

SISCON
VALVES & INSTRUMENTS

ENGINEERING
TOMORROW

Danfoss

Automation for the marine sector and industrial **Save energy and reduce emissions**

Danfoss pressure transmitters, temperature sensors, switches and valves



Authorised Technical Partner
For the maritime industry

YOUR DIRECT BENEFITS

- Product and application knowledge
- Specialist for new build and replacements
- Real time stock information
- Fast and reliable deliveries



By land and by sea, Danfoss engineering is contributing to a better and cleaner environment

Maritime expertise

Look around a modern ship, and you'll find Danfoss hard at work reducing energy costs and emissions in the engine room and beyond.

In fact, several Danfoss divisions bring a particular range of technical benefits to the marine sector.

On their own, each division is at the forefront of its field. Together, Danfoss's many divisions provide a comprehensive array of products that keep major fleets running efficiently

Refrigeration, A/C and heating:

Maintain desired temperatures in reefers, storage rooms and living quarters

Hydraulic solutions: Robust design and rugged reliability keep hydraulic equipment running longer.

High-pressure pumps and energy

recovery devices: Convert salt water into fresh water for drinking, cooling and firefighting.

Frequency converters: Save energy in countless applications throughout the ship.

Danfoss Sensing Solutions — Your partner Authorised Technical Partner



Siscon Valves & Instruments

Danfoss Sensing Solutions, formerly Danfoss Industrial Automation, offers an extensive portfolio of advanced sensor technologies and application expertise.

Our goal is to help the industries and people we serve to embrace a digital-focused future with industry-leading know-how, world-class support, and sensors that enable a connected and sustainable future.

Small controls ...

Constant improvement of reliability and efficiency is not an option. It's a prerequisite for success no matter what role you play in today's increasingly competitive shipping industry. That's why Danfoss continues to work on the details of the components that are small in size but big in impact.

... that enable big gains

Danfoss controls empower operators to sail smarter, faster and more efficiently. They monitor temperature and pressure in the places that matter most. And they put you in control of the processes that let you fine-tune performance.

All approved for marine

Controls for marine applications must be as dependable as they are safe. That's why the Danfoss range of controls have all achieved independent type approval and certification.

PRESSURE TRANSMITTER



TEMPERATURE SENSOR



PRESSURE AND TEMPERATURE SWITCHES



SOLENOID VALVES



The benefits of intelligent control:

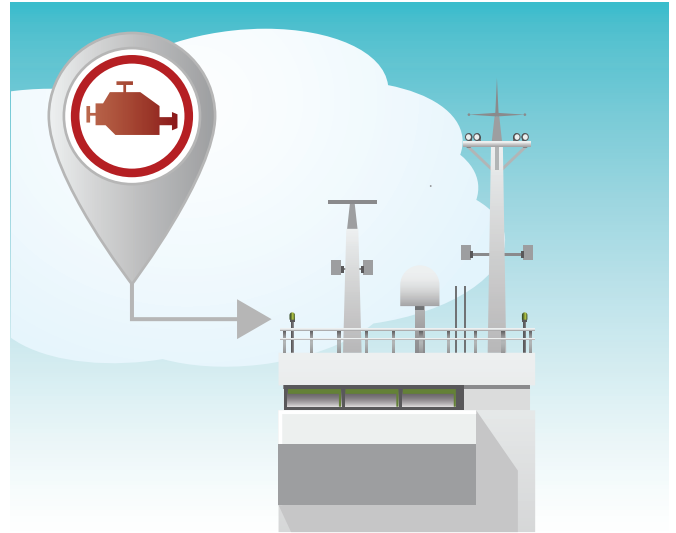
Measureable improvements that you can rely on



SMARTER SERVICE

Preventive maintenance keeps engines running efficiently and eliminates costly downtime. That's why a broad range of Danfoss controls make it easier than ever to base service procedures on real-time information for the parameters that matter most for service.

For example, our MBS 9300 monitors pressure in turbocharger filters. Pressure increases are a reliable indicator of filter stoppage – and knowing exactly when to change the filter saves time, parts and fuel.



PREDICTABLY RELIABLE PERFORMANCE

Trusting cooling and lubricating systems to work is one thing. Controlling them with sensors, mechanical switches and alarms is quite another. Danfoss components let crews lift performance reliability to another level – Whether the seas remain calm or a storm is brewing on the horizon.

For example, our KPS switch resists engine room jolts and vibrations to monitor pressure in lubricating oil systems. Then they raise the alarm if pressure deviates from acceptable parameters, so crews have the knowledge to react and prevent performance variations and engine damage.

Quality you can count on

Our zero-defect policy is your guarantee. But don't just take our word for it – ask the world's leading marine approval agencies and our customers.

Danfoss Industrial Automation uses the same production processes and quality assurance standards worldwide. All procedures are ISO/TS 16949:2009 approved, so no matter

where we produce we follow the same stringent guidelines for what to do and how to do it.

The Danfoss culture of quality depends on best-in-class systems, tools and certifications. Most of all, it depends on people who care.

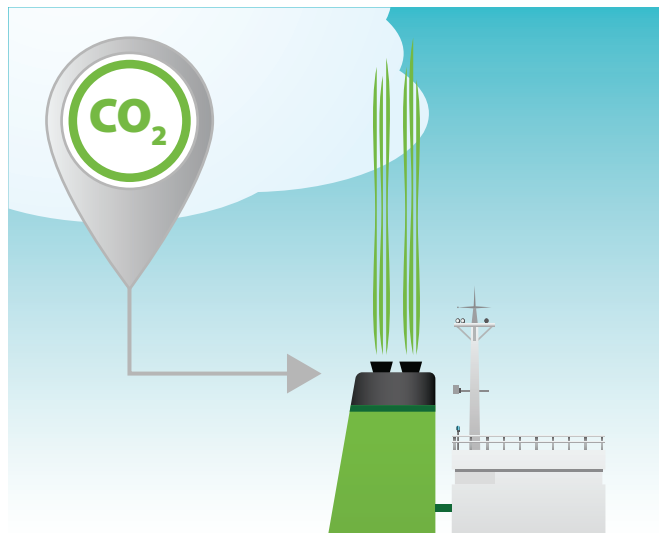
If it matters, measure it. Danfoss helps operators monitor and control the performance parameters that matter most throughout the engine room and propulsion system. And we do it day in and day out in some of the most extreme environments on a modern ship.



IMPROVED ENGINE EFFICIENCY

Smoother combustion means better engine efficiency and lower fuel costs. Danfoss controls contribute to this ongoing effort all around the engine room, every day.

For example, common rail engines rely on fuel injection under high pressure to atomize diesel into tiny droplets and achieve better combustion and improved fuel efficiency. Our MBS 6300 keeps pressure stable even at very high levels, and is engineered to keep up as pressure levels increase in the future.



REDUCED CO2 EMISSIONS

As emission regulations continue to become more and more stringent, marine applications increasingly rely on advanced electronic controls to fine tune performance.

Our MBS 1800 cylinder pressure sensor helps you meet or exceed growing demands. It keeps you informed of what's happening inside the combustion chamber as the engine is running. This information not only allows you to save fuel and reduce emissions – it also helps you to balance cylinder performance and extend crankshaft lifetime.



Pressure transmitters



Compact pressure transmitters

- 0 – 1 bar to 0 – 600 bar
- 4 – 20 mA, absolute voltage, ratiometric output
- Various electrical connections
- Various pressure connections incl. flange connections
- Up to 125 °C
- Versions also available with pulse-snubber
- Available in cartridge or block version
- Block versions can be used with our test valves
- Versions with Ex Zone 0 approval available

Low pressure transmitters

- 40 – 250 mbar pressure span
- Bidirectional ranges available (zero point flexible)
- 4 - 20 mA output
- EN 175301-803-A, Pg 9 plug
- Up to 100 °C
- Different pressure connections

High pressure transmitters

- 0 – 2000 bar to 0 – 2500 bar
- 4 – 20 mA, absolute voltage, ratiometric output
- Cable version
- M18 x 1.5 (ISO 2974 / SAEJ 1949)
- Up to 125 °C

Cylinder pressure sensors

- Integrated charge amplifier
- In-line charge amplifier
- 0 – 250 bar
- 4 – 20 mA or 0.5 – 4.5 V outputs
- 3 m cable (In-line)
- M10 & M14 (In-line)
- Customer-specific versions available

General applications where robustness and space are an issue

*Turbocharger filter monitoring
Crankcase monitoring*

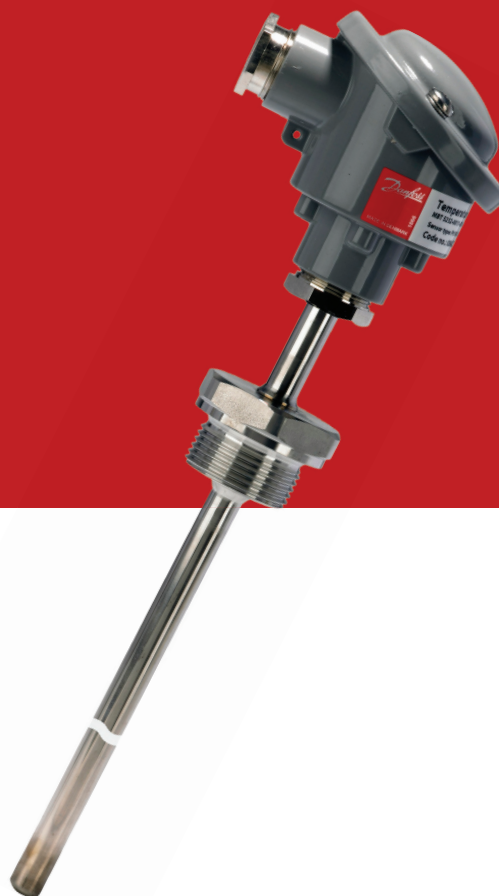
Common rail pressure monitoring

Cylinder pressure monitoring

The Danfoss range of pressure transmitters for marine and industrial applications

				
MBS 3300 Series MBS 9300 Series	MBS 6300 Series	MBS 33M MBS 42X1 Series (Ex)	MBS 5100 Series	EMP

Temperature sensors



Thermocouple exhaust gas sensors

- Up to 800 °C
- Adjustable insertion length
- Straight or angle measuring element
- Versions with B-head available
- Availability for versions with transmitter

RTD exhaust gas sensors

- Up to 600 °C
- B-head, slim-line, plug or cable versions
- Versions with 1 or 2 Pt 1000 elements (no need for compensation cable)
- Adjustable insertion length

RTD sensors

- Up to 400 °C
- Versions with B-head available
- Availability for versions with transmitter
- Fixed or changeable measuring inserts

Bearing temperature sensors

- Up to 200 °C
- Sensing element Pt 100 or Pt 1000
- Various electrical connections
- Various process connections
- Spring loaded to ensure excellent contact to bearing

Measuring exhaust gas in diesel, gas & dual fuel engines

Measuring exhaust gas in diesel, gas & dual fuel engines

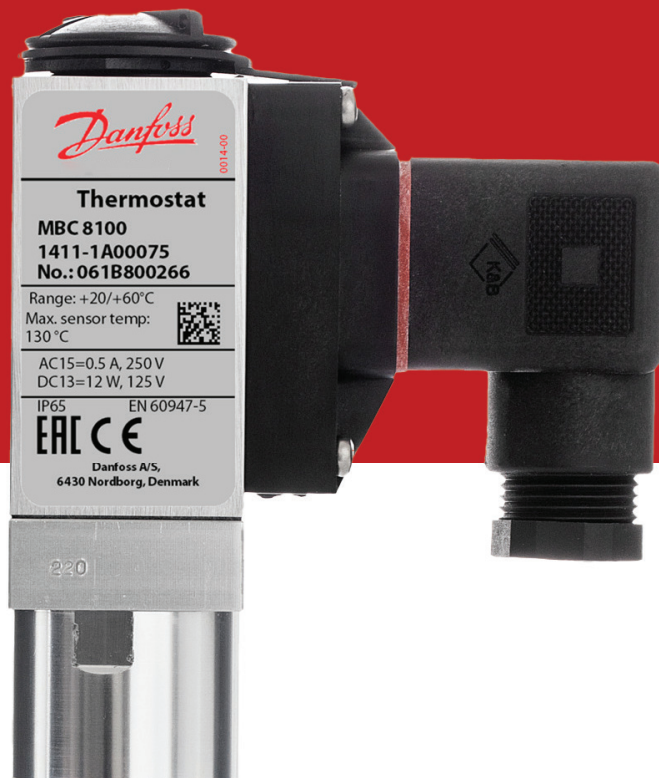
General applications, e.g., lube-oil monitoring among others

Temperature measuring of bearings in engines and gearboxes

The Danfoss range of temperature sensors for marine and industrial applications

MBT 5111	MBT 5113	MBT 5116 Slim-line	MBT 5116 with B-head	MBT 5250	MBT 5252	MBT 5310	MBT 5560

Pressure and temperature switches



Block pressure switches

- 0.2 – 400 bar measuring range
- SPDT contact system
- DIN plug
- Ag contact material
- Fixed differential

General applications where robustness and space are an issue

Can be used in connection with the range of test valves

Box pressure switches

- -1 – 60 bar pressure span
- SPDT contact system
- Screw terminals
- Ag and Au contact material
- Fixed or adjustable differential

General applications

Block temperature switches

- -10 – 200 °C
- SPDT contact system
- DIN plug
- Ag contact material
- Fixed differential

General applications where robustness and space are an issue

Box temperature switches

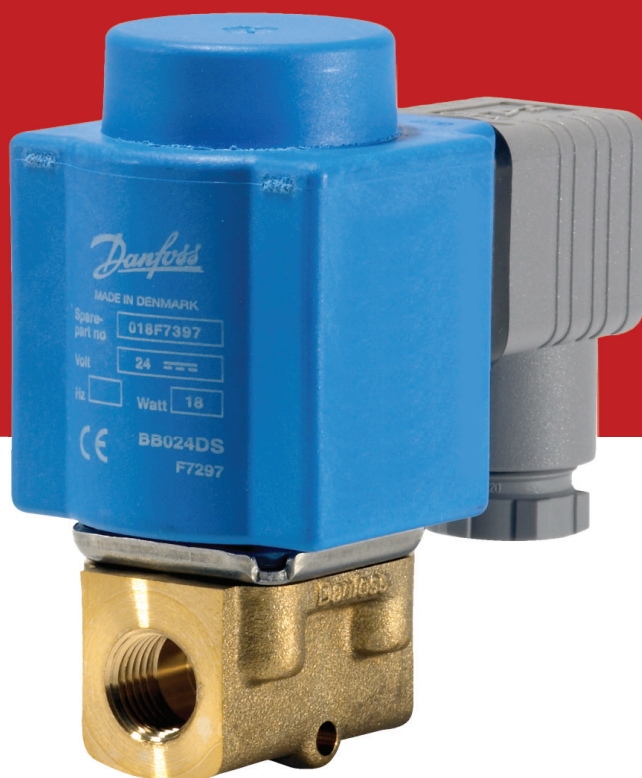
- -60 °C – 300 °C
- SPDT contact system
- Screw terminals
- Ag or Au contact material
- Fixed or adjustable differential

General applications

The Danfoss range of switches for marine and industrial applications



Solenoid Valves



Direct-operated 2/2 way valves

- G1/8 – G1 connection ISO 228/1
- NC/NO function
- 0 – 30 bar differential pressure
- 0 – 8 m³/h flow range
- Up to 80°C ambient temperature
- -30 – 140 °C media temperature

General marine applications

Servo-operated 2/2 way valves

- G1/4 – G1 connection ISO 228/1
- NC/NO function
- 1 – 30 bar differential pressure
- 0.2 – 19 m³/h flow range
- Up to 80°C ambient temperature
- -30 – 100 °C media temperature

General marine applications

Servo-operated 2/2 way valves – high pressure

- G1/2 – G2 connection ISO 228/1
- NC/NO function
- 0.3 – 16 bar differential pressure
- 1.3 – 160 m³/h flow range
- Up to 80°C ambient temperature
- -30 – 140 °C media temperature

General marine applications

Assisted lift operated 2/2 way valves

- G1/2 – G1 connection ISO 228/1
- NC/NO function
- Up to 40 bar differential pressure
- Up to 60°C ambient temperature
- -10 – 60 °C media temperature

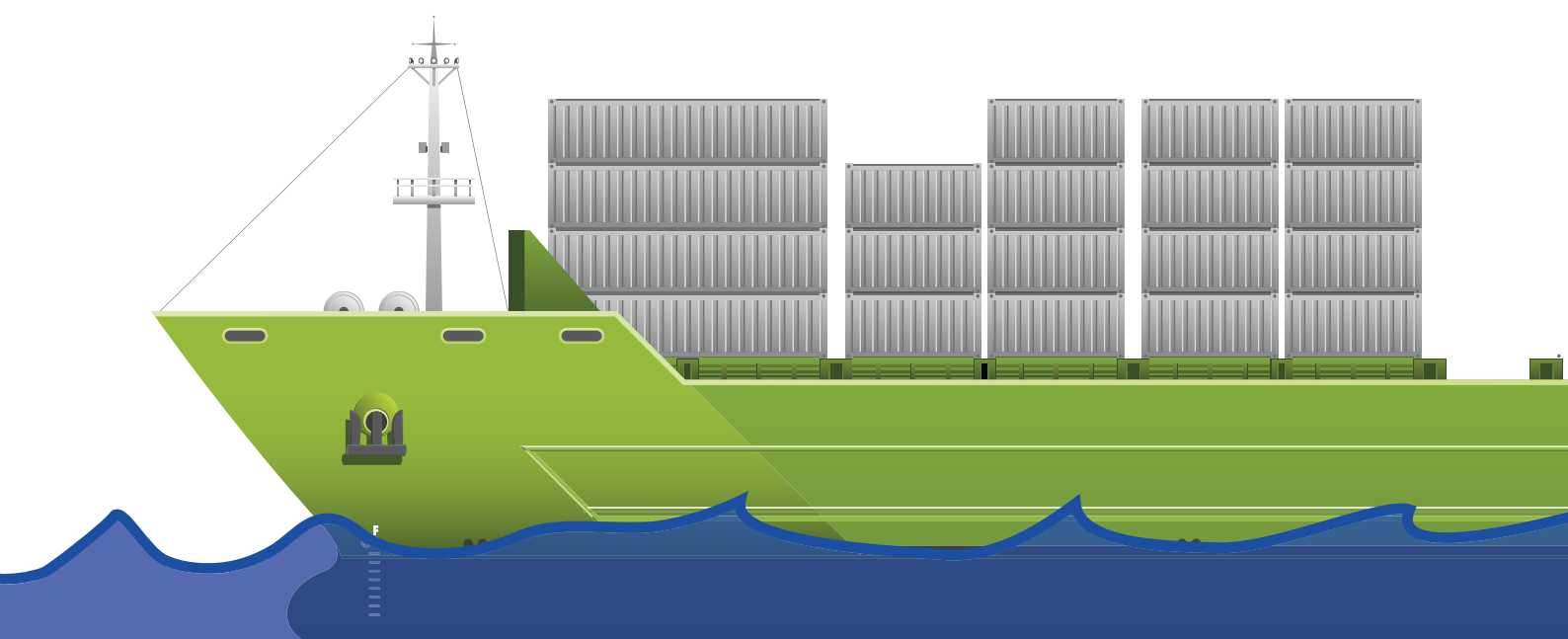
General marine applications

The Danfoss range of solenoid valves for marine and industrial applications



Wherever performance matters, automation matters even more

Danfoss adds automation throughout your ship - so you can start adding up savings in fuel, emissions and downtime.



Fuel Treatment

- Fuel pressure & temperature
- Sludge oil pressure & temperature
- Oil filter differential pressure
- Common rail pressure

Engines

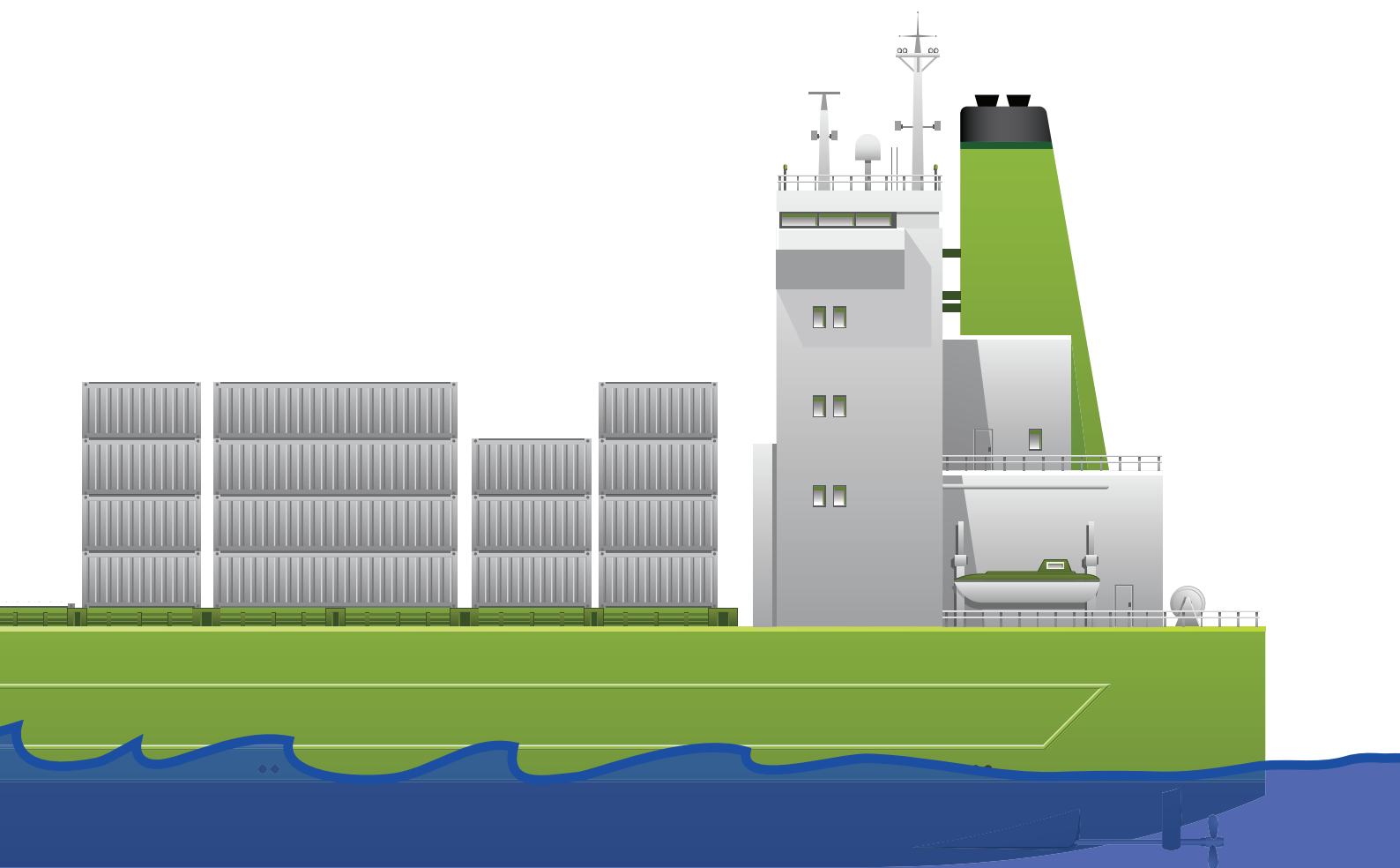
- Lube-oil pressure & temperature
- Exhaust gas temperature
- Common-rail pressure
- Crankcase pressure
- Bearing temperature
- EGR temperature
- Cooling water system
- Start air pressure
- Charge air pressure & temperature
- Cylinder pressure

Gearboxes

- Clutch switching pressure
- Lube-oil pressure & temperature
- Oil filter differential pressure
- Bearing temperature
- Hydraulic oil pressure & temperature

Power packs

- Cooling water temperature
- Hydraulic oil pressure & temperature
- Oil filter differential pressure



Air compressors

- Air pressure
- Lube oil pressure
- Air temperature

Pump systems

- Water pressure
- Inlet/outlet temperature

Boilers & incinerators

- Steam pressure
- Exhaust gas temperature
- Steam control
- Pump & fan soft-start control

Propulsion systems

- Lube-oil pressure monitor & alarm
- Bearing temperature
- Oil filter differential pressure
- Hydraulic pressure for pitch control

Siscon trusted brands in all marine and industrial applications. Improve: - Efficiency, safety and reliability.

YOUR DIRECT BENEFITS

- Product and application knowledge
- Specialist for new build and replacements
- Real time stock information
- Fast and reliable deliveries

Contact us: sales@siscon.nl

Siscon Valves & Instruments | Danfoss ATP (Authorised Technical Partner)

www.siscon.nl | Tel: 0180-439655