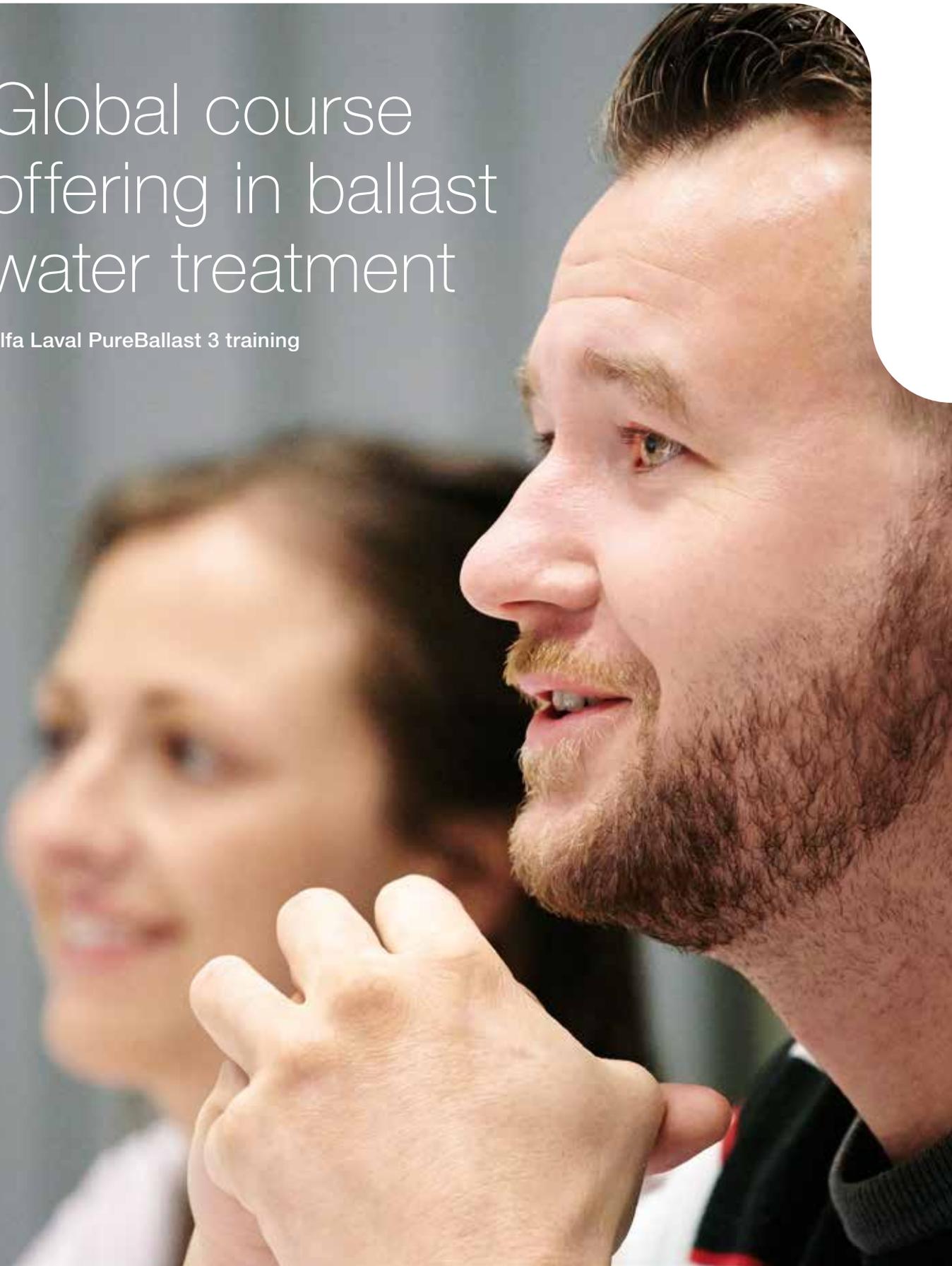




Global course offering in ballast water treatment

Alfa Laval PureBallast 3 training





Why Alfa Laval PureBallast 3 training?

Training is a prerequisite for optimizing the performance of your equipment and safeguarding your investment. In the case of your ballast water treatment system, it also safeguards your compliance.

To get the most out of PureBallast 3, you need to be sure the people who work with it are equipped with the right know-how. Effective training will give them a broad understanding of how to use and maintain the system, as well as the practical skills to do so – ensuring high efficiency, correct operation and the performance you count on.

Whether at Alfa Laval's global training centres, aboard your ship, or at your convenience online, we provide the training you need to get ballast water treatment right.

With PureBallast 3 training you achieve:

- Compliance with regulatory demands
- Increased safety and equipment reliability
- Minimized operating costs and maximized equipment life
- More sailing time

Lack of crew knowledge is not a valid reason for non-compliance in ballast water treatment. In its annual report for 2017, the U.S Coast Guard (USCG) noted the potential consequences of crew failure: non-compliance, significant vessel delays and/or penalties. Alfa Laval training is one of the best ways to ensure that your PureBallast 3 system is always operated in a *safe, efficient and compliant* manner.



Who should sign up?

Complying with environmental legislation and minimizing operating costs requires engineers with knowledge and experience. Through our courses, participants gain in-depth technical expertise in PureBallast 3 systems and further hone their skills with regard to IMO and USCG regulations.

Target groups

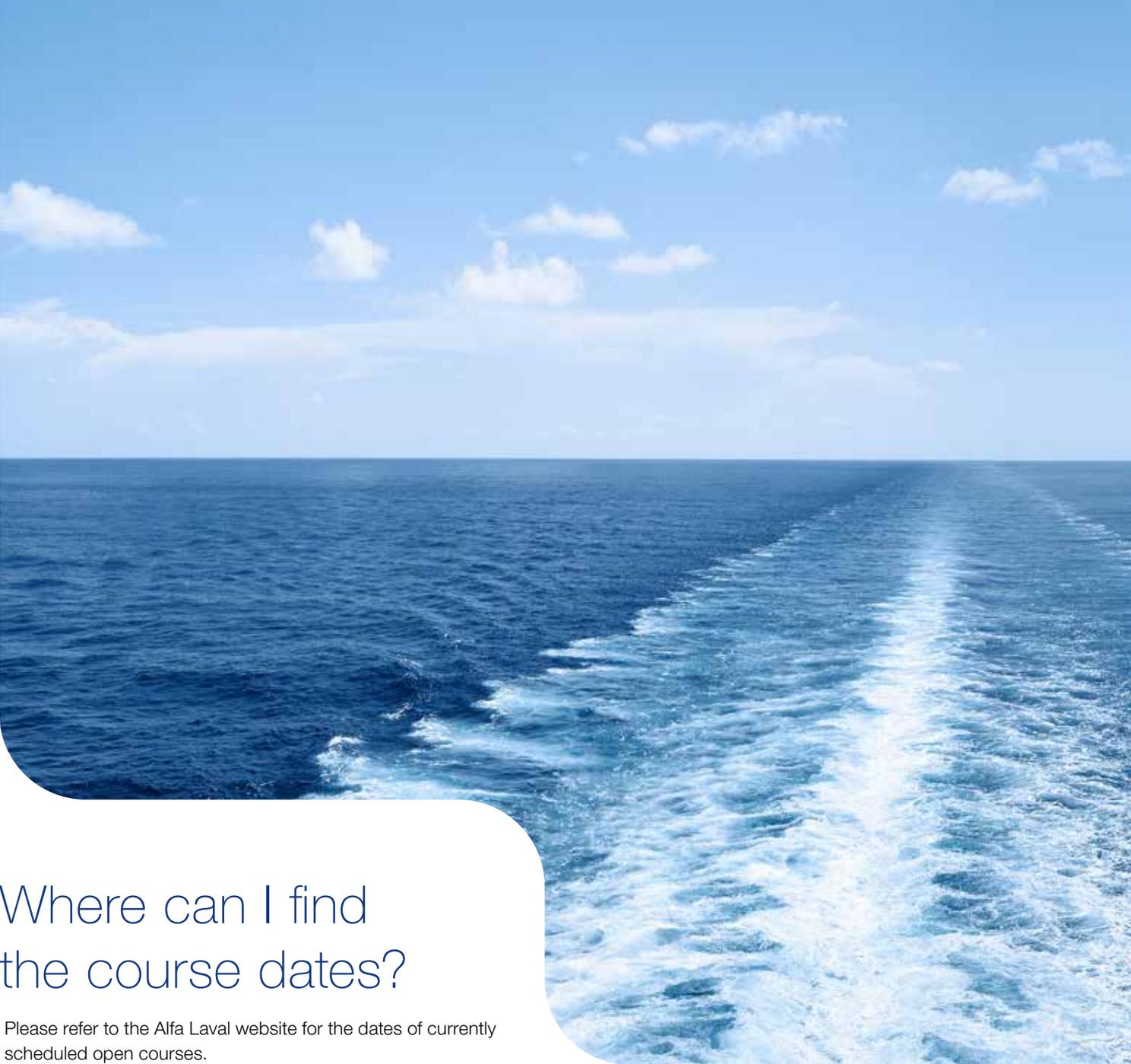
- Deck officers
- Superintendent engineers
- Chief engineers
- Ship engineers
- Apprentices
- Engineering companies
- Vessel design engineers
- Shipyard administrative and management personnel
- Shipowner administrative and management personnel



About our courses

We strive to ensure courses that fulfil your needs and are available at a site convenient for you. PureBallast 3 courses take place at Alfa Laval's facilities in Stockholm, Hamburg, Houston, Istanbul, Manila, Mumbai, Shanghai and Singapore.

Our courses combine theory with practical exercises. They are led by extremely qualified, thoroughly knowledgeable and easily approachable instructors – who know how to get their insights across. You will learn from people with vast marine industry experience, who will work with you in modern facilities suited to your individual requirements.



Where can I find the course dates?

Please refer to the Alfa Laval website for the dates of currently scheduled open courses.

If no suitable date is available, we can arrange a course that meets your schedule. Your nearest Alfa Laval sales office will be happy to support you in your training request. You can find the relevant local contact information on the Alfa Laval website.

How do I register for a course?

Course registration takes place on the Alfa Laval website. You will find relevant information and a registration form for each course on the PureBallast 3 training page. >>

Our general philosophy

- Theoretical and practical training combined
- Instruction in English, or in local languages by request
- Digital learning
- Continuous monitoring of customer satisfaction
- Global quality ensured by central course development at the Alfa Laval PureBallast headquarters and use of the same course plans and equipment
- Well-equipped facilities in strategic locations worldwide

PureBallast 3

Crew training in operation and maintenance

Learning goals

Upon completion of this course, participants will understand the PureBallast ballast water treatment process and know how to operate and troubleshoot a PureBallast 3 system. They will also be familiar with PureBallast 3 maintenance procedures and equipment calibration needs. In total, participants will understand the responsibilities and duties involved in operating a PureBallast 3 system.

Target group

This training is aimed at participants who will operate and maintain a PureBallast 3 system on board a vessel.

Prerequisites

None

Duration

2 days

Course fee

For pricing, contact your nearest Alfa Laval sales office, who will support you in your training request. The Alfa Laval website can provide you with the relevant local contact information.

Course content

- Principles of ballast water treatment and the differences between ballast water treatment technologies
- Practical identification of PureBallast 3 system components and their function
- PureBallast 3 operation and processes
- Practical simulation of different operational conditions
- Practical maintenance and calibration of PureBallast 3
- Recommended spare parts on board

Additional notes

This training is intended to give crew members confidence in operating and maintaining a PureBallast 3 system. It combines theory and hands-on operational exercises at a training facility equipped with a full-scale PureBallast 3 system.

The training is conducted at facilities in Stockholm, Hamburg, Houston, Istanbul, Manila, Mumbai, Shanghai and Singapore. It can also be provided on the customer's vessel with access to the actual system that the crew will be using.





“What I appreciated most was the instructor’s expertise and professional attitude. We received a good presentation of the test rig and quality explanations. And I enjoyed the real-life discussions between companies. This was very practical.”

PureBallast 3

Engineering company training – for retrofit and newbuild

Learning goals

Upon completion of this course, participants will be able to plan, design and install a PureBallast 3 system in the swiftest manner possible. The course focuses on mechanical installation requirements and best practices, but it also covers control system integration, options and Ex systems.

Target group

This training is aimed at engineering companies and yards who will design the integration of PureBallast 3 into the vessel.

Prerequisites

Experience of integrating equipment into a retrofit/newbuild vessel design.

Duration

2–3 days

Course fee

For pricing, contact your nearest Alfa Laval sales office, who will support you in your training request. The Alfa Laval website can provide you with the relevant local contact information.

Course content

- Concept, components and processes
- Installation requirements
- System integration: P&ID, pump curves and fitting
- System integration: signals and software
- Retrofit process
- Maintenance and recommended spare parts on board
- Collaboration between Alfa Laval and engineering companies
- Service package offering

Additional notes

This training is conducted at our state-of-the-art facility in Stockholm.

PureBallast 3

Basic product knowledge and operation for shipowners

Learning goals

Upon completion of this course, participants will understand the basics of the PureBallast ballast water treatment process, as well as the regulatory demands and shipowner responsibilities in complying with the IMO and USCG legislation. They will also know how to optimize the total cost of ownership of a PureBallast 3 system.

Target group

This training is aimed at shipowner administrative and management personnel, i.e. persons working with ballast water issues for a fleet who need the knowledge to support their organization internally.

Prerequisites

None

Duration

1 day

Course fee

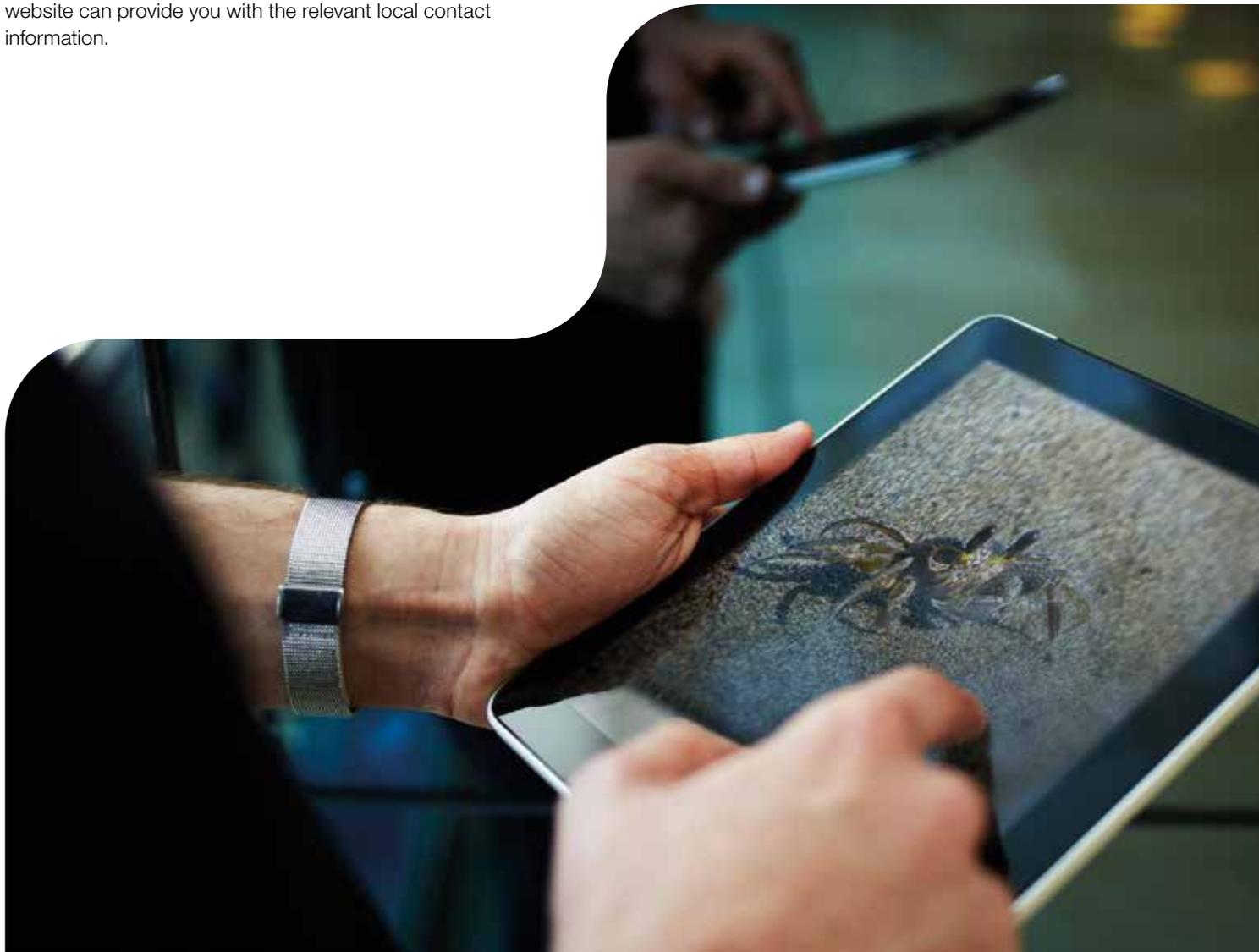
For pricing, contact your nearest Alfa Laval sales office, who will support you in your training request. The Alfa Laval website can provide you with the relevant local contact information.

Course content

- Concept, components and processes
- Operating basics
- Maintenance and calibration basics
- Technical information regarding installation requirements and system integration
- Recommended spare parts on board
- Service package offering
- IMO and USCG regulations

Additional notes

This training is normally adjusted to the participants' interests and information needs. For example, specific emphasis can be placed on installation, service or engineering. The training is conducted at our state-of-the-art facility in Stockholm.



PureBallast 3

E-learning

Learning goals

Upon completion of the e-learning programme, participants will have a practical familiarity with PureBallast 3 and its integration with the vessel's piping and tanks. E-learning allows trainees to explore and operate a computer-simulated PureBallast 3 system, learning how to start processes and attend to alarms.

The e-learning modules are intended as a complement to face-to-face instruction, which is always recommended for in-depth PureBallast 3 crew training.

Target group

All

Prerequisites

None

Course fee

For pricing, contact your nearest Alfa Laval sales office, who will support you in your training request. The Alfa Laval website can provide you with the relevant local contact information.

Course content

The e-learning programme is an online/offline training tool that introduces the PureBallast 3 system layout and provides an overall understanding of how to navigate the control system. It comprises a number of different modules:

- *Introduction (90 minutes)*
This module introduces PureBallast 3 and provides an overall understanding of the components, control system navigation and system operation. Three versions are available depending on the system type (Compact, Compact Flex or Std & Ex).
- *Operation (60 minutes)*
This module covers IMO and USCG modes and how to operate the system to ensure ongoing compliance.
- *Service and maintenance (15 minutes)*
This module includes training in safety, calibration, maintenance and troubleshooting.
- *Introduction to ballast water sampling (45 minutes)*
This module explains why, when and how ballast water sampling is carried out, as well as the IMO and USCG sampling requirements specific to UV ballast water treatment systems.



- *Simulator (45 minutes)*
The simulator offers a closer look at a PureBallast 3 Std system and its components. Various processes can be run from the control panel: ballasting, deballasting, stripping or CIP
- *How-to videos (30 minutes total)*
A series of around 30 short how-to videos, covering the most important PureBallast 3 operations, is available as a complement to the other modules and the written instructions in the system manual.

Additional notes

The e-learning modules are available 24/7 from anywhere in the world, which makes it easier to determine, improve and maintain crew competence levels with regard to ballast water treatment. In this way, e-learning helps shipowners and operators maximize the return on their equipment investment and feel confident in adhering to IMO and USCG legislation.

For integration into the vessel's Learning Management System (LMS), contact your nearest Alfa Laval sales office, who will support you in your training request. The Alfa Laval website can provide you with the relevant local contact information.

“The e-learning programme will save us man hours of training in the office, enhance safe operation and shorten the period of handovers on board. Using this simulator for training our seafarers will greatly help them conceptualize the system more easily and accurately.”

How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com

100001156-2-EN 2210