

*One DVGW compliant sensor per lamp ensures accurate monitoring.*



*Robust power supplies with 20 year guaranteed life – means less maintenance and O&M cost.*



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



## ENVIRONMENTALLY FRIENDLY DISINFECTION

*Our most rigorously developed and tested products ever created for Pharma. Disinfection has evolved, and we can prove it!*

This is Pharma process water disinfection taken to the next level. We meet the standards that the best demand. Standards enforced/applied by external experts determined to ensure Pharma enjoys the most reliable, effective, and complete disinfection.

The PQ model is 3rd party validated in the USA to the 2006 USEPA protocol following the UV Disinfection Guidance Manual (UVDGM). The system provides accurate DOSE delivery giving you the security you need – guaranteed.

PQ systems provide complete peace of mind. Each system is complete with certificates and testing records, material certificates for all wetted parts, performance validation documentation and approved to UL, NSF61 and IEC standards.

The next level of Pharma disinfection is here – guaranteed by Aquionics.



**AQUIONICS**  
UV Delivered

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
Degree of protection:	IP65 equivalent to NEMA4 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	No
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 lamp off
Operating/Design pressure:	6 bar / 7 bar
Pressure loss:	Typically < 20 mbar
Seals:	EPDM FDA approved WQA certified to NSF 61 except PQL 0005 and PQP 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:	10m
External interface:	4-20mA signals 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	• UV intensity %
• Remote start/stop	• Warning and trip messages
• Remote/local operation	• Door interlocked cabinet isolator
• Lamp fail	• Low UV % intensity

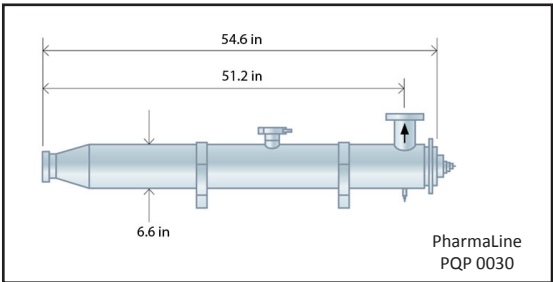
PQL Additional Features	
• <0.38µm Ra max welds left as laid electropolished and passivated	
• Process (mating) connections: Tri-clamp to BS 4825	
• Drain connection: Tri-clamp to BS 4825	



PHARMALINE PERFORMANCE QUALIFIED

	Model	Flow Rate (gpm)	Flange (in)	Number of Lamps	Max Power (W)
Performance Qualified Loop	PharmaLine PQL 0005	14	1.5	1	80
	PharmaLine PQL 0009	32	2	1	140
	PharmaLine PQL 0016	65	2	1	270
	PharmaLine PQL 0036	82	3	1	270
	PharmaLine PQL 0128	563	6	1	500
Performance Qualified Process	PharmaLine PQP 0005	16	1.5	1	80
	PharmaLine PQP 0008	42	2	1	140
	PharmaLine PQP 0016	83	2	1	270
	PharmaLine PQP 0030	86	3	1	270
	PharmaLine PQP 0090	453	6	1	500

PQL: The maximum disinfection capacity is based on a dose of 32mJ/cm<sup>2</sup> RED MS2 phage T<sub>10</sub> 98%  
PQP: The maximum disinfection capacity is based on a dose of 32mJ/cm<sup>2</sup> RED MS2 phage T<sub>10</sub> 95%



Options	
• Validation Support Pack	• 30m lead lengths
• Stainless Steel cabinet (304)	• CIP maximum 266°F with cabinet electrically isolated
• Printed operating, menu and safety guides available in Chinese, French, and German	• Optional chamber internal finish 0.38µm welds as laid electropolished and passivated (standard on PQL)
• Auto-wiper pneumatic operation (excludes PQL)	• ANSI 150 flanges and NPT drain (excludes PQL)
• In field reference monitor and intensity meter	

A HALMA COMPANY  
Celebrating 85 Years of Pure Performance from the UV Technology Pioneers

