

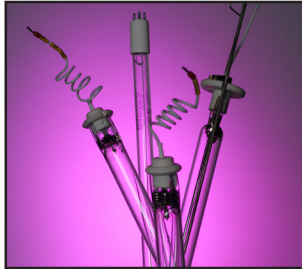
# PharmaLine™ DO

## DE-OZONATION SERIES

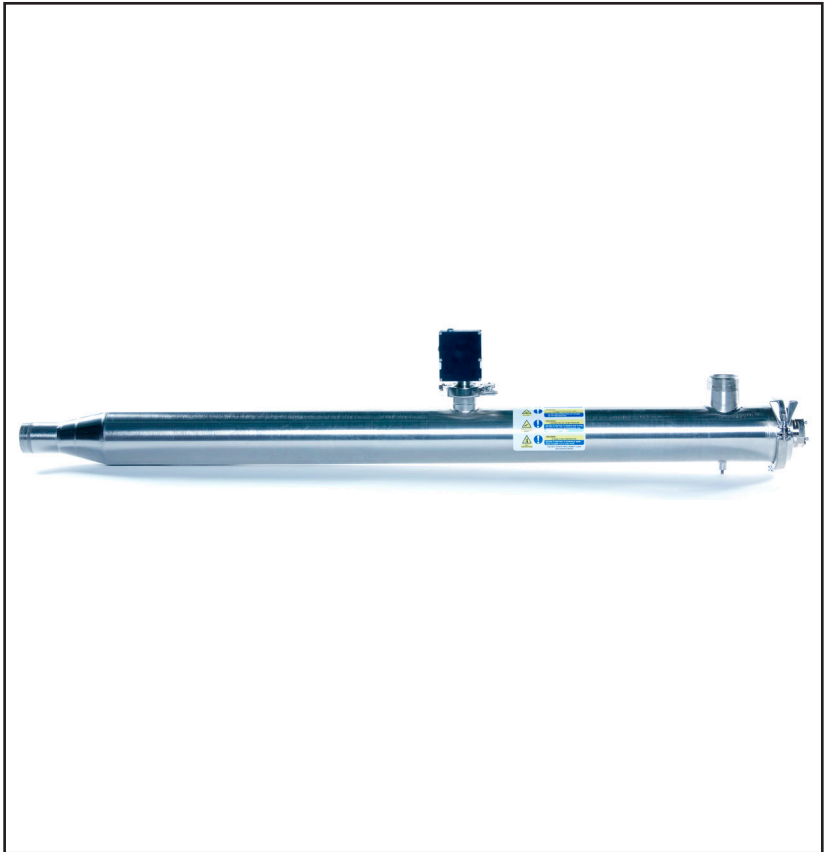
Smart controls – continuous monitoring and DOSE display.



Highly efficient, long life UV lamps.



Maintenance programs to ensure optimized system performance.



PharmaLine DO

## ENVIRONMENTALLY FRIENDLY DISINFECTION

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

Aquionics' new PharmaLine DO range of highly efficient and low energy UV systems for ozone destruction in Pharmaceutical process water.

Ozone is used in many water treatment applications such as Ultrapure Water for pharmaceutical or microelectronics production. Whilst being an effective disinfectant, ozone has characteristics which can lead to problems and having an efficient and safe method for ozone destruction is imperative.

The PharmaLine range allows for easy maintenance, requiring little disruption to the plant. Maintenance is simple and can be carried out by on-site personnel. Systems are available in Low Pressure High Output Amalgam lamps.



Food & Beverage



Marine



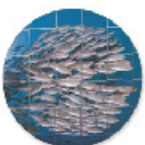
Pharmaceuticals



Electronics



Cosmetics & Toiletries



Aquaculture



Medical & Ophthalmic



# PharmaLine™ DO

## DE-OZONATION SERIES

UV Chamber		Cabinet	
Material:	St 316L/1.4404	Material:	Polyester coated carbon steel
Internal finish:	<0.38µm Ra max welds left as laid electropolished and passivated	Degree of protection:	IP65/NEMA 4 except DO 0020 which is IP55 / NEMA 12
External finish:	Sateen polish (120 grit) electropolished and passivated	Supply voltages:	230V (207V to 253V) or 115V (104V to 126V except DO 0020) 50/60Hz
Process (mating) connections:	Tri-clamp to BS 4825	Operating temperature range:	+41°F to +104°F
Drain connection:	Tri-clamp to BS 4825	Relative humidity:	<90%
End plate:	Removable tri-clamp	Cooling fans:	On DO 0020 only
Degree of protection:	IP65 equivalent to NEMA4 but not suitable for outside use	Cable length:	5m
Arc tube (lamp):	Low pressure amalgam/high purity quartz	External contacts:	4-20mA signal for UV Intensity %, Volt Free Contacts for Lamp ON, Low UV warning
Arc tube enclosure:	High purity quartz		
Number of lamps:	1		
Expected lamp life:	12000-16000 hours		
Temperature sensor	On DO 0020 only		
UV monitor	Wet 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 < 5 mbar		
Seals:	EPDM FDA approved		

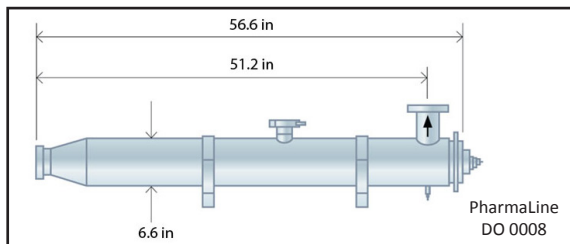
Features	
• Lamp on/off	• UV intensity %
• Remote start/stop	• Warning and trip messages
• Horizontal or vertical mounting (DO 0020 horizontal only)	• Total hours run
• Remote mode	• Lamp fail
• Door interlocked cabinet isolator	• Low UV % intensity



PharmaLine DO

	Model	Flow Rate (gpm)	Flange (in)	Number of Lamps	Max Power (W)
DeOzonation	PharmaLine DO 0001	5	1.5	1	80
	PharmaLine DO 0002	10	2	1	140
	PharmaLine DO 0004	20	2	1	270
	PharmaLine DO 0008	37	3	1	270
	PharmaLine DO 0020	86	3	1	500

The maximum deozonation capacity is based on a 90% reduction of ozone at T<sub>10</sub> > 98%



Options	
• Validation Support Pack	• Uvtronic control 230V (207 to 263V) CE and UL approved with pre calibrated DVGW compliant dry UV monitor
• Stainless Steel cabinet (304)	• CIP maximum 266°F with cabinet electrically isolated
• Printed operating, menu and safety guides available in Chinese, French, and German	

A HALMA COMPANY

Celebrating 85 Years of Pure Performance from the UV Technology Pioneers

