

PharmaLine D AF H

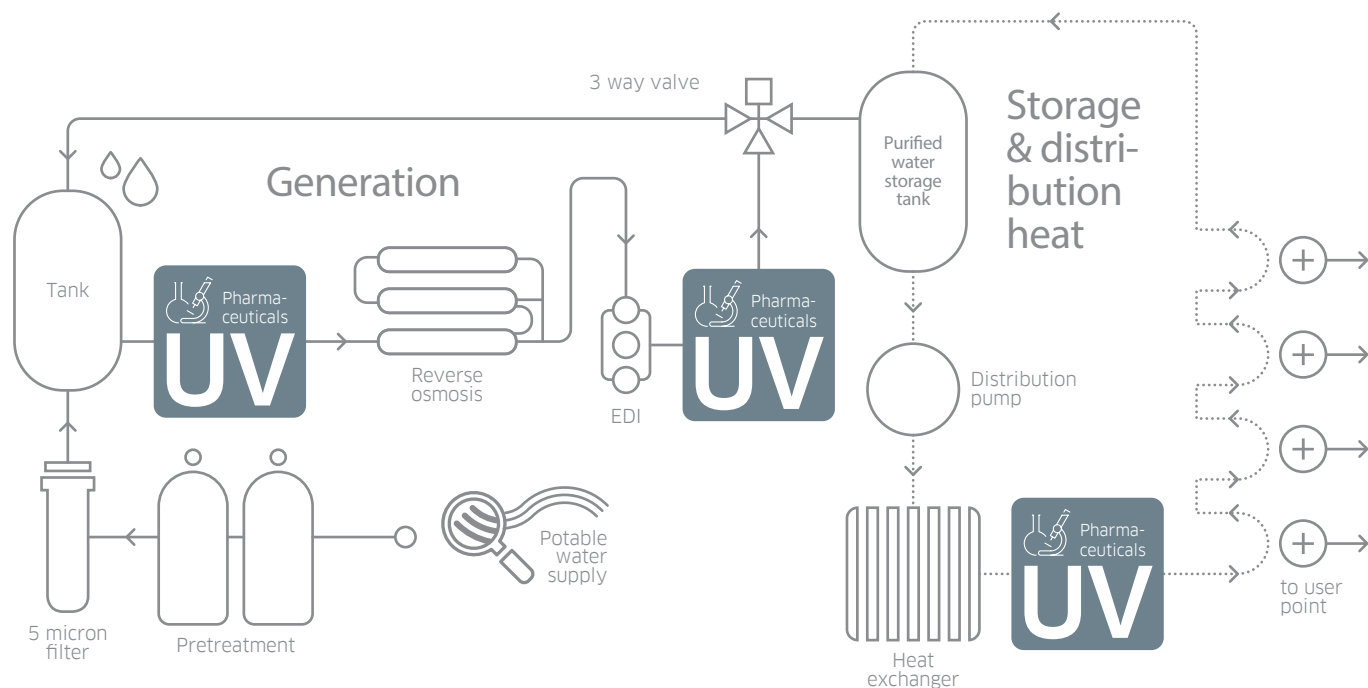
UV TREATMENT FOR PURIFIED WATER AND DISTRIBUTION (HYGIENIC DESIGN-H)

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 active 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 active wavelength and long lamp life to reduce operating costs.

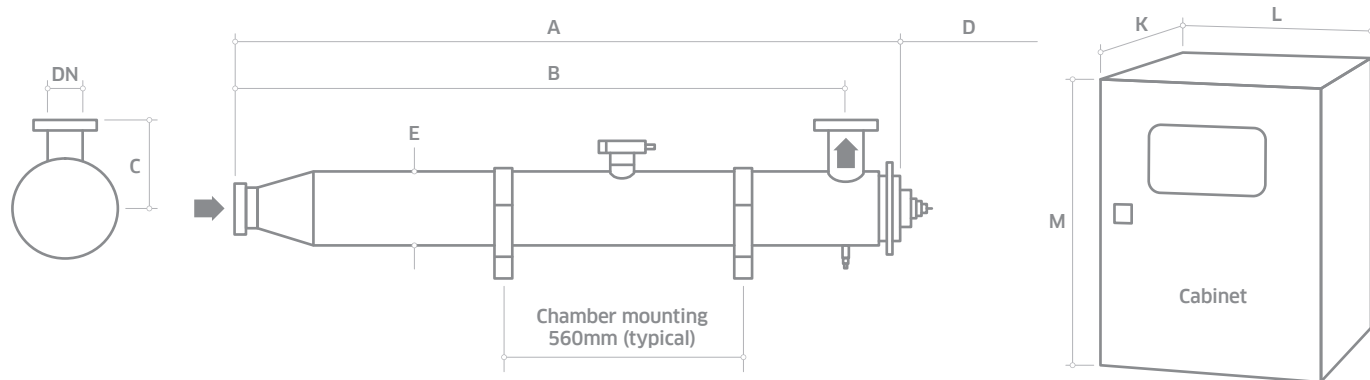


Application
Optimised UV for
Pharmaceuticals

POTENTIAL LOCATIONS OF THE PHARMALINE D AF H™



| KEY FEATURES | WHAT IT GIVES YOU | BENEFITS FOR YOU |
|---|---|--|
| INTELLIGENCE | | |
| UV intensity monitor measuring active 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 Can be retrofitted to existing process | Easy integration |



| 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.

** 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).

| 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 shipboard 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

+86 216 167 9599
apac@nuvonicuv.com

Germany

+44 175 351 5300
emea@nuvonicuv.com

Malaysia

+60 16 440 8834
sea@nuvonicuv.com

Mexico

+1 980 256 5700
americas@nuvonicuv.com

United Kingdom

+44 175 351 5300
emea@nuvonicuv.com

USA

+1 980 256 5700
americas@nuvonicuv.com



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