

We UVCare...



PHARMALINE DO AF H

## Application Optimized UV for Pharmaceuticals

**RODEM**<sup>®</sup>  
SMART SANITARY PROCESSES  
[www.Rodem.com](http://www.Rodem.com) | (800) 543-7312



UV de-ozonation  
for purified water  
distribution loops

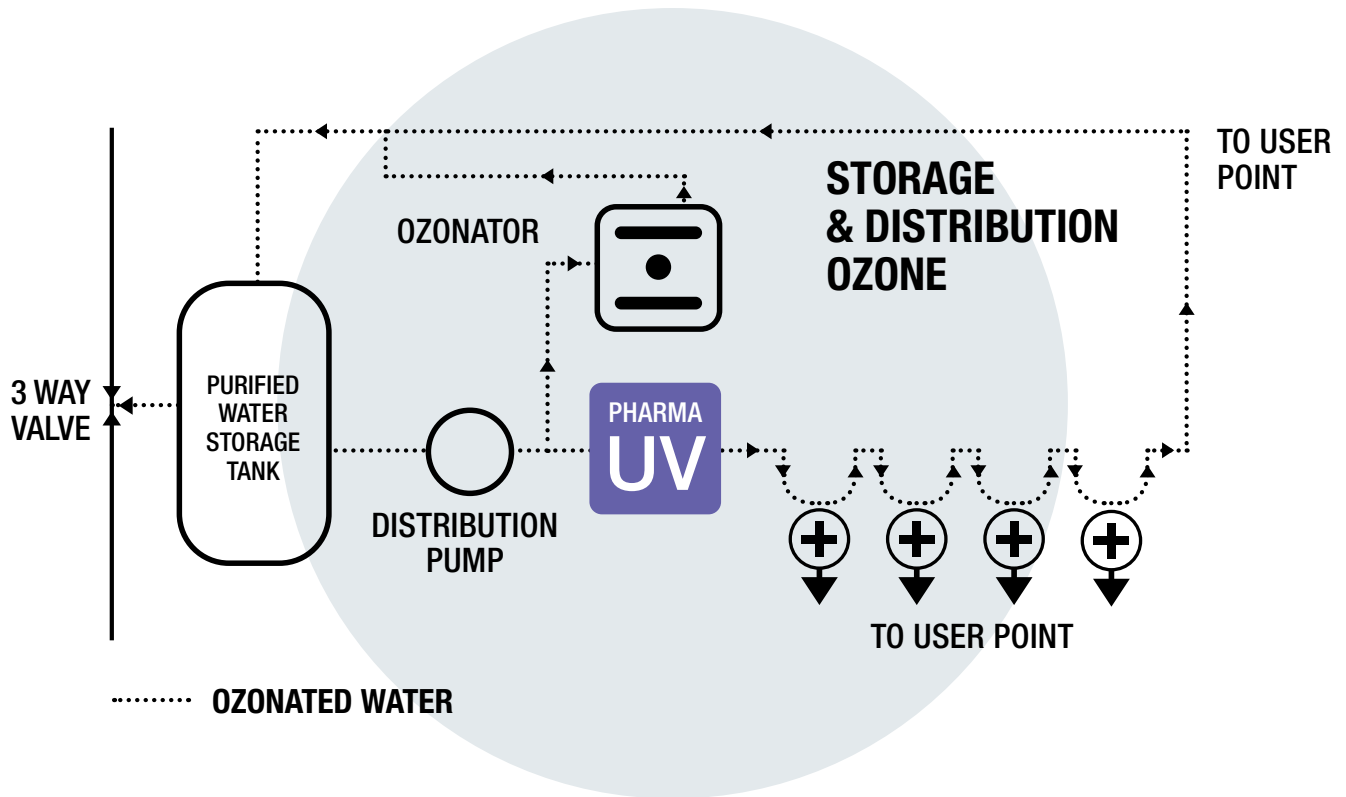
Our PharmaLine DO AF H UV systems are designed for hygiene based on cGMP principles specifically for providing ozone destruction for pharmaceutical purified water distribution loops. When installed in a distribution loop the PharmaLine DO AF H will remove residual ozone dosed into the water to maintain microbiological integrity. The UV system can be remotely controlled to turn off to allow residual ozone to disinfect the purified water loop during a SIP and then be turned on again to remove the ozone before the loop is put back into service. Each system comes with a UV monitor / UV sensor to measure the lamp output making it easy to monitor and log performance. The UV systems are all single lamp design with long lamp life providing reduced operating costs.

berson

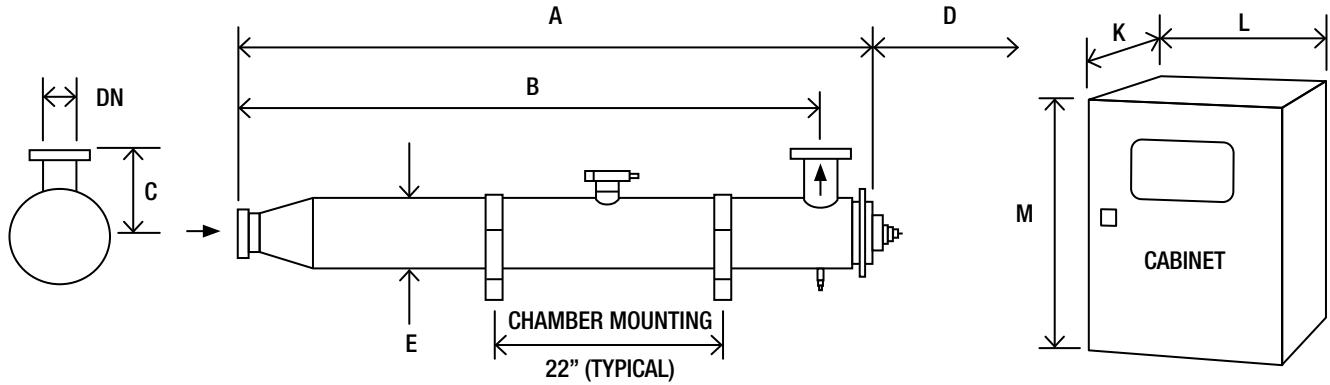
hanovia

aquionics

# Potential locations of the PharmaLine DO AF H™



KEY FEATURES	WHAT IT GIVES YOU	BENEFITS FOR YOU
<b>INTELLIGENCE</b>		
UV intensity monitor / sensor measuring UV wavelengths	Continuous verification of performance with in-built low intensity alarm	Easy to monitor and log system performance
<b>OPTIMIZATION</b>		
Single lamp technology	Optimised for ozone reduction	Proven log reduction of ozone
	Lower power use than comparable multi-lamp systems	Lower operating costs
	Lower maintenance cost compared to multi-lamp systems	
Designed for the pharmaceutical industry based on cGMP principles	Sanitary design with <math><0.38 \mu\text{m}</math> internal surface finish and tri-clamp connections as standard	Industry compliance; reduced risk of microbiological contamination; enhances control of your process as part of a multi-barrier system
	FDA-approved materials used for all wetted parts	
	Remote control function	Matches automated SIP ozonation procedure
<b>INTEGRATION</b>		
Compact design	Can be fitted to skids	Easy integration
	Can be retrofitted to existing process	



PharmaLine DO AF H (low pressure amalgam lamp)			Dimensions (Inches)										Approx weight (lb)	
Model Number	Maximum Power (W)	UVT (%)	A	B	C	D	E	DN***	K*	L	M**	Chamber (Empty)	Control Cabinet	
PharmaLine DO AF H 0001	115	60	54.6	50.1	3.2	51.2	4	1.5	6.7	11.8	19.3	20	24	
PharmaLine DO AF H 0002	165	60	54.6	50.1	3.2	51.2	4	2	6.7	11.8	19.3	20	24	
PharmaLine DO AF H 0005	345	60	54.6	50.1	3.2	51.2	4	2	6.7	11.8	19.3	20	24	
PharmaLine DO AF H 0008	345	60	56.6	51.2	5.9	51.2	6.6	3	6.7	11.8	19.3	53	24	
PharmaLine DO AF H 0020	700	60	78	71.9	7.9	74.8	8.1	3	8.9	15.7	27.2	101	49	

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

\*\* M dimension includes the space for the cabinet mounting brackets but you need to allow space below the cabinet for cable entry and access (minimum of 9.8").

\*\*\* DN tri-clamp sizes over 3" may not fit with standard sanitary tube. Please consult with Aquionics for correct dimensions.

All dimensions are approximate for clearance purposes only. We have a policy of continuous product development, exact drawings are available on request.

All specifications are subject to change without notification. Your distributor or our account manager can advise on correct sizing and specification requirements.

UV CHAMBER	
Material:	StSt 316L / 1.4404
Internal finish:	<0.38 µm Ra welds left as laid, electropolished and passivated
External finish:	Sateen polish (120 grit) electropolished and passivated
Process (mating) connections:	Tri-clamp. For sizes see Tri-clamp technical bulletin 910425-0001
Drain connection:	Tri-clamp to ISO 2852
End plate:	Removable tri-clamp
Degree of protection:	IP65 equivalent to NEMA 4 but not for outside use
UV lamp:	Low pressure amalgam
Quartz sleeve	Pure quartz (F200)
Number of UV lamps:	1
Expected lamp life:	12000 hours
Temperature sensor:	Snap stat, on DO AF H 0020 only
UV intensity sensor:	Wet UV monitor
Working fluid temperature:	41°F to 104°F
Maximum CIP temperature:	266°F (DO AF H 0001 – DO AF H 0005) 203°F (DO AF H 0008 – DO AF H 0020) with cabinet electrically isolated
Hydrostatically pressure tested:	Yes
Chamber mounting:	Horizontal or vertical except DO AF H 0020 which is horizontal only
Operating pressure:	10 bar (positive pressure only)
Seals:	EPDM, FDA 21 CFR 177.2600, USP Class VI 250°F approved

OPTIONS	
Document Support Pack	
Cabinet material:	Stainless steel 304
Operation and Maintenance manual and printed Installation and Commissioning manual in Chinese, English, French, German and Spanish	
Maximum CIP temperature:	266°F (DO AF H 0008 – DO AF H 0020, panel switched off)
Welder Document Pack for chamber construction	
Skid mounting (not ship board or earthquake zone)	

CABINET (CONTROLLER ELECTRON RCM)	
Material:	Polyester coated carbon steel
Degree of protection:	IP66 / NEMA 4 except DO AF H 0020 which is IP54 NEMA 12
Supply voltages (nominal):	230 V (+/-10%), 50/60 Hz
Operating temperature range:	41°F to 104°F
Relative humidity:	<95% non-condensing, except DO AF H 0020
Cooling fans:	DO AF H 0020 only
Interconnecting cable lengths:	16.4 ft

CUSTOMER OUTPUTS	
4-20 mA passive output:	UV intensity %
VFC outputs:	Lamp ON and Low UV warning

CUSTOMER INPUTS	
VFC inputs:	Remote stop/start and remote reset

CUSTOMER COMMUNICATIONS PORT	
None	

APPROVALS	
CE marked	



## PHARMALINE DO AF H

Also available in our Pharmaceutical product range...



### PHARMALINE PQ+POH

3rd party bioassayed systems for critical disinfection or as part of a pathogen barrier



### PHARMALINE D+DH

Disinfection as part of a multi barrier approach or secondary hygiene maintenance



### PHARMALINE DC

Chlorine removal



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