PHARMALINE DO AF H

Also available in our Pharmaceutical product range...

PHARMALINE PQ+PQH

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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A Halma company

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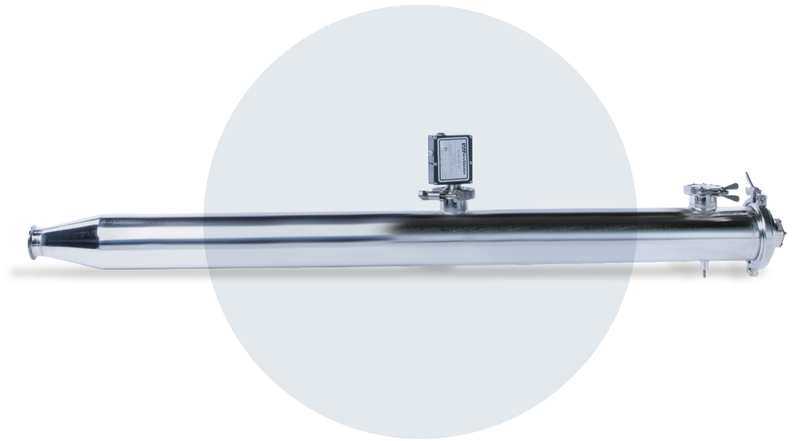
We UVCare...

Application Optimised UV for Pharmaceuticals

PHARMALINE DO AF H



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.

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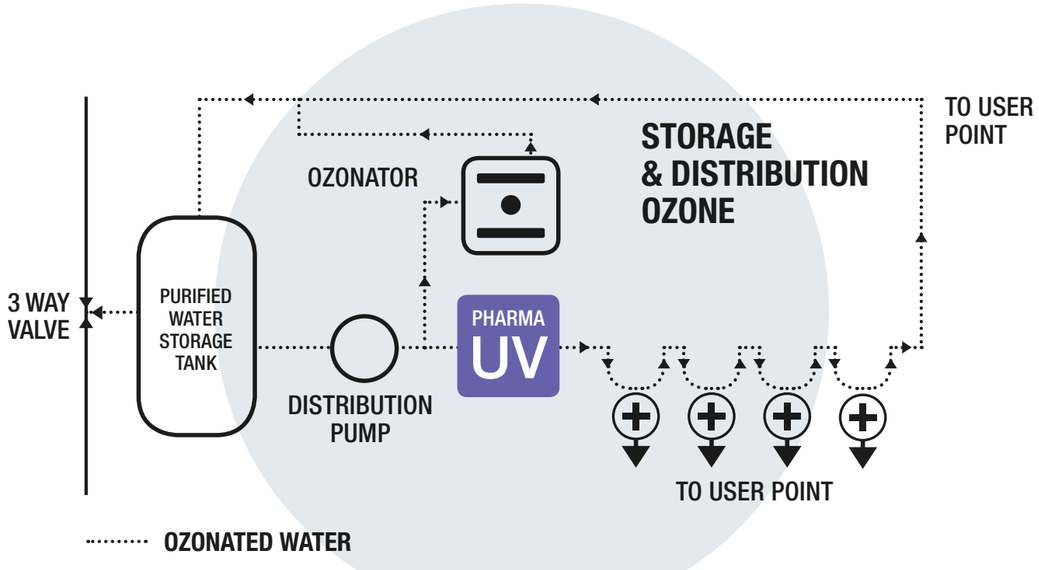
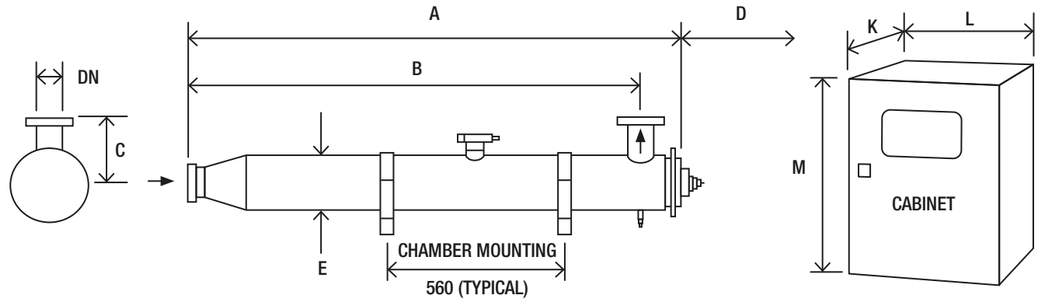
The Operating Cycle of the PharmaLine DO AF H™



KEY FEATURES	WHAT IT GIVES YOU	BENEFITS FOR YOU
INTELLIGENCE		
UV intensity monitor / sensor measuring UV wavelengths	Continuous verification of performance with in-built low intensity alarm	Easy to monitor and log system performance
OPTIMISATION		
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 <0.38 µm 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
INTEGRATION		
Compact design	Can be fitted to skids	Easy integration
	Can be retrofitted to existing process	



			Dimensions (mm)									Approx weight (Kg)	
Model Number	Maximum Power (W)	Min T_{10}(%)	A	B	C	D	E	DN	K*	L	M**	Chamber (Empty)	Control Cabinet
PharmaLine DO AF H 0001	115	60	1388	1273	82	1300	102	40	170	300	490	9	11
PharmaLine DO AF H 0002	165	60	1388	1273	82	1300	102	50	170	300	490	9	11
PharmaLine DO AF H 0005	345	60	1388	1273	82	1300	102	50	170	300	490	9	11
PharmaLine DO AF H 0008	345	60	1437	1300	150	1300	168	80	170	300	490	24	11
PharmaLine DO AF H 0020	600	60	1980	1820	200	1900	206	80	225	400	690	46	22

* 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 250 mm).
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 Table 2
End plate:	Removable tri-clamp
Degree of protection:	IP65 equivalent to NEMA 4 but not for outside use
Arc tube (lamp):	Low pressure amalgam
Arc tube enclosure:	Pure quartz
Number of arc tubes (lamps):	1
Expected lamp life:	12000 hours
Temperature sensor:	On DO AF H 0020 only
UV monitor:	Wet UV monitor
Working fluid temperature:	5°C to 40°C
Maximum CIP temperature:	130°C (DO AF H 0001 – DO AF H 0005) 95°C (DO AF H 0008 – DO AF H 0020) with cabinet electrically isolated
Hydrostatically pressure tested:	Yes to PED requirements EN 13445
Chamber mounting:	Horizontal or vertical except DO AF H 0020 which is horizontal only
Operating pressure:	10 bar
Seals:	EPDM, FDA 21 CFR 177.2600, USP Class VI 121°C 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: 130°C (DO AF H 0008 – DO AF H 0020, panel switched off)
Welder Document Pack for chamber construction
Skid mounting

CABINET	
Material:	Polyester coated carbon steel
Degree of protection:	IP65 / NEMA 4 except DO AF H 0020 which is IP54 NEMA 12
Supply voltages (nominal):	230 V (207 V to 253 V) 50/60 Hz
Operating temperature range:	5°C to 40°C
Relative humidity:	<95% non-condensing
Cooling fans:	DO AF H 0020 only
Interconnecting cable lengths:	5 m

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