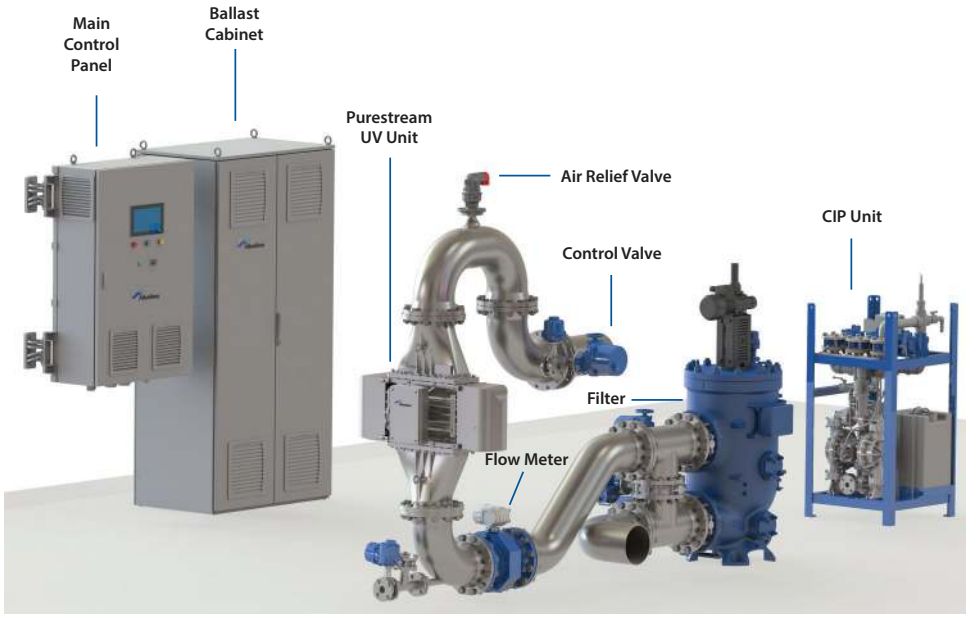
Atlantium Marine

DATA SHEET

Purestream™
UV Ballast Water Management System

Purestream™ is an advanced UV ballast water management technology that provides effective treatment and unique operational advantages for the treatment of regulated organisms. This non-chemical, environmentally friendly solution is based on a revolutionary 20-micron screen filter and a proprietary medium pressure UV system.

Purestream systems are designed to treat 100–1,500 m^3/h of fresh, brackish, or seawater and they are validated to operate at minimum retention times (≤ 24 hours) following treatment under difficult water conditions with UV transmittance as low as 40% UVT.



UV Dose	=	UVT	+	Flow	+	Power	+	UV Apparatus
Purestream automatically and efficiently maintains the UV dose required to meet IMO and USGC Type Approval.		Purestream continuously monitors UVT and adjusts the UV dose accordingly to remain in IMO and USCG regulatory compliance. Purestream is designed for UVT ≤ 40 %UVT.		Purestream continuously controls the flow to provide the validated UV dose.		Purestream continuously monitors the UV output of each UV lamp (radiation intensity) with a dedicated sensor, one per lamp.		Designed by Atlantium to deliver the needed dose in the most efficient way under the most challenging water conditions.

Process Overview

During ballasting, the water flows through the filter and then flows through the Purestream UV system. During de-ballasting, the filter is automatically bypassed and ballast water flows through a second-pass treatment before discharge. There are no retention time limitations for de-ballasting. For the IMO, there is no requirement for water treatment during de-ballasting.

- Proprietary comprehensive real-time monitoring of critical parameters to automatically and efficiently maintain the maximum flow rate and the required UV dose required to meet application-specific needs.
- Extensive control mechanism that assures operators and authorities about the unit's functionality.

Free Manual PDF downloaded from: https://watersoftenerplus.com/manuals/_pdf//manual.pdf
Back to product page: https://watersoftenerplus.com

Purestream™ Specifications – Modular System Components

Purestream™ UV BWMS	Capacity Range (m^3/h)	Filter - Loose					UV Unit - Loose (Vertical)				Ballasts Electrical Cabinet(s) - Loose					Power Consumption Nominal (kW)	Total Weight (kg)
		Dimensions (m)			Qty.	Weight (kg)	Dimensions (m)			Weight (kg)	Dimensions (m)			Qty.	Weight (kg)		
		L	W	H			L	W	H		L	W	H				
PS-100	≤ 150	0.62	0.62	1.16	1	496	1.04	0.93	0.39	160	0.7	1.0	2.2	1	320	15	976
PS-200	≤ 250	0.62	0.62	1.16	1	496	1.04	0.93	0.39	160	0.7	1.0	2.2	1	320	22	976
PS-300	≤ 350	0.62	0.62	1.16	1	496	1.04	0.93	0.39	160	0.7	1.0	2.2	1	320	36	976
PS-500	≤ 500	0.69	0.67	1.62	1	600	1.63	1.28	0.45	410	0.7	1.0	2.2	2	320	64	1650
PS-900	≤ 900	0.69	0.67	1.62	1	600	1.63	1.28	0.45	410	0.7	1.0	2.2	2	320	100	1650
PS-1200	≤ 1200	0.69	0.67	1.62	2	600	1.63	1.32	0.52	575	0.7	1.0	2.2	2	320	90	2415
PS-1500	≤ 1500	0.69	0.67	1.62	2	600	1.63	1.32	0.52	600	0.7	1.0	2.2	3	320	138	2760

Purestream™ Specifications – Skid System

Purestream™ UV BWMS (skid)	Capacity Range (m^3/h)	Dimensions (m)				Power Consumption Nominal (kW)	Total Weight (kg)
		L	W	H	Weight (kg)		
PS-100	≤ 150	2319	1062	2986	1100	15	1100
PS-200	≤ 250	2319	1062	2986	1100	22	1100
PS-300	≤ 350	2319	1062	2986	1100	36	1100

Notes:
1) Specifications subject to change without notice. Dimensions and weights are for reference only, ICD drawings should be used for design purposes.
2) Weights are dry
3) For max power consumption in backwashing sequence add 10-15%
4) Power supply: 400/440VAC, 50/60Hz
5) Total weight: Filter (PS-1200/PS-1500 include 2 filters), UV Unit and Ballasts Electrical Cabinet

Features and Benefits

- Real-time dose monitoring and advanced control system enables treatment of maximum flow at lowest UVT levels
- Suitable for treatment on all water types and temperatures, no salinity or heating requirements
- One-Pass treatment (IMO)
- 24-hour retention time validation, (USCG) (0-hour in process)
- Flexible installation, loose modules or skid system
- Small footprint for filter, UV and CIP skid
- No hazardous chemical handling or byproducts
- Zone 1 approval is underway

Purestream™ One-Pass™

- Enables discharge of wing tanks directly by gravity.

Advanced Proven Ballast Filtration

- Robust Construction — an austenitic stainless steel designed for maximum resistance to pitting and crevice corrosion.
- Self-Cleaning Filtering Process — seawater flows through the filter. The gradual dirt buildup on the inner screens surface causes an increase of the differential pressure across the filter. The self-cleaning process begins when the pressure differential reaches a pre-set value. Features automatic, uninterrupted focused flushing that cleans out 100% of the screen area, while using less than 10% of the total processed water.
- Suction Scanning Solution — a special mechanism offering automatic, uninterrupted focused flushing that cleans out 100% of the screen area, while using less than 10% of the total processed water.

Pressure Drop

Normal operation: 0.3 bar

Material

UV chamber: Super Duplex Stainless Steel CE3MN
Filter: 254 SMO® Weavewire screen and Epoxy coated housing

Flexible Supply Options

To manage flexible installation in constrained engine spaces modules will be supplied as loose items. Skid arrangements are available.

Global Service

Through our local agent and service network we can provide onboard survey, 3D scan and further engineering assistance to ensure a smooth and correct installation.

Atlantium Marine

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