



PureServ

THE SERVICE PROVIDER

PureServ is PureteQ's certified service organization that provides service and support to all brands of scrubbers and sensors. We encourage all shipowners to realise the full potential of scrubber systems by entering into a PureteQ Service Agreement to safeguard continuous operation, reliability and MARPOL compliance.

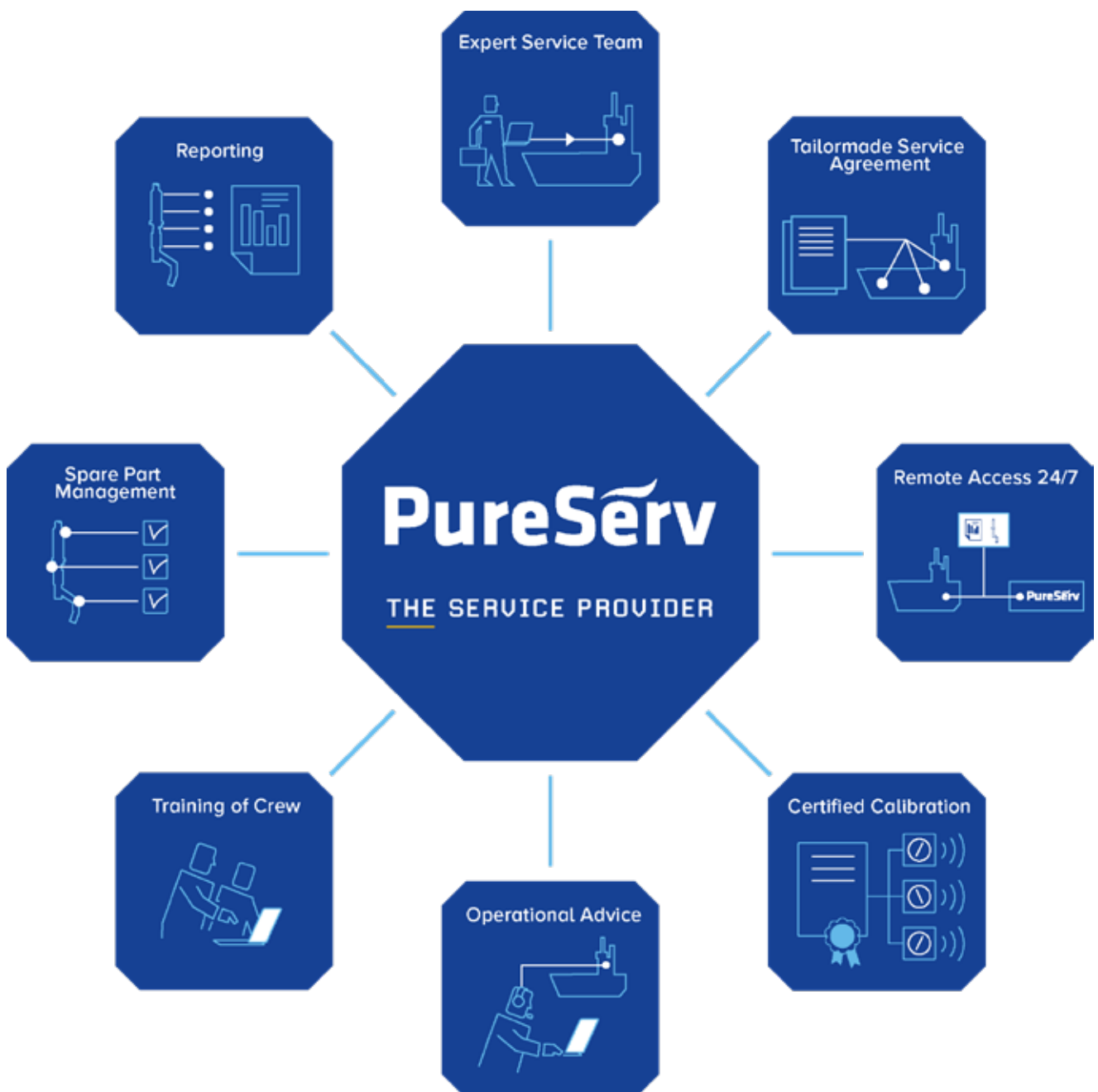
PureteQ A/S supplies built-to-fit maritime scrubber systems to shipowners who want to save money on fuel by continuing use of heavy fuel oil. The PureteQ Marine Scrubber System is one of the most energy efficient Exhaust Gas Cleaning Systems (EGCS) on the market. All PureteQ scrubbers come with a user-friendly control system with real-time remote access.

PURESERV

PureServ services all brands of scrubbers and sensors worldwide. When maintained in good operational condition, the scrubber system will serve you well throughout the lifetime of the ship.

Our expert service team has received extensive training to assist shipowners in safeguarding continuous operation, reliability, and MARPOL compliance of scrubber systems. This entails expert support on-site as well as remote online support and guidance for all scrubber systems.

All clients with a PureteQ Service Agreement have a designated service engineer. Having serviced more than a hundred scrubber systems of both PureteQ and other brands, we have gained invaluable knowledge of any type and brand of scrubber system. We have learned how to rectify issues by combining our technical know-how with hands-on-experience.





TAILOR-MADE SERVICE AGREEMENT

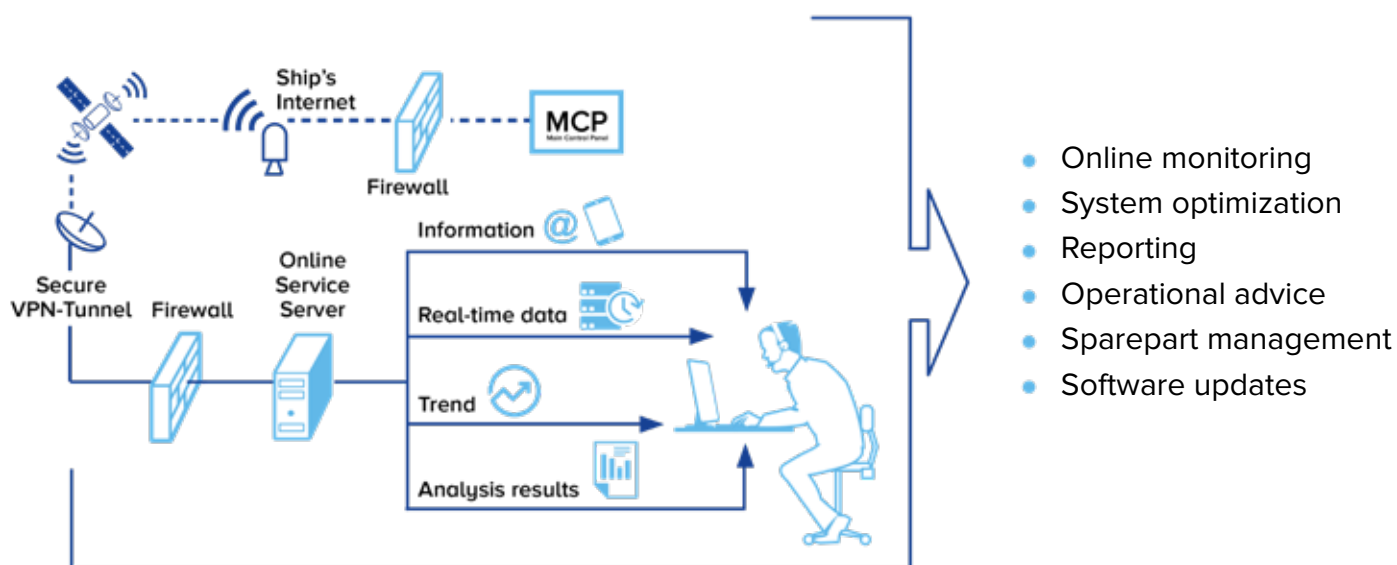
A PureteQ Service Agreement is designed to meet shipowner's specific needs based on the ship's operational pattern and crew proficiency level. While most shipowners prefer predictive and condition-based maintenance to minimize costs, we offer a tailor-made service agreement to make sure you only pay for what you get. The PureteQ Service Agreement normally includes (but is not limited to):

- One or more service visits to the ship (depending on crew proficiency)
- Crew training: initial and brush up training sessions
- Certified service of gas analyzer (CEMS) and Water Monitoring System (WMS)
- Spare part management and access to our safety stock (shipped within 24 hours)
- Remote monitoring of PureteQ Marine Scrubber Systems with internet connection:
 - online operational guidance for the crew
 - online guidance for the replacement of spare parts
 - online monitoring of the scrubber system to safeguard MARPOL performance
- Manuals and video tutorials to support maintenance and operation activities
- Reporting
- Service letters with newest knowledge on system use, maintenance and software updates
- Hotline service 24/7/365

REMOTE ACCESS 24/7

The PureteQ Scrubber Control System is at the forefront of digitalization and features full remote access 24/7. It can be operated in manual or full automatic mode depending on our client's preferences and crew skills, and enables real-time remote analysis, data monitoring, troubleshooting, and Flag State reporting.

The control system allows PureteQ Service Engineers to perform system updates, and to support ship crews in operational tasks such as spare part replacement, as well as locating errors that need to be rectified to maintain MARPOL compliance and system reliability. The system logs hundreds of datasets every second to ensure energy efficiency that not only reduces the operating expenditure (OPEX) but minimizes the carbon footprint.



REPORTING

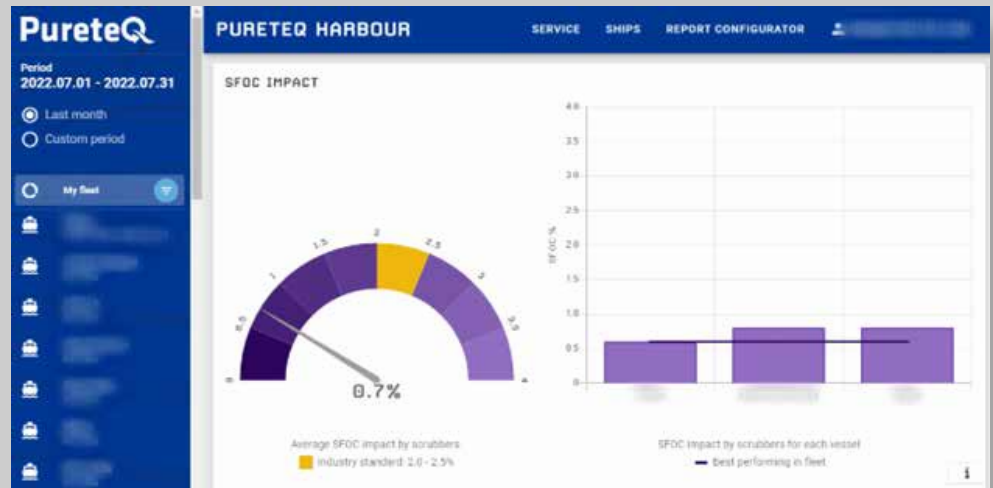
As part of a PureteQ Service Agreement we offer to monitor the scrubber system and provide compliance and performance reporting, as well as online guidance to the crew. In some instances we assist in Flag State reporting and reporting to the US Coast Guard. New improved software to all ships encompassing voyage mode for energy optimization and automated functionality on VGP compliance of wash water is available.

FLEET OPTIMIZATION SOFTWARE

As part of PureteQ's Service Agreement we offer clients access to our web-based Scrubber Performance Optimization Tool, [Pure-SPOT](#), for environmental performance reporting and optimization of scrubbers throughout your fleet. Pure-SPOT facilitates MARPOL compliance monitoring, operational performance assessment (including its impact on Specific Fuel Oil Consumption - SFOC), and environmental performance reporting, encompassing reductions in CO₂, sulfur, and particulate matter (PM).

Pure-SPOT aligns with the new IMO regulations on EED(X) & CCI on a well-to-wake basis. It enables cross-ship and fleet knowledge sharing among crews, resulting in cost reductions.

The cost savings are calculated by comparing the expenses of using HFO with scrubbers vs. compliant fuel. Our analysis incorporates findings from the SINTEF report and actual tests conducted by third parties on sailing installations.



A sample view of actual data from a PureteQ customer fleet (ships in fleet, scrubber SFOC impact).

Pure-SPOT features the measuring of MARPOL compliance, operational performance (impact on SFOC) as well as environmental performance reporting, such as CO₂, sulfur and particulate matter reductions

TRAINING OF CREW

ONLINE OR ONBOARD TRAINING SESSIONS

When training on board is not possible, PureteQ offers an online training package (good internet connection required). Training in scrubber systems will include basic knowledge of the entire scrubber system from sea chest to overboard pipes.

The crew will learn:

- where all the parts are placed and which parts need special attention
- when and how to maintain components
- when, where, and how to replace or repair parts
- how to navigate the scrubber control system
- how to perform operational analysis on the scrubber panel

When training is performed on board, the crew will learn by doing some of the most common activities, such as filter replacement, calibration of sensors etc.

PURETEQ INTERNET FOR REMOTE ASSISTANCE SERVICES

To ensure easy and unproblematic access to training sessions and other remote services, we offer Internet for Remote Assistance Services (IRAS). A complete hardware and software installation for shipwide WiFi access and realtime support that functions even when you stand next to a running genset or close to the main engine.

The installation is permanent and is delivered with a flight case including the SIM-card modem, a heavy duty tablet and a noise cancelling headset that enables video and audio communication with a PureteQ service engineer.

CERTIFIED CALIBRATION

Some type approved components must be calibrated by a certified engineer to maintain MARPOL approval of the Exhaust Gas Cleaning System (EGCS).

PureteQ Service Engineers hold the necessary certification and experience to validate and calibrate the gas analyzer (Continuous Emission Monitoring System - CEMS) and other components at a favorable rate. The CEMS must be calibrated once a year. The PH sensor must be calibrated every three months.

PureServ offers a sensor replacement program for calibration of PAH and turbidity sensors, as part of the PureteQ Service Agreement, and will notify the ship in due time, before calibration is needed. The ship will receive a newly calibrated sensor before shipping the old sensor to PureServ.



EXPERT SERVICE TEAM

Dedicated and certified marine engineers and naval architects form the core of our service team.

Regardless of the geographical location of your ship, PureteQ Service Engineers are dispatched from Europe or Asisa to support scrubber systems either on-site or via the safe PureteQ remote system, depending on the ship's condition and the client's requests.

The service team will assist the crew with regards to ship maintenance activities, calibration and validation of sensors.



SPARE PART MANAGEMENT

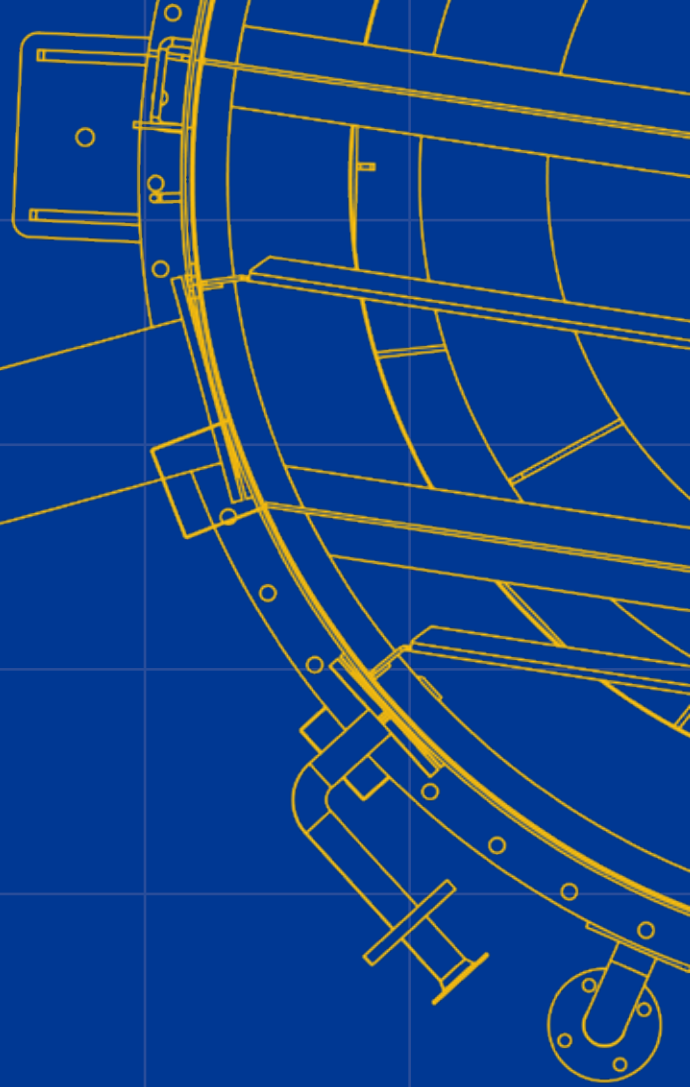
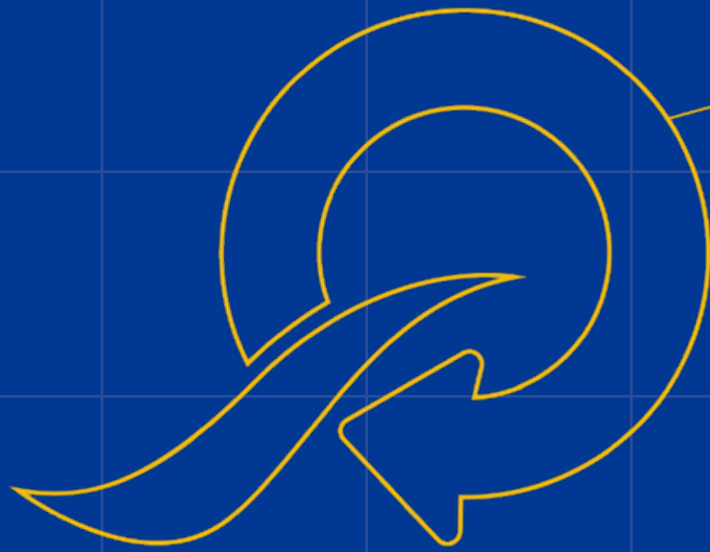
Clients, who have purchased a PureteQ scrubber, receive a list of recommended spare parts upon project finalization. Shipment of critical spare parts from our safety stock will be shipped within 24 hours (3 working days for clients without a service agreement).

We offer Original Equipment Manufacturers' (OEMs) components at a fair price. For clients with a PureteQ Service Agreement, who have other brands of scrubber systems installed, we evaluate the scrubber system and recommend what parts need to be stored on board and which can be supplied from PureteQ safety stock in Asia or Europe.

ONE STOP SERVICE

A PureteQ Service Agreement is all you need to service your scrubbers and sensors of all brands:

- 24/7/365 hotline service
- Spare part management
- Training of crew
- Operational advice & reporting
- Certified calibration & sensor replacement program



PureteQ

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Connect with us on
WeChat

PureServ

General service & troubleshooting:
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Spareparts & components:
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SERVICE HOTLINE

Urgent and emergency service matters are handled 24/7/365 through one of our service hotlines:

Denmark (Svendborg): +45 3699 0222

USA (Houston): +1 (832) 460 1019

Hongkong: +852 8192 5114

Japan: +81 50 5532 6875

WWW.PURETEQ.COM