NUVONIC

formerly Aquionics, Berson, Hanovia and Orca GmbH

PharmaLine D AF H

UV TREATMENT FOR PURIFIED WATER AND DISTRIBUTION (HYGIENIC DESIGN-H)

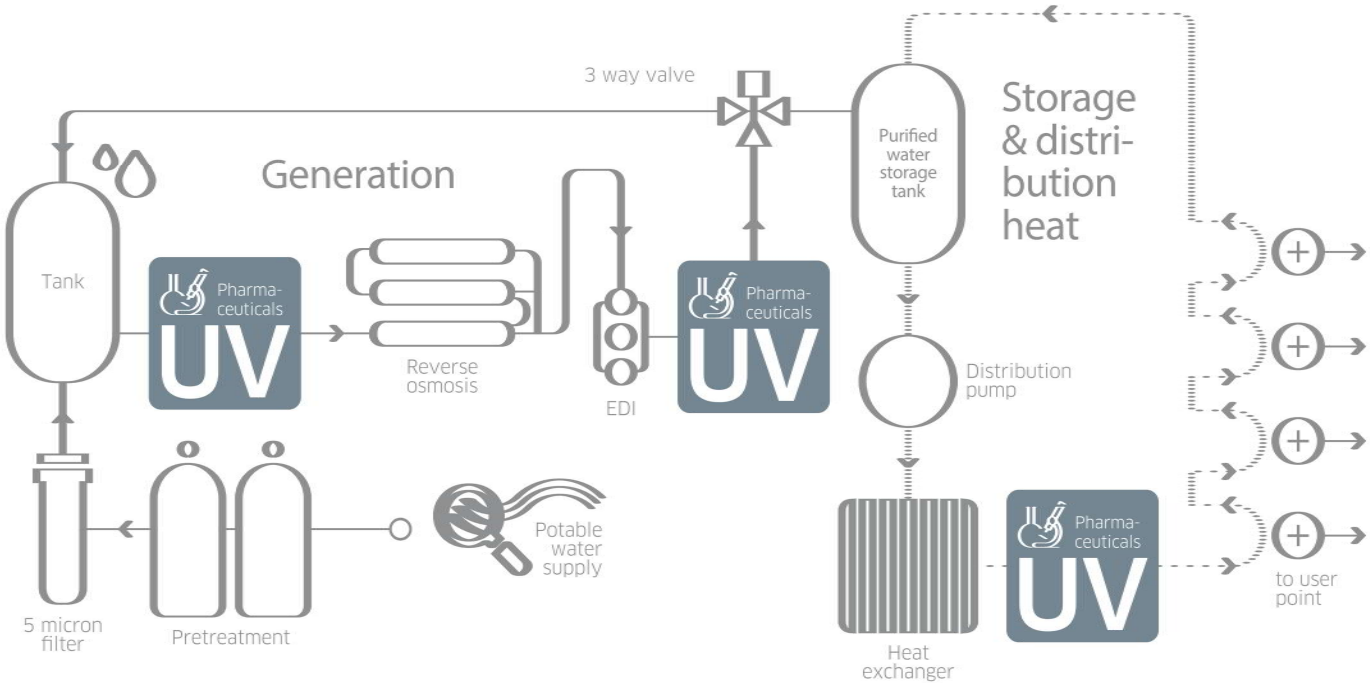
Our **PharmaLine D AF H** systems are designed for hygiene based on cGMP principles and aimed specifically at providing UV treatment in Pharmaceutical Purified Water Generation and distribution loop systems where sanitary design is critical. By using a UV system you will eliminate objectionable organisms, 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 an energy efficient germicidal wavelength and long lamp life to reduce operating costs.

UVCELL™

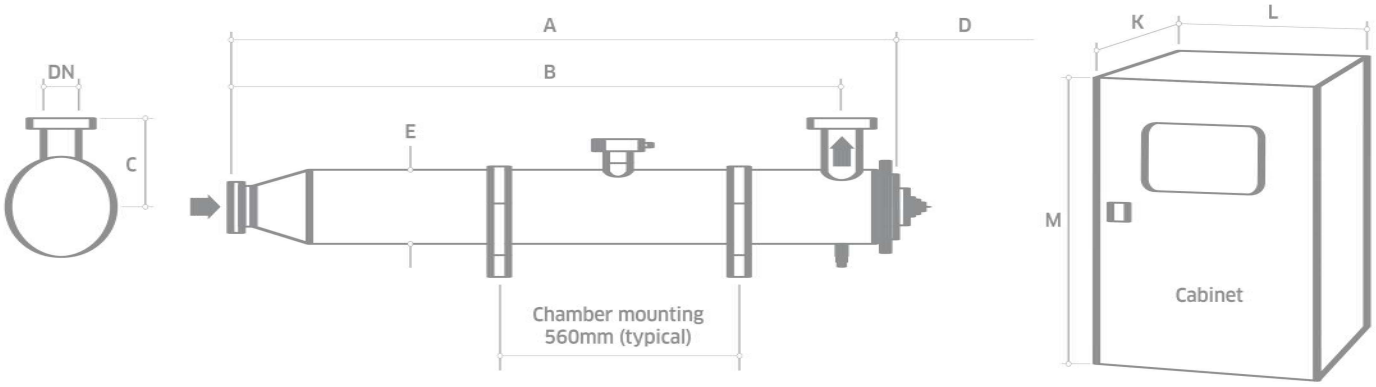
WYŁĄCZNY DYSTRYBUTOR NA RYNKU POLSKIM

Application Optimised UV for Pharmaceuticals

POTENTIAL LOCATIONS OF THE PHARMALINE D AF H™



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	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 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	
INTEGRATION		
Compact design	Can be fitted to skids	Easy integration
	Can be retrofitted to existing process	



MODEL NUMBER	MAX POWER (W)	MIN T10(%)	DIMENSIONS (MM)									APPROX WEIGHT (KG)	
			A	B	C	D	E	DN	K*	L	M**	Chamber (Empty)	Control Cabinet
PharmaLine D AF H 0003	115	60	920	840	75	800	64	25	170	300	490	5	11
PharmaLine D AF H 0005	115	60	1388	1273	82	1300	102	40	170	300	490	9	11
PharmaLine D AF H 0008	165	60	1388	1273	82	1300	102	50	170	300	490	9	11
PharmaLine D AF H 0016	345	60	1388	1273	82	1300	102	50	170	300	490	9	11
PharmaLine D AF H 0030	345	60	1437	1300	150	1300	168	80	170	300	490	24	11
PharmaLine D AF H 0090	700	60	1980	1825	200	1900	206	150	225	400	690	46	22

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

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
Arc tube (lamp):	Low pressure amalgam
Arc tube enclosure:	Pure quartz (F200)
Number of arc tubes (lamps):	1
Expected lamp life:	12000 hours
Temperature sensor:	Snap stat on D AF H 0090 only
UV monitor:	Wet UV monitor
Working fluid temperature:	5°C to 40°C
Maximum CIP temperature:	130°C (D AF H 0003 – D AF H 0016) 95°C (D AF H 0030 –D AF H 0090) with cabinet electrically isolated
Hydrostatically pressure tested:	Yes to PED requirements EN 13445
Chamber mounting:	Horizontal or vertical except D AF H 0090 which is horizontal only
Operating pressure:	10 bar (positive pressure only)
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

OPTIONS (CONTINUED)
Maximum CIP temperature: 130°C (D AF H 0030 – D AF H 0090, 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 D AF H 0090 which is IP54 NEMA 12
Supply voltages (nominal):	230 V (+/- 10%) 50/60 Hz
Operating temperature range:	5°C to 40°C
Relative humidity:	<95% non-condensing except D AF H 0090 which is 85%
Cooling fans:	D AF H 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

PharmaLine D AF H

Also available in our Pharmaceutical product range...

PHARMALINE PQ+PQH

3rd party validated systems for critical treatment

PHARMALINE DO

Ozone removal and treatment

PHARMALINE DC

Chlorine removal

Canada
+1 980.256.5700
americas@nuvonicuv.com

China
+86 21 61679599
apac@nuvonicuv.com

Germany
+49 611 44575375
emea@nuvonicuv.com

Malaysia
+60 16 440 8834
sea@nuvonicuv.com

Poland
+48 511 744 077
biuro@arwito.pl

Mexico
+1 980.256.5700
americas@nuvonicuv.com

United Kingdom
+44 1753 515300
emea@nuvonicuv.com

USA
+1 980 256 5700
americas@nuvonicuv.com

NUVONIC

A Halma company

formerly Aquionics, Berson, Hanovia and Orca GmbH

www.uvcell.pl
nuvonicuv.com

FM 29365