil



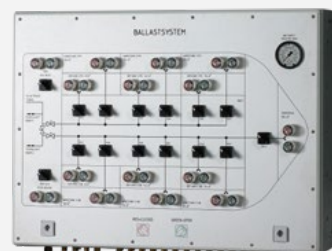
▲ Inside view of Marex VCS control cabinet

# Pneumatic valve control and tank sounding systems – A smart solution

Based on expertise, the Marex VCS is designed to the customers' wishes and requirements, for new built or refits. The scope is wide and ranges from a simple system to a full package with extensive functionality. It includes visualization, valves, actuators, control cabinets and tubing.

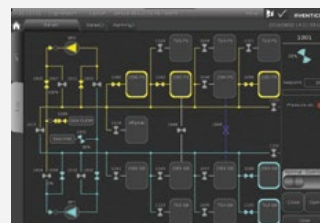
## 1 Valve Control System – fully pneumatic

Filling and emptying of tanks by means of butterfly valves and actuators which are opened and closed via switches on a custom-designed control cabinet. With active pneumatic feedback signal.



## 2 Touch-screen operated control and monitoring system:

Valve control, pump operation, tank sounding, alarm indication, monitoring and much more.



## 3 Tank Sounding System

Based on the bubble-type principle, the pressure is continuously measured and the resulting value is used to calculate the tank's filling level. Fluid level indication on gauges or screens.



# Pneumatics at best use – The advantages are clear

- **Cost-effectiveness**

Compared to other technologies, the Valve Control System Marex VCS will cost you less. The purchase costs for pneumatic components are considerably lower. In most areas, plastic piping may be used. Once in operation, the system is handled easily with low maintenance effort. Service can be done by crew members without requiring special training or tools.

- **Safety**

All system components inside or in proximity of the tanks are operated by compressed air. There is no risk of pollution or short-circuits. The system with a nominal pressure of 7 bar (101 PSI) remains operational in temperatures from -40 to 80°C (-40 to 176°F) and can be operated manually by a pump in case of emergency. A pneumatic feedback signal makes sure the operator knows the actual position of the butterfly valve at any time.



▲ Submerged butterfly valve and actuator

- **Reliability and wide range of application**

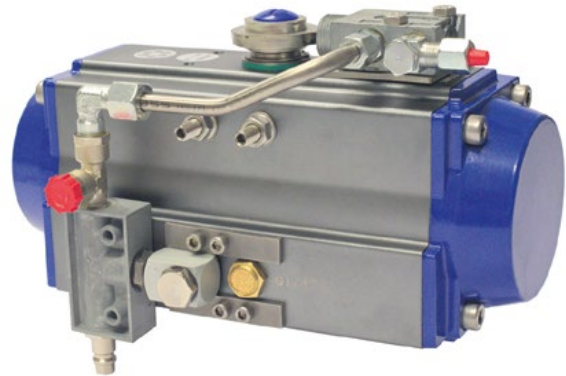
The pneumatic valve control and tank sounding systems are a rugged and proven technology. The piping is relatively easy to install and does not wear out. The system remains operational even in extreme temperatures and can be used with nearly all tank types and applications.

- **Worldwide service**

Emerson provides an international network of partners which ensures a maximum of support for our customers and the availability of components and spare parts.

- **Environmental compatibility**

The Marex VCS contributes to Clean Ship and Green Passport. It is optimized for a long operation life and only compressed air is used – a clean medium.



▲ Marex VCS actuator with active feedback

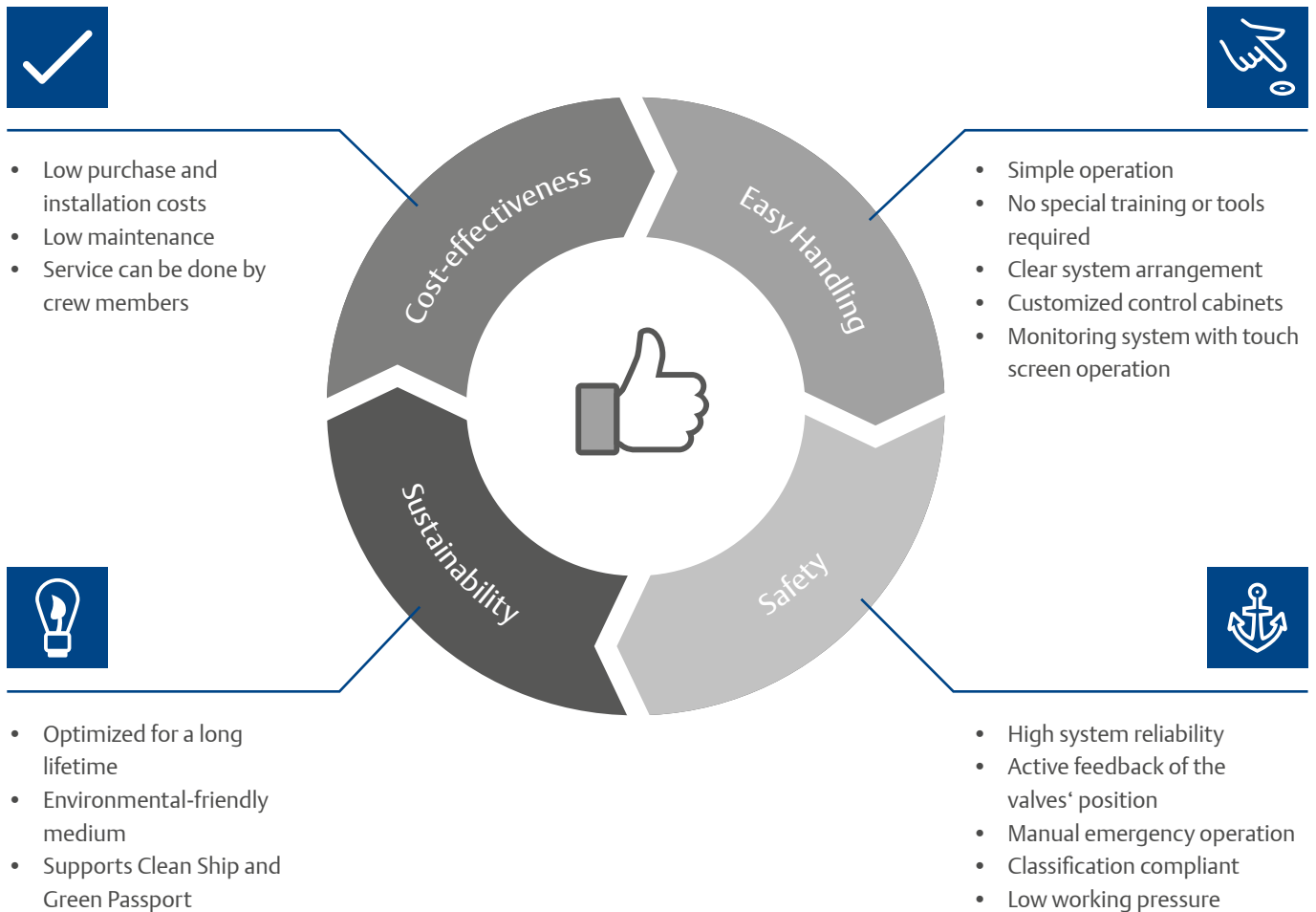
# AVENTICS Marex VCS

## At a glance

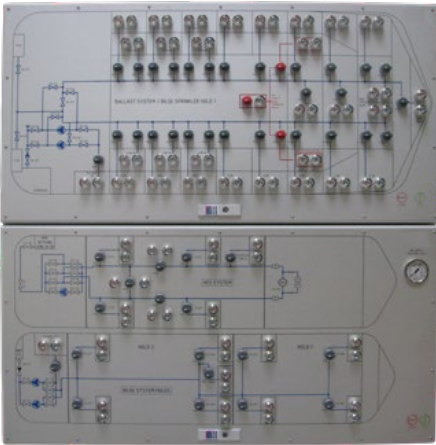
### Features

- System layout by experienced specialists
- High-quality, long-life components
- Submersible components
- Custom-designed control cabinets
- Pneumatic feedback signal, accurate and reliable
- Classification compliant
- Temperature range -40 to 80°C (-40 to 176°F)
- For new builds and refits
- Manual emergency operation
- No electrical components installed in tanks

### Your benefits



Reduce costs and improve reliability with  
a perfectly balanced ballast tank solution.



**AVENTICS™**

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