



Alfa Laval PureBallast 3 Ex deckhouse

Deckhouse solution for tankers with optional booster pump unit



Alfa Laval has developed standard deckhouse solutions for Alfa Laval PureBallast 3 Ex ballast water treatment systems. Each deckhouse is delivered as a pre-assembled solution, including the PureBallast 3 Ex system and all internal piping and wiring, for easy integration into the vessel. If needed (see below), a booster pump unit can be integrated to ensure sufficient pressure without modifications to the existing ballast pumping system.

Application

A large portion of the world's tanker fleet uses submersible pumps, e.g. Framo pumps or the equivalent, to eliminate the need for a pump room and maximize space for the transport of cargo. This usually poses two challenges when installing a ballast water treatment system. First, there is not enough internal space available to install the system, which means that it must be installed in a deckhouse. Second, when the system is installed in a deckhouse, the existing ballast pumping system does not deliver sufficient pressure for the ballast water treatment system to function properly. The latter is why Alfa Laval has developed the optional PureBallast 3 booster pump unit (BPU), which is fully integrated with the PureBallast 3 Ex system inside the deckhouse. The BPU ensures sufficient pressure at all times, which eliminates the need to modify the existing ballast pumping system.

For specific details regarding the PureBallast 3 Ex system or BPU, please refer to the PureBallast 3 Std & Ex or PureBallast 3 booster pump unit leaflet.

Benefits

- Pre-assembled PureBallast 3 Ex system in standardized deckhouse
- Integrated solution reviewed by classification societies
- Durable construction with materials according to requirements
- Climate regulation through integrated heating and ventilation*
- Optional booster pump unit to ensure sufficient pumping head without modifications to existing pumps
- Full backing from Alfa Laval's global service organization

Configuration

The flow-related components of the PureBallast 3 Ex system (UV reactor, filter and CIP unit) are contained within the deckhouse, as is the optional booster pump unit. The lamp drive cabinet, control cabinet and optional booster pump VFD are installed outside the deckhouse and within the vessel's safe zone.

*Ambient temperature outside deckhouse: min. -20°C to max. +45°C

Safety classification

All components and wiring inside the deckhouse are classified for use in hazardous areas in accordance with the IEC 60079 series of standards:

- ATEX certified Zone 1
- Explosion group IIB + H2
- Temperature class T4 (135°C)

Scope

The standard deckhouse scope of supply includes the following:

- Ballast water treatment system
 - PureBallast 3 Ex system
- Deckhouse heating and ventilation
 - Heater
 - Electrically driven ventilation fan
- Interior lighting
 - Fluorescent lamps with Ex approval
 - Emergency lights integrated into the standard lamp units
- Fire detection installation
 - Prepared placement and connection points for general vessel alarm beacon, heat and smoke detectors
 - Prepared connection to vessel fire detection system
- Options inside deckhouse
 - Booster pump unit (BPU)
 - Backflush pump



PureBallast 3 Ex system in deckhouse	Dimensions (mm) (L x W x H)*	Approx. net/dry weight (kg) incl. PureBallast 3 Ex system*
600/750/1000/1500	6096 x 2438 x 2896	13,500 – 16,000
2000	9125 x 2438 x 2896	21,500

*Exact weight and dimensions to be set after order

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