



PHARMACEUTICALS



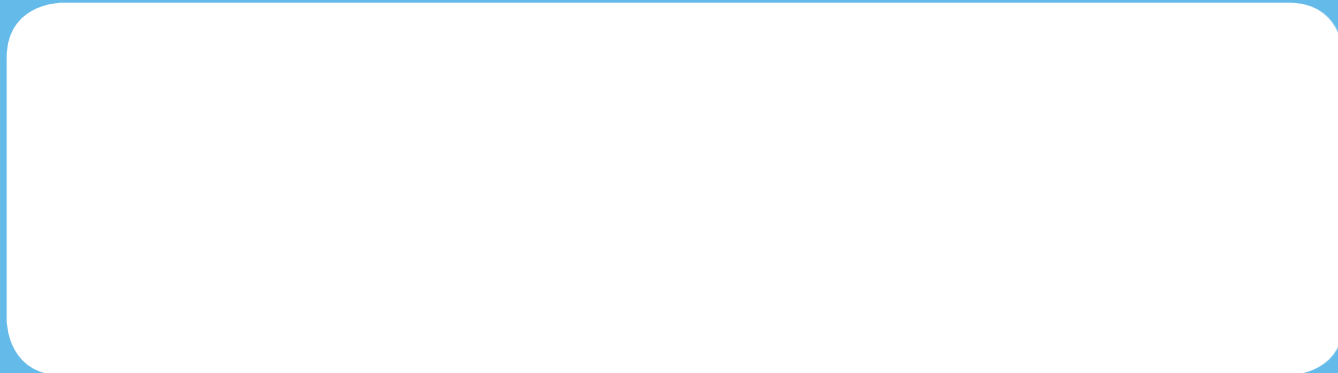
COSMETICS+TOILETRIES



MEDICAL+OPHTHALMIC

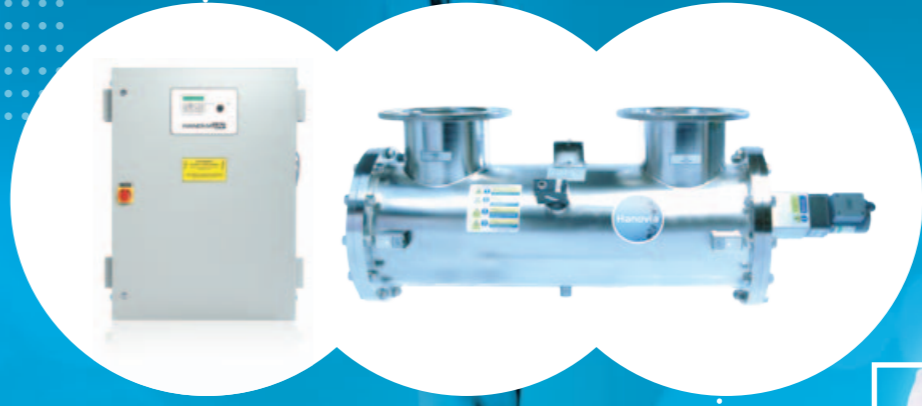


NUTRACEUTICALS



## PharmaLine DC

Chlorine reduction of pre-treatment process waters



## Technical Specification

UV Chamber	
Material:	StSt 316L / 1.4404
Internal finish:	As made pipe and tube, welds left as laid electropolished and passivated
External finish:	Sateen polish (120 grit) electropolished and passivated
Process (mating) connections:	Flange DN series PN16 rated
Drain connection:	BSPT
End plate:	Removable bolted plates
Degree of protection:	IP65 equivalent to NEMA 4 but not suitable for outside use
Arc tube (lamp):	Medium pressure / high purity quartz
Arc tube enclosure:	High purity quartz
Number of arc tubes (lamps):	1 to 16 depending on model
Expected lamp life:	4000-8000 hours
Temperature sensor:	Yes
UV monitor:	Wet UV monitor (down to minimum T10)
Working fluid temperature:	+5°C to +60°C
Maximum CIP temperature:	95°C with control cabinet electrically isolated
Hydrostatically pressure tested:	Yes to PED requirements EN13445
Operating / Design pressure:	6 bar / 7 bar
Pressure Loss:	Typically < 120 mbar
Seals:	EPDM FDA approved

Cabinet	
Material:	Polyester coated carbon steel
Degree of protection:	IP54 / NEMA 12
Supply voltages:	Up to 2.5kW 95V to 260V (nominal) 50/60Hz 3.5 to 7.0kW 190V to 500V (nominal) 50/60Hz >7.0kW 300V to 500V (nominal) 50/60Hz
Operating temperature range:	+5°C to +40°C
Relative humidity:	<90%
Cooling fans:	Yes
Interconnecting cable lengths:	10m
External interface:	4-20mA signal for UV intensity, Volt Free Contacts for Local/Remote, System Available, Lamp Ready, System Warning, Common Alarm, Low UV Intensity, ELCB Trip

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# PharmaLine DC

Chlorine reduction of pre-treatment process waters

## Product Specific Data

### Features

#### Operational Features:

- Lamp on/off
- Remote start / stop
- Selectable auto restart following power failure
- Automatic wiper system electrical operation
- Event log

#### Screen Display Features:

- 2 line x 20 character VFD with indication of System Status
- Remote mode
- UV intensity in mW/cm<sup>2</sup> or relative intensity (%)
- Warning and trip messages
- Total hours run
- Spares listing
- English language

#### Alarm Message Features:

- Lamp fail
- Low UV intensity
- ELCB trip
- Wiper trip
- Power failure
- Chamber over temperature
- Power supply over temperature warning and trip

#### Safety Features:

- Door interlocked cabinet isolator
- Separate door locks
- Power supply thermal cut out
- Resettable circuit breaker
- Earth leakage trip
- Wiper motor overload cut out

### Options

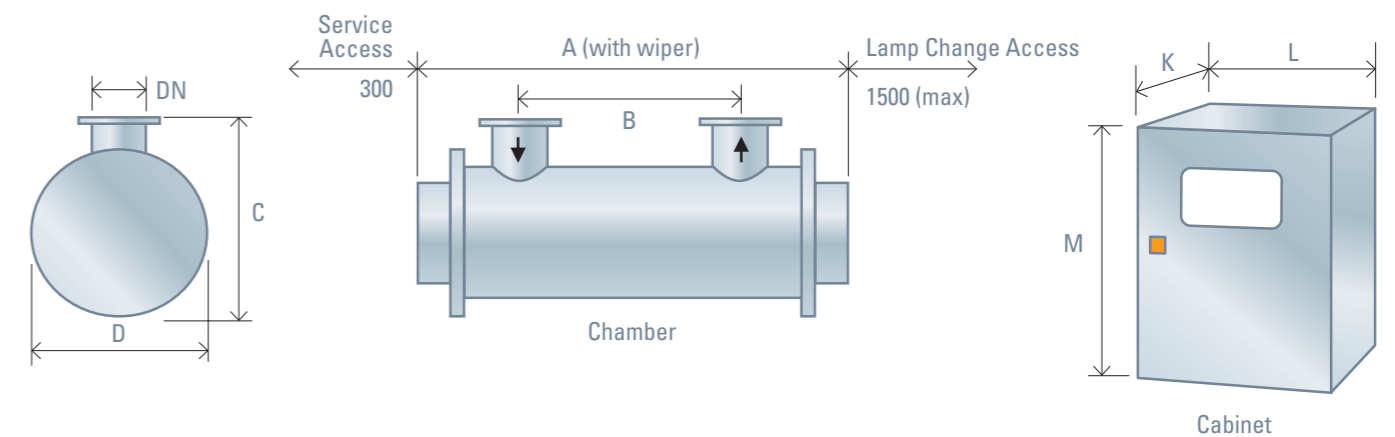
- Validation Support Pack
- Stainless Steel cabinet (316)
- Printed operating, menu and safety guides in Chinese, French and German
- Chamber internal finish 0.38µm welds ground out electropolished and passivated
- Automatic bleed valve
- ANSI 150 flanges and NPT drain and bleed stub
- Lead length 30m or 50m
- CIP maximum 130°C with control cabinet electrically isolated

### Approvals

- CE following the low voltage and EMC directives conforming to EN50081-1, EN61000-4-2, 4-3, 4-5, 4-6, 4-8, and 4-11
- UL Listed E149108.

### Dimensions (mm)

#### Chamber and cabinet:



Flow m <sup>3</sup> /hr	System for 90% reduction of chlorine	System for 99% reduction of chlorine
1	PharmaLine DC 0001	PharmaLine DC 0002
2	PharmaLine DC 0002	PharmaLine DC 0004
4	PharmaLine DC 0004	PharmaLine DC 0010
6	PharmaLine DC 0006	PharmaLine DC 0013
8	PharmaLine DC 0010	PharmaLine DC 0016
10	PharmaLine DC 0010	PharmaLine DC 0020
13	PharmaLine DC 0013	PharmaLine DC 0030
16	PharmaLine DC 0016	PharmaLine DC 0030
20	PharmaLine DC 0020	PharmaLine DC 0050
25	PharmaLine DC 0030	PharmaLine DC 0050
30	PharmaLine DC 0030	PharmaLine DC 0030 x 2

Model	Maximum Dechlorination Capacity * (m <sup>3</sup> /hr)	Min. T <sub>10</sub> (%)	Dimensions (mm)				DN	K**	L**	M**	Approx Weight (Kg)		
			A	B	C	D					Chamber (Empty)	Power Supply	Power (kW)
PharmaLine DC 0001	1	85	850	300	319	240	50	370	750	850	45	85	1.2
PharmaLine DC 0002	2	81	1300	710	319	240	50	370	750	850	50	85	3.5
PharmaLine DC 0004	4	90	1300	710	420	290	50	370	750	850	65	85	3.5
PharmaLine DC 0006	6	84	1300	710	420	290	50	370	900	1100	65	165	5.5
PharmaLine DC 0010	10	93	1300	710	505	410	50	370	900	1100	140	165	5.5
PharmaLine DC 0013	13	90	1300	710	505	410	50	370	900	1100	140	165	7.0
PharmaLine DC 0016	16	62	1300	710	420	290	50	380	1100	1590	70	290	14.0
PharmaLine DC 0020	20	62	1300	710	505	410	50	380	1100	1590	150	290	14.0
PharmaLine DC 0030	30	62	1300	710	505	410	80	380	2100	1590	150	480	21.0
PharmaLine DC 0050	50	76	1300	710	540	430	80	380	2300	1590	300	630	28.0

\* The maximum dechlorination capacity is based on a 90% reduction of chlorine at T<sub>10</sub> 95%

\*\*Cabinet dimensions allow for door isolator, fan covers, bracket space and space for two cabinets to mount side by side on the K6 dimensions do not allow for cable entry which is from the side

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#### Additional Information

All dimensions are approximate for clearance purposes only. Hanovia has a policy of continuous product development, exact drawings are available on request. All specifications are subject to change without notification. Your Distributor or Hanovia Account Manager can advise on correct dosage and specific requirements.