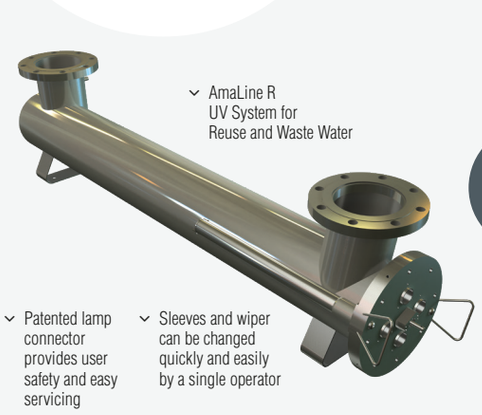
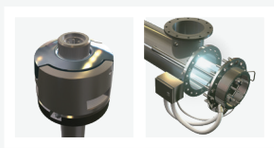
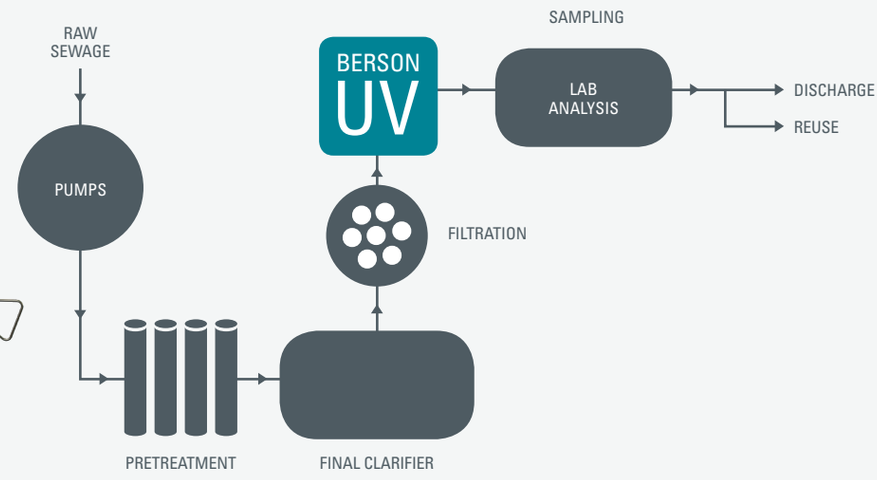
AmaLine R Range

UV FOR MUNICIPAL WASTE AND REUSE





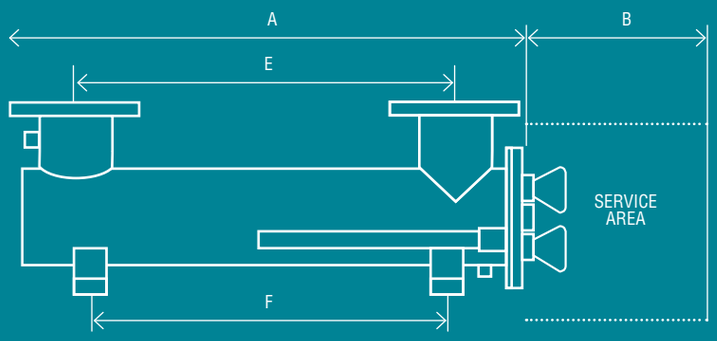


AMALINE R FOR WASTE WATER AND RECLAIMED WATER

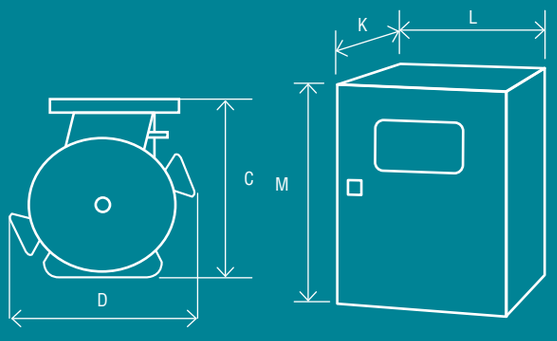
Berson AmaLine R systems are designed for the wastewater and reclaimed water market with energy efficiency and ease of maintenance in mind.

- By utilising amalgam lamps and a patented inlet reactor configuration, energy efficiency combined with low head loss provides an optimised design for this system.
- The unit is provided with automatic wiping to extend lamp life.
- A single operator can perform all maintenance requirements without the need for additional equipment or support.

KEY FEATURES	WHAT IT GIVES YOU	BENEFITS FOR YOU
Easy maintenance	Simple extending support arms to allow for quartz sleeve and wiper blade replacement	Single operator can quickly and easily carry out the maintenance without requiring external lifting equipment
Improve operator safety with patented lamp connector	Lamp orientation is fixed ensuring easy and safe installation and optimum performance	Simple, quick and safe lamp changes that self-align, allowing for minimum downtime and assurance of optimal system operation. Operator friendly design
	Lamp cannot be removed while chamber is energized	Protects operator from harm during lamp changes
	Lamp connector cannot be removed from pressurised system in the event of a broken sleeve	Protects operator from harm during servicing
Optimised design	Efficient chamber design using CFD modelling, optimises lamp(s) positioned in chamber	Ensures peak energy efficiency from the optimum distribution of intensity throughout the chamber, providing effective treatment
	Low pressure, high intensity, amalgam lamp technology with variable output ballasts (50 to 100%) provides low energy UV disinfection	Optimised power use for energy savings, low running temperature and greater lamp life
	U shape chamber design, provides effective treatment of low UVT water and easy installation	Provides efficient treatment, and can be integrated easily into existing pipework
Validations	UVDGM [2006]	Meets the latest USEPA drinking water standards
	NWRI [2012] for reuse	Reuse water certification with high energy efficiency



UV CHAMBER



CABINET

			Dimensions (mm)										Approx weight (Kg)	
Model	Maximum Power (kW)	Min T_{10}(%)	A	B	C	D	E	F	DN	K*	L	M**	Chamber (Empty)	Control Cabinet
AmaLine R 100	2.4	65	1710	1500	420	375	1415	1310	150	300	800	1000	105	90
AmaLine R 300	6.9	65	1805	1500	675	575	1370	1290	250	400	1200	1200	240	130

* Allow dimension L in front of cabinet for door opening and panel access.

** M dimension you need to allow space below the cabinet for cable entry and access (minimum of 250 mm).

*** System consists of two cabinets; separate dimensions K, L, M and weights are given for each cabinet.

All dimensions are approximate for clearance purposes only. Berson has a policy of continuous product development, exact drawings are available on request. All specifications are subject to change without notification. Your distributor or Berson account manager can advise on correct sizing and specification requirements.

UV CHAMBER	
Material:	Stainless steel 316L / 1.4404
Internal finish:	< 0.8 µm Ra, welds as laid
External finish:	Brushed to K280
Process (mating) connections:	Flange EN 1092-1 PN16
Drain connection:	BSP
End plate:	Removable end plate
Degree of protection:	IP54 equivalent to NEMA 12 but not for outside use
Arc tube (lamp):	Low pressure amalgam
Arc tube enclosure:	Pure quartz
Number of lamps:	4 (R 100), 12 (R 300)
Expected lamp life:	9000 hours
Wiper:	Automatic (electrically operated)
UV monitor:	Dry DVGW compliant UV sensor
Working fluid temperature:	5°C to 35°C
Hydrostatically pressure tested:	Yes to 15 bar
Chamber mounting:	Horizontal only
Operating pressure:	10 bar
Seals:	EPDM, ADI free, EC 1935/2004, FDA 21 CFR 177.2600 approved

OPTIONS
Cabinet material: Stainless steel 304
Operation and Maintenance manual and printed Installation and Commissioning manual in Chinese, English, French, German and Spanish
Flange options: ANSI 150, JIS, Table 'E'
Temperature sensor
NWRI guidelines (2012) validation
Cabinet IP rating: Carbon steel air conditioners IP 56, NEMA 4 or stainless steel version IP 56, NEMA 4X. Increases cabinet dimensions
Lead length: 20 and 29m

CABINET	
Material:	Polyester coated carbon steel RAL 7035
Degree of protection:	IP54 NEMA 12 indoor use only
Supply voltages (nominal):	230/400 ± 10% V 3L + N 50/60 Hz
Operating temperature range:	5°C to 40°C
Relative humidity:	<95% non-condensing
Cooling fans:	Yes
Interconnecting cable lengths:	10 m cabinet to chamber
Variable power:	Stepless (50% reduction in lamp output)

HMI CONTROL	
Display:	7" touch screen
Operating menu:	3 levels (2 with password protection)
Fault finding:	Event log

CUSTOMER OUTPUTS	
4-20 mA passive or active output:	UV RED dose, ballast power
VFC outputs:	System warning, lamp ready, common trip, system available, local or remote mode

CUSTOMER INPUTS	
4-20 mA passive or active input:	Flow meter and transmittance meter
VFC inputs:	Remote stop/start and remote reset

CUSTOMER COMMUNICATIONS PORT	
Base ethernet port:	Ethernet IP class 3

APPROVALS
CE marked, UL 508A

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