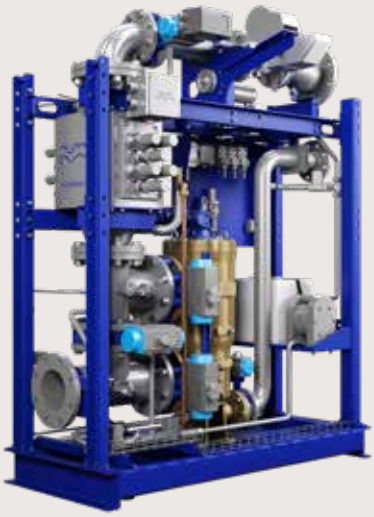
# Alfa Laval PureBallast 3 Compact

## Skid-mounted ballast water treatment system with minimal footprint

Alfa Laval PureBallast 3 Compact is a third-generation PureBallast system designed for simple, plug-and-play installation. Like other PureBallast 3 systems, it is fully automated and uses an enhanced form of UV treatment for the biological disinfection of ballast water. (See the PureBallast 3 Compact Flex or PureBallast 3 Std leaflets for details.)

The system is delivered as a compact module, which comes ready-assembled and mounted on a skid with all necessary equipment and prefabricated pipework. The module is easy to connect and is pre-tested before delivery.



### Application

Type approved by IMO and the U.S. Coast Guard (USCG), PureBallast 3 Compact is designed for ballast water treatment in all water salinities: fresh, brackish and marine. Even in low-clarity water, it provides unmatched biological disinfection performance. When operating in IMO-regulated waters, full-flow treatment is possible where the UV transmittance is as low as 42 %.

PureBallast 3 Compact is specifically designed for compact installation and can be configured for flows of 32–300 $m^3/h$.

### Type approvals

- *IMO*
  PureBallast 3 Compact systems have IMO revised G8 type approval. When operating in IMO-regulated waters, they make maximum use of their power management and other capabilities.
- *USCG*
  PureBallast 3 Compact systems have USCG type approval and provide the option of minimized holding time when operating in USCG-regulated waters. The minimized holding time is just 2.5 hours and is only needed when crossing between Captain of the Port Zones.

### Benefits*

- Minimal system footprint
- Simple installation as a plug-and-play skid
- Superior performance in all water salinities: fresh, brackish, marine
- Excellent performance in low-clarity waters
- Effective power management

* *Additional benefits and details can be found in the PureBallast 3 Compact Flex or PureBallast 3 product leaflets*

### Skid components

The following components are incorporated into the PureBallast 3 Compact skid:

- *Filter*
  The filter is used during ballasting operations to block the intake of larger organisms and reduce sediment in the ballast water tanks.
- *Reactor*
  Built with long-lasting super-austenitic stainless steel, the reactor comprises the enhanced UV treatment stage responsible for biological disinfection.
- *Compact Cleaning-In-Place (CIP) unit*
  UV lamp performance is safeguarded by an automatic CIP cycle that removes UV-impairing fouling and scaling.

## Electrical cabinet

In PureBallast 3 Compact, the lamp drive cabinet and control cabinet are integrated into a single electrical cabinet. This cabinet provides power to the UV lamps and features a 7” display with a graphical user interface. The control system can be integrated with onboard automation systems via Modbus, allowing access to all functions through the vessel’s Integrated Ship Control System.

## Ex placement

PureBallast 3 Compact is configured for installation within the safe zone. For placement in the hazardous zone, a PureBallast 3 Ex system is required (see separate leaflet).

## Capacity range (flow in m³/h)

PureBallast 3 Compact is optimized for the smallest possible footprint in relation to the capacity of the ballast water pumps.

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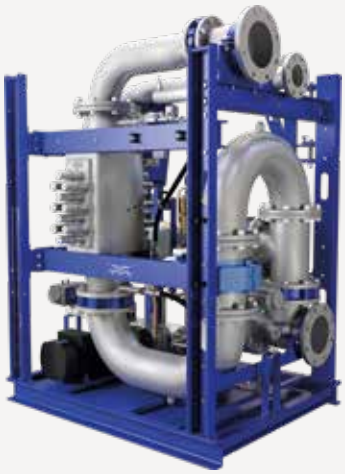
|---|---|---|---|---|---|---|---|
| PureBallast 3 Compact | (32)* | 85 | 135 | | 170 | 250 | 300 |

** PureBallast 3 Compact/85 system at reduced flow rate*

Electrical cabinet



System for 300 m³/h (footprint 2.2 m²)

## Technical data

| PureBallast 3 Compact | |
|---|---|
| Power consumption, 32–170 m³/h | Optimal 11 kW (20 kW at full ramp-up*) |
| Power consumption, 250/300 m³/h | Optimal 17 kW (32 kW at full ramp-up*) |

** Power consumption can be increased to handle low-clarity water with low UV transmittance.*

Power supply: 400–440 VAC, 50/60 Hz
Working pressure: Max 6 bar (up to 10 bar optional)

## Component dimensions

| PureBallast 3 Compact | Size (mm) (W × D × H) | Net/dry weight (kg) |
|---|---|---|
| Skid, 32/85 m³/h | 1312x680x1745 | 650/740 |
| Skid, 135/170 m³/h | 1500x680x1912 | 785/905 |
| Skid, 250/300 m³/h | 1500 × 1200 × 2050 | 1320/1421 |
| Electrical cabinet, 32–300 m³/h | 954x520x1466 | 160 |



**100001639-3-EN 2110**



**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