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With automatic cleaning—sleeves and sensors remain deposit free.



Smart controls – continuous monitoring and real-time display of DOSE.



Patented UV light protection shutter – the dry UV sensor can be removed without system shutdown for field verification.



PureLine PQ

ENVIRONMENTALLY FRIENDLY DISINFECTION

Meeting stringent water quality standards for the industrial market!

Aquionics' new PureLine PQ range is designed specifically to provide validated, performance qualified and chemical-free UV treatment of water in the food and beverage industries. Aquionics new PureLine PQ UV system takes disinfection to another level.

Not only has the PureLine PQ been designed to exacting industry standards using the latest design techniques to maximize performance, its disinfection performance has also been independently tested and validated by a 3rd party engineering firm to the 2006 US EPA UV Disinfection Guidance Manual (UVDGM).

The PureLine PQ systems fit into existing pipework relatively easily, requiring minimum disruption and site preparation. Maintenance is simple and can be carried out by on-site personnel. Systems are available in Medium Pressure lamp technology.



Food & Beverage



Marine



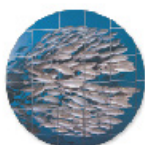
Pharmaceuticals



Electronics



Cosmetics & Toiletries



Aquaculture



Medical & Ophthalmic



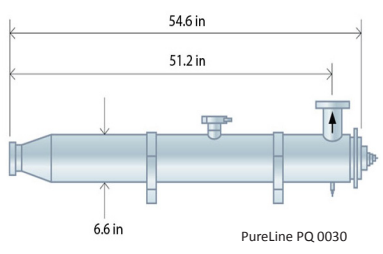
Low Pressure Systems

UV Chamber	
Material:	St 316L/1.4404
Internal finish:	As made pipe and tube, welds left as laid electropolished and passivated
External finish:	Sateen polish (120 grit) electropolished and passivated
Process (mating) connections:	Flange DN series PN16 rated
Drain connection:	BSPT
End plate:	Removable tri-clamp except PQ 0090 which is a bolted plate
Degree of protection:	IP65 equivalent to NEMA 4 but not suitable for outside use
Arc tube (lamp):	Low pressure amalgam/high purity quartz
Arc tube enclosure:	High purity quartz
Number of lamps:	1
Expected lamp life:	12000-16000 hours
Temperature sensor	Yes
UV monitor	Pre calibrated DVGW compliant dry UV monitor
Working fluid temperature:	+41°F to +104°F
Hydrostatically pressure tested:	Yes to PED requirements EN13445
Maximum CIP temperature:	203°F with control cabinet electrically isolated
Operating/Design pressure:	6 bar / 7 bar
Pressure loss:	Typically < 20 mbar including wiper
Seals:	EPDM FDA approved WQA certified to NSF61 except PQ 0005

Cabinet	
Material:	Polyester coated carbon steel
Degree of protection:	IP65/NEMA 4
Supply voltages:	230V (207V to 263V) 50/60Hz
Operating temperature range:	+41°F to +104°F
Relative humidity:	<90%
Cooling fans:	No
Cable length:	32 ft
External contacts:	4-20mA signal for UV dose and UV intensity, 24V dc 10mA max for trip, warning, system available, system remote, lamp running, replace lamp and Modbus for complete remote control

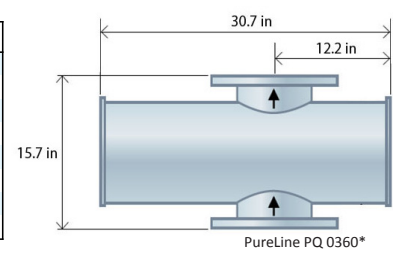
Features	
• Lamp on/off	• Warning and trip messages
• Remote mode	• Lamp fail
• Door interlocked cabinet isolator	• Low UV % intensity

Options	
• Validation Support Pack	• In field reference monitor and intensity meter (LP)
• Stainless Steel cabinet (304)	• 98 ft lead lengths
• Printed operating, menu and safety guides available in Chinese, French, and German	• Tri-clamp connections to BS 4825 with tri-clamp drain internal finish <0.38µm Ra maximum welds as laid electropolished and passivated
• Auto-wiper pneumatic operation	• CIP maximum 266°F with cabinet electrically isolated
• ANSI 150 flanges and NPT drain	



Model	Flow Rate (gpm)	Flange (in)	Number of Lamps	Max Power (kW)
PureLine PQ 0005	16	1.5	1	.08
PureLine PQ 0008	42	2	1	.14
PureLine PQ 0016	83	2	1	.27
PureLine PQ 0030	64	3	1	.27
PureLine PQ 0090	449	6	1	.55
PureLine PQ 0200*	903	8	2	5.4
PureLine PQ 0360*	1717	8	4	10.7
PureLine PQ 1100*	4007	14	4	17.1

The maximum disinfection capacity is based on a dose of 32mJ/cm² RED MS2 phage T₁₀ 95%



Medium Pressure Systems*

UV Chamber	
Material:	Stainless steel 316L
Internal finish:	<0.8µm Ra max, welds left as laid electropolished and passivated
External finish:	Brushed to K280 electropolished and passivated
Process (mating) connections:	Flange DN series PN10 rated
Drain connection:	BSPT
End plate:	Removable bolted plates
Degree of protection:	IP54 (NEMA 12)
Arc tube (lamp):	Medium pressure/high purity quartz
Arc tube enclosure:	High purity quartz
Number of lamps:	2-4
Expected lamp life:	9000 hours
Temperature sensor	Yes
UV monitor	4 Pre calibrated DVGW compliant dry UV monitor
Working fluid temperature:	+41°F to +104°F
Hydrostatically pressure tested:	Yes
Maximum CIP temperature:	203°F with electrical cabinet electrically isolated
Operating/Design pressure:	6 bar / 7 bar
Pressure loss:	Typically <100 mbar
Seals:	Viton and NBR 90 approved to NSF61

Cabinet	
Material:	Painted carbon steel
Degree of protection:	IP54 (NEMA12)
Supply voltages:	Model PQ 0200 and PQ 0360: 200-300V 50/60 Hz Model PQ 1100 400V 50/60 Hz or 480V 50/60 Hz
Operating temperature range:	+41°F to +104°F
Relative humidity:	<90%
Cooling fans:	Yes
Cable length:	32 ft
External contacts:	4-20mA signal for UV dose and UV intensity, Volt free contacts for trip, warning, system available, system remote, UV on, system ready, dose valid, warming, cooling, system OK, wiper fault, ground fault, chamber/cabinet trip, cabinet temperature warning, chamber temperature warning, low UV, lamp failure, Modbus output. Inputs remote start/stop, remote reset, remote wipe cycle.

Features	
• Lamp on/off	• Warning and trip messages
• Remote/local mode	• Lamp fail
• Door interlocked cabinet isolator	• Low UV % intensity

Options	
• Validation Support Pack	• In field reference monitor and intensity meter (LP)
• Stainless Steel cabinet (304)	• 98 ft lead lengths
• Printed operating, menu and safety guides available in Chinese, French, and German	• ANSI 150 flanges and NPT drain



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