PHARMALINE D AF

Also available in our Pharmaceutical product range...

PHARMALINE PQ+PQH

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

PHARMALINE DO

Ozone removal and disinfection

PHARMALINE DC

Chlorine removal

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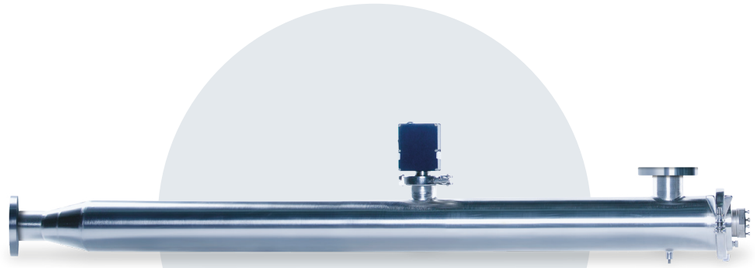
We UVCare...

PHARMALINE D AF

Application Optimised UV for Pharmaceuticals



UV disinfection for pre-treatment process water

Our PharmaLine D AF systems are aimed specifically at providing UV disinfection for Purified Water Generation System Pre-treatment where sanitary design is not critical. By using a UV system you will disinfect the water, eliminate objectionable organisms, reduce the bio-burden, protect against bio-fouling, lead to fewer CIP/SIP cycles and lower operating costs. Each system comes with a UV monitor to measure the germicidal output of the UV system and make it easy to monitor and log performance. The systems all use low pressure amalgam lamps providing energy efficient germicidal wavelength and long lamp life to reduce operating costs.

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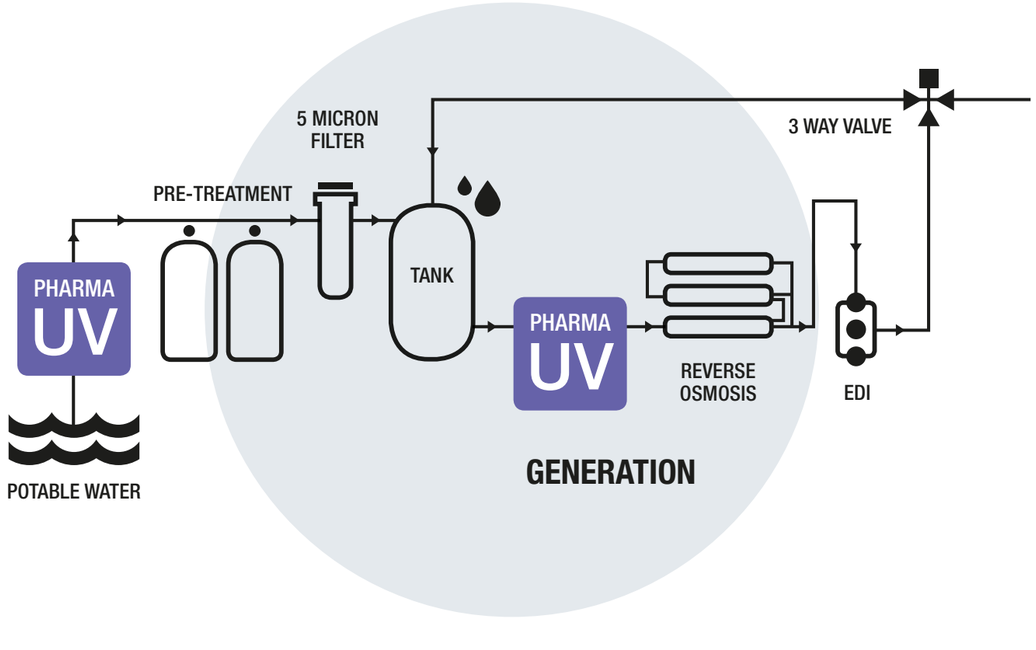
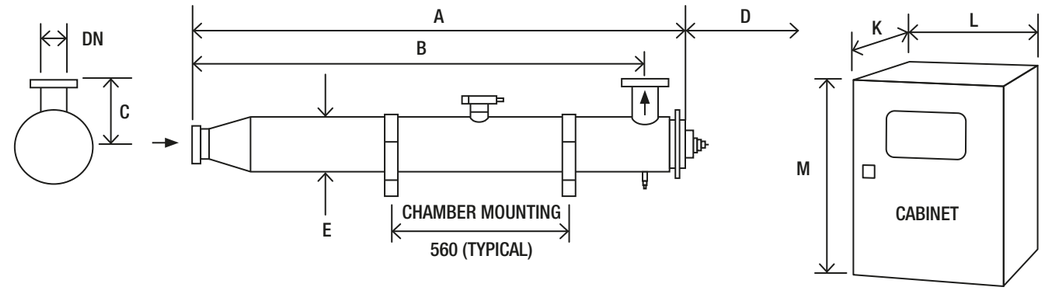
The Operating Cycle of the PharmaLine D AF™



KEY FEATURES	WHAT IT GIVES YOU	BENEFITS FOR YOU
INTELLIGENCE		
UV intensity monitor measuring germicidal wavelengths	Continuous verification of performance with in-built low intensity alarm	Easy to monitor and log system performance
OPTIMISATION		
Single low pressure amalgam lamp technology (LPHO)	Targeted microbiological wavelength	Proven log reduction of microorganisms as part of a multi-barrier purified water process
		Reduced bio-burden in pre-treatment equipment, leading to fewer CIP / SIP cycles and optimised production efficiency
		Protects RO membranes from bio-fouling, reducing CIP frequency and downtime
Designed for pre-treatment processes in the pharmaceutical industry	Flanged connections, standard internal finish	Reduced system costs where sanitary design is not critical
	FDA-approved materials used for all wetted parts	Industry compliant materials
Option of sanitary design 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
INTEGRATION		
Compact design	Can be fitted to skids	Easy integration
	Can be retrofitted to existing process	



PharmaLine D AF (Low Pressure Lamp)			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 D AF 0003	115	60	920	840	100	800	64	25	170	300	490	5	11
PharmaLine D AF 0005	115	60	1388	1273	150	1300	102	40	170	300	490	9	11
PharmaLine D AF 0008	165	60	1388	1273	150	1300	102	50	170	300	490	9	11
PharmaLine D AF 0016	345	60	1388	1273	150	1300	102	50	170	300	490	9	11
PharmaLine D AF 0030	345	60	1437	1300	200	1300	168	80	170	300	490	24	11
PharmaLine D AF 0090	600	60	1980	1820	250	1900	206	150	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:	As made pipe and tube, welds as laid, electropolished and passivated
External finish:	Sateen polish (120 grit) electropolished and passivated
Process (mating) connections:	Flange EN 1092-1 PN16
Drain connection:	Tri-clamp to ISO 2852 Table 2
End plate:	Removable tri-clamp except D AF 0090 which is flanged
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 D AF 0090 only
UV monitor:	Wet UV monitor
Working fluid temperature:	5°C to 40°C
Maximum CIP temperature:	130°C (D AF 0003 – D AF 0016) 95°C (D AF 0030 – D AF0090) with cabinet electrically isolated
Hydrostatically pressure tested:	Yes to PED requirements EN 13445
Chamber mounting:	Horizontal or vertical except D AF 0090 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
Wiper: automatic (pneumatically driven) except D AF 0003
Flange options: ANSI 150, JIS, Table 'E' and tri-clamp with chamber internal finish <0.38 µm, welds left as laid, electropolished and passivated
Maximum CIP temperature: 130°C (D AF 0030 – D AF0090, panel switched off)
Welder Document Pack for chamber construction
Skid mounting

CABINET	
Material:	Polyester coated carbon steel
Degree of protection:	IP65 / NEMA 4 except D AF 0090 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:	D AF 0090 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