

PharmaLine ECO

OPTIMIZED UV TREATMENT FOR PHARMACEUTICALS & HEALTHCARE

ECO is purpose-built to ensure uncompromised purity, offering an unmatched level of confidence in critical pharmaceutical and healthcare processes.

Efficiency: Reduce your carbon footprint significantly while maintaining the highest quality standards in your operations.

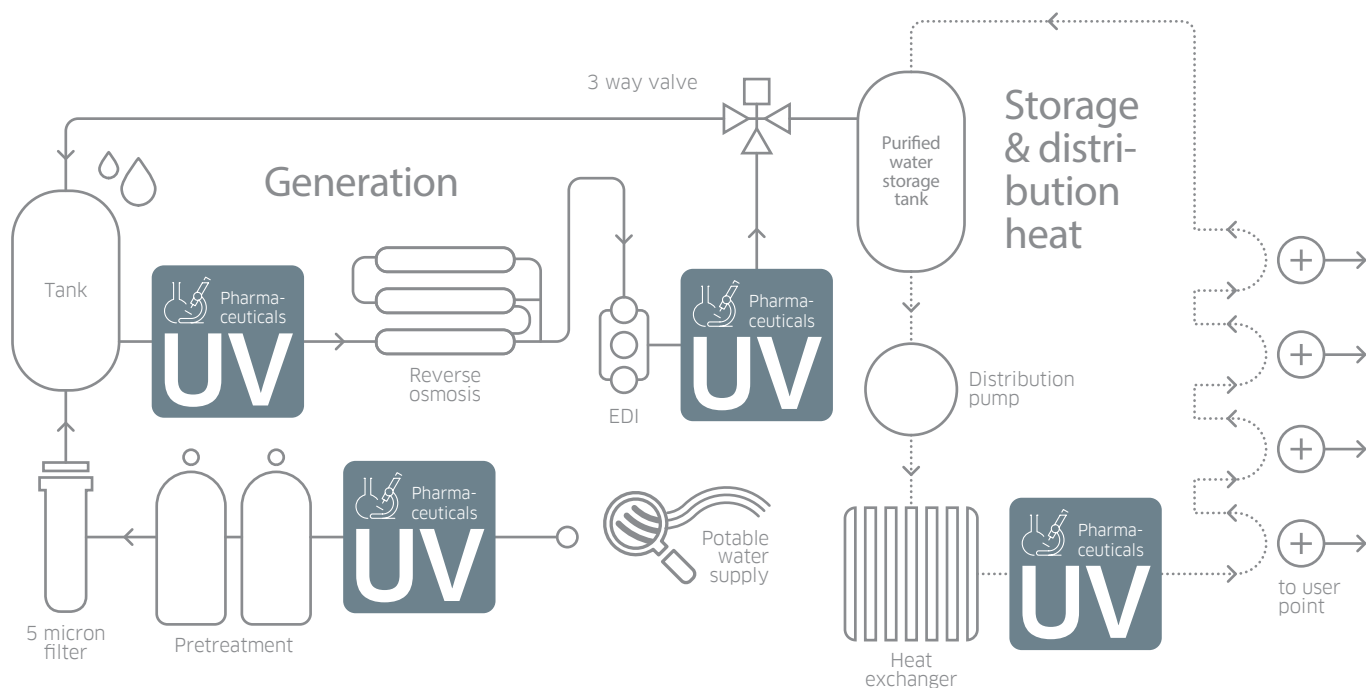
Compact Brilliance: ECO fits where others can't, delivering uncompromised results in limited space.

Optimized Performance: ECO is optimized for peak performance, providing consistently reliable water treatment solutions.

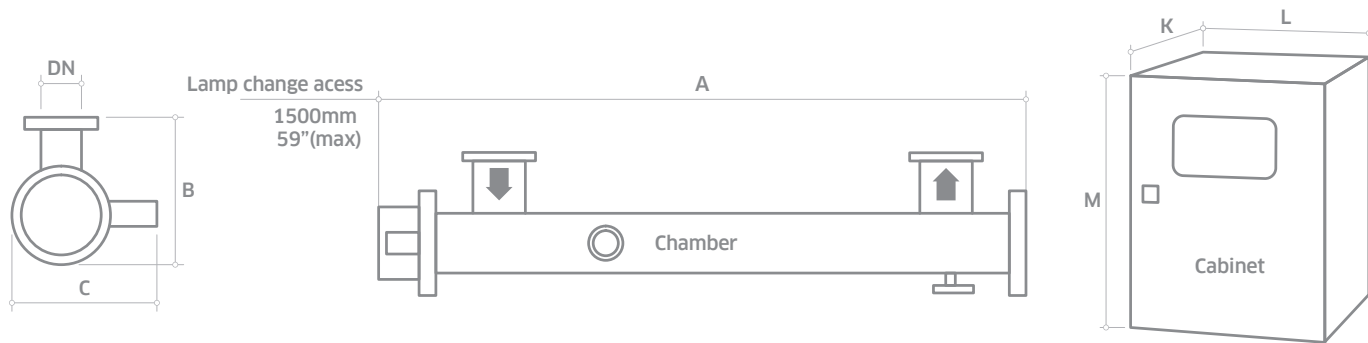


Application
Optimized UV for
Pharmaceuticals

POTENTIAL LOCATIONS OF THE PHARMALINE ECO



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
OPTIMIZATION		
UV water treatment	Protect your process waters from microbiological contamination including chlorine resistant Cryptosporidium and Giardia	Does not affect taste and colour of final product No chemicals
Designed for biopharmaceutical	FDA-approved materials used for all wetted parts Chamber with tri-clamp connections and 0.5 µm internal finish (0.38 µm is optional)	Industry compliant materials Sanitary design
INTEGRATION		
Compact design	Can be retrofitted to existing process	Easy integration



MODEL NUMBER	FLOW** (m ³ /h)	MAX POWER (W)	LAMP (QTY)	CHAMBER SIZE (mm)				CABINET			APPROX WEIGHT (kg)	
				A	B	C	DN	K	L	M	Chamber w/o wiper	Cabinet
Pharmaline ECO 4	3.4	90	1	745	210	245	25	180	470	535	10.5	20.5
Pharmaline ECO 8	9	150	1	1245	230	245	50	180	470	535	12.3	20.5
Pharmaline ECO 15	16.5	250	1	1245	230	245	50	180	470	535	12.3	20.5
Pharmaline ECO 32	30.5	360	1	1785	230	245	80	180	470	535	22.6	20.5
Pharmaline ECO 40	34	380	1	1785	335	305	80	180	470	535	41.2	20.5
Pharmaline ECO 85	68	750	2	1785	335	305	100	210	490	600	42	27.6
Pharmaline ECO 125	116	1080	3	1785	335	305	*150	210	490	600	43	29.1

*the DN is 125 when connection type is PN10/ANSI

**Disinfection capacity based on UV Dose 30 mJ/cm² at 98% T10, end of lamp life. Flow rates may differ with flange connections.

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

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:	Stainless steel 316L / 1.4404
Process (Mating) connection:	Tri-clamp BS4825
End plate:	Removable plate
Drain connection:	Tri-clamp 1" BS4825
Degree of protection:	IP54 equivalent to NEMA 12
Internal finish:	< 0.5 µm Ra (Welds ground out)
Lamp type:	Low Pressure Amalgam
Expected Lamp life:	9,000 hours
UV sensor:	Dry sensor
Temperature sensor	Yes, PT100
Seals:	EPDM, FDA 21 CFR 177.2600
Maximum CIP temperature:	95°C with cabinet electrically isolated
Working fluid temperature:	5-40°C
Chamber mounting:	Horizontal only
Operating pressure:	10 bar

OPTIONS

Interconnecting cable lengths:	5 m
Document support pack	
ANSI B 16.5 Class 150 process (mating) connection	
PN10 to EN1092-1 process (mating) connection	
Internal finish < 0.38 µm Ra (Welds ground out)	

APPROVALS

CE marked, UL

CABINET (UV CONTROLLER)

Material:	Stainless steel 304
Controller:	UV Controller
HMI:	7" Touch screen
Interconnecting cable lengths:	3 m
IP rating:	IP54 / NEMA 12
Power supply:	220 V ± 10%, 50/60 Hz, single phase, L+N+G. 110V (for ECO 4-215)
Operating temperature range:	5-40°C
Humidity:	< 90% no condense cabinet fan installed for ECO 32 and larger systems
Control & Display:	Stepless power adjustment 50-100% All alarms and warnings Fixed dose running Water temperature Lamp running hours Flow rate (m ³ /h or gpm) UV dose
Alarm & Warning:	Low UV dose Lamp end pre-warning (time adjustable) Lamp fault alarm Chamber over temperature alarm UV sensor fault alarm Temperature sensor fault alarm Warning for lamp and quartz resetting
Input:	Flow 4-20 mA T ₁₀ 4-20 mA Remote On/Off
Output:	UV dose 4-20 mA Any system alarm VFC Any system warning VFC Low UV dose alarm VFC Lamp fault alarm VFC Lamp preheat VFC Lamp ready VFC



PharmaLine ECO

Also available in our ECO product range...



Utility and service water treatment

Breakdown and reduction of TOC using medium pressure lamp

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