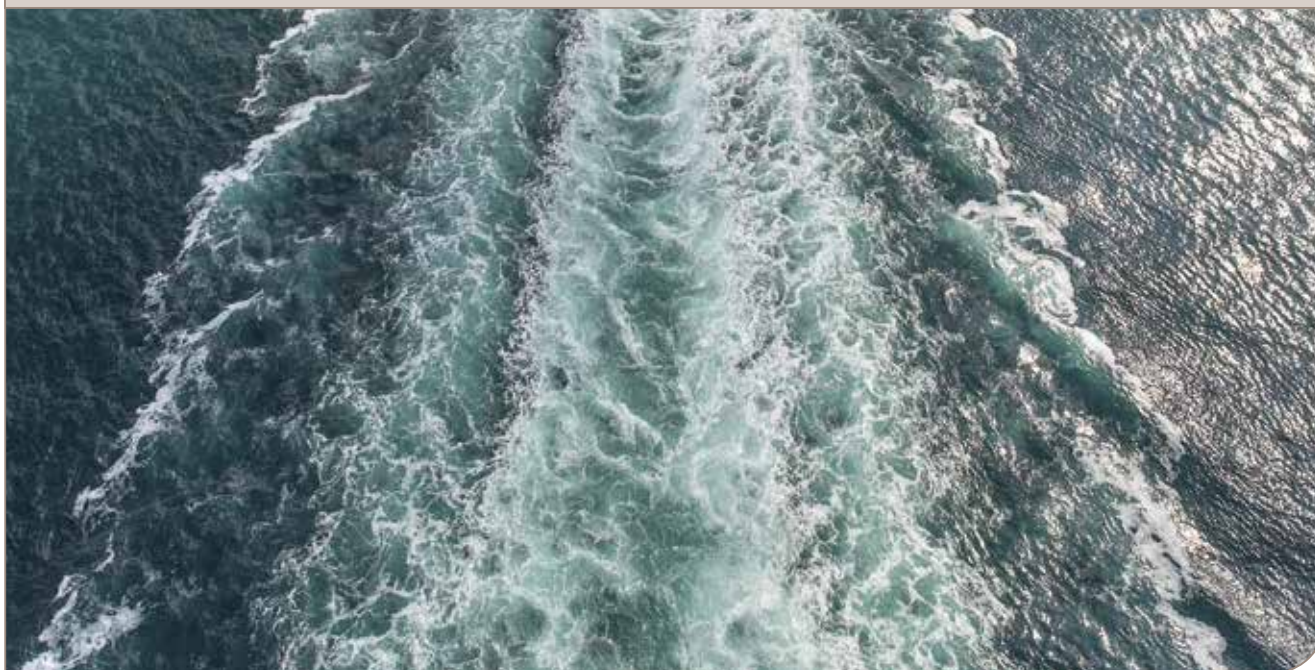# Alfa Laval PureBallast 3 Computer-Based Training (CBT)

Ballast water management self-study, 3D simulator and self-assessment

Alfa Laval PureBallast 3 Computer-Based Training (CBT) is an online/offline training tool that provides an introduction to the PureBallast 3 system layout and an overall understanding of how to navigate the control system. It combines self-study in ballast water management with a general 3D simulation of the Alfa Laval PureBallast 3 ballast water treatment system (see reverse), as well as a self-assessment.

As a computer-based resource, PureBallast 3 CBT is available for your master and crew 24/7. It is intended as a complement to face-to-face instruction, which is always recommended for in-depth PureBallast 3 crew training.

Application

Ballast water management is no longer tomorrow's issue. The IMO Ballast Water Management Convention (effective September 2017) and the U.S. Coast Guard Ballast Water Discharge Standard (effective December 2013) both demand either ballast water treatment or ballast water exchange, depending on the vessel's compliance date.

Going forward, it is a must to have a functioning ballast water treatment system and a crew that is trained to operate and maintain it according to manufacturer specifications. Both IMO and the U.S. Coast Guard have made clear that training and education must cover ballast water management practices and the specifics of the ballast water treatment system.

PureBallast 3 CBT helps address the challenge of keeping the master and crew on duty updated and trained, no matter where or when they board.

Benefits

- Confidence adhering to IMO and U.S. Coast Guard training policy
- Development and assessment of crew ballast water management skills
- Training availability 24/7
- Training availability regardless of location

Content overview

- General knowledge of ballast water management
- Introduction to PureBallast 3 and its components
- Simulated basics of PureBallast 3 operation

See the reverse for detailed descriptions of the individual training components.

Recommended computer specifications

Processor:	Intel® Core™ i5
RAM:	8 GB
Hard drive:	240 Gb
Graphic card:	GeForce, minimum 2 GB RAM
Monitor:	Full HD (1920 x 1080)

PureBallast 3 CBT training components

Self-study session

For a ballast water treatment system to operate as it should, it must be used regularly and in accordance with manufacturer specifications. Improving crew operational knowledge of the ballast water treatment system is thus important to ensure reliability. The self-study component of PureBallast 3 CBT familiarizes the crew with PureBallast 3 and covers:

- An introduction to the issue of ballast water and invasive species
- PureBallast 3 – system concept and components
- PureBallast 3 – process description
- PureBallast 3 - integration into the vessel
- PureBallast 3 – control system
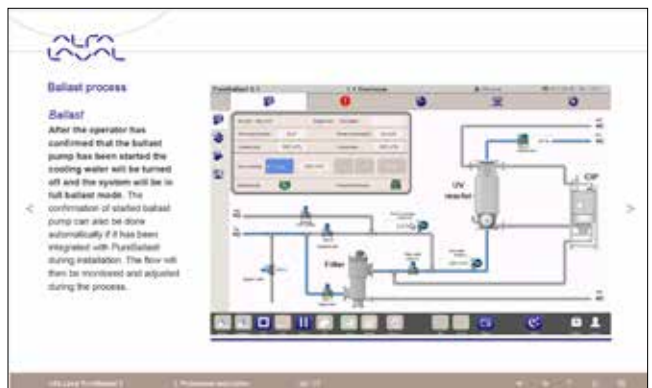
PureBallast 3 – 3D simulator

The PureBallast 3 computer simulation provides a practical way to become more familiar with the PureBallast 3 components, flow chart and control system as a whole. It presents a typical installation of the system in 3D, showing its functions and its connections to ballast water piping and tanks. By creating an understanding of how everything fits and works together, it can increase preparedness for actual operation on board. The simulator lets crews:

- View and become familiar with PureBallast 3 components and the control system
- Operate a simulated PureBallast 3 system to learn how to start processes and attend to alarms
- Understand PureBallast 3 integration with the vessel

Self-assessment

The final component of PureBallast 3 CBT is a self-assessment, with questions covering ballast water management in general and PureBallast 3 specifically. The self-assessment will:

- Generate random questions each time
- Test crew skills to show what has been learned
- Document results in a printed training report

About Alfa Laval PureBallast 3

Alfa Laval PureBallast 3 is an automated inline treatment solution for the biological disinfection of ballast water. Operating without chemicals, it combines initial filtration with an enhanced form of UV treatment to remove organisms in accordance with stipulated limits.

PureBallast 3 is the first solution to be type approved by IMO according to the revised (2016) G8 guidelines and is also type approved by the U.S. Coast Guard. It is certified for ballast water treatment in all types of water:

fresh, brackish and marine. Single systems can be configured for flows of 32–3000 m³/h, with multiple systems used for even larger capacities.

Due to its enhanced UV technology and power ramp-up capabilities, PureBallast 3 provides unmatched biological disinfection performance in low-clarity waters. When operating in IMO-regulated waters, full-flow treatment is possible where the UV transmittance is as low as 42%.

Alfa Laval reserves the right to change specifications without prior notification.

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.