



Alfa Laval PureBallast 3.1 Compact

Ballast water treatment solutions for smaller vessels

Alfa Laval PureBallast 3.1 can be configured in a range of compact solutions optimized for smaller vessels, including skid-mounted solutions. Like their larger counterparts, these compact inline solutions are fully automated and use an enhanced form of UV treatment for the biological disinfection of ballast water. (See the main PureBallast 3.1 product leaflet for details.)

With a skid-mounted construction, a PureBallast 3.1 system is both very compact and easy to install due to prefabricated pipework. The skid has the smallest footprint on the market and is installed via simple plug-and-play contacts.

Application

PureBallast 3.1 solutions for smaller vessels are specifically designed for compact installation and flows of 32–300 m³/h.

PureBallast 3.1 is certified for ballast water treatment in all types of water: fresh, brackish and marine. It provides unmatched biological disinfection performance in low-clarity waters, offering full-flow treatment where the UV transmittance is as low as 42%.

Benefits*

- Minimal system footprint
- Simple installation as a plug-and-play skid
- Certified performance in any type of water: fresh, brackish, marine
- Full-flow treatment in low-clarity waters (UV transmission as low as 42%)
- Effective power management

* Additional benefits and details can be found in the main PureBallast 3.1 product leaflet



Skid components

The following components are incorporated into the compact PureBallast 3.1 skid:

- *Filter*
A 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 254 SMO steel, the reactor comprises the enhanced UV treatment stage responsible for biological disinfection.
- *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 3.1 solutions for smaller vessels, the lamp drive cabinet and control cabinet of larger systems 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.

EX placement

EX configurations are not currently supported by skid-mounted versions of PureBallast 3.1. The skid should be installed within the safe zone.

Technical data

Power consumption	32-170	250/300
	Optimal 11 kW (20 kW at full ramp-up*)	Optimal 17 kW (32 kW at full ramp-up*)

Power supply	400–440 VAC, 50/60 Hz	
Working pressure	Max 6.0 bar (up to 10.0 bar optional)	

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

Capacity range

PureBallast 3.1 solutions for smaller vessels are optimized for the smallest possible footprint in relation to the capacity of the ballast water pumps.

Flow in m ³ /h	(32)*	85	135	170	250	300

* PB-85 system at reduced flow rate.

Component dimensions

Dimensions for the larger skid-mounted systems are shown below. The size of smaller systems will be dependent on the system requirements.

PB 32-170	Size (mm)	Net/Dry weight (kg)
	Footprint (W × D × H)	
Skid	1500 × 700 × 1913	800
Electrical cabinet	800 × 520 × 1468	160

PB 250/300	Size (mm)	Net/Dry weight (kg)
	Footprint (W × D × H)	
Skid	1500 × 1200 × 2050	1350/1250
Electrical cabinet	800 × 520 × 1468	160



Skid-mounted system for 300 m³/h
(footprint 2.2 m²)



Electrical cabinet

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