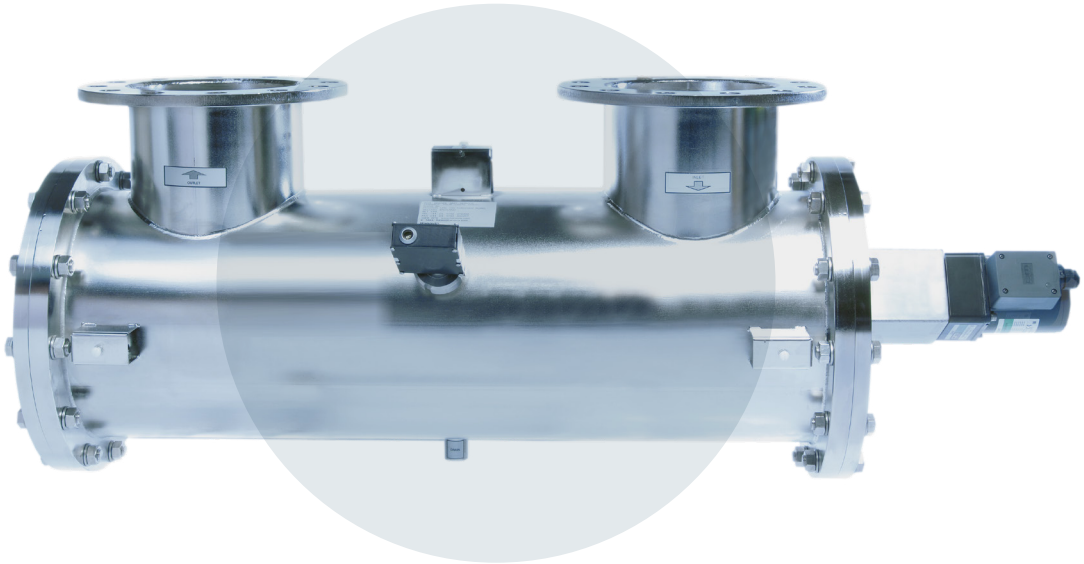
We UVCare...

Application Optimised UV for Power Generation

PUREPOWER DC PH



UV dechlorination for Power Generation

Our PurePower DC PH UV systems deliver guaranteed high UV doses for effective free chlorine removal and disinfection for the power generation industry. By using UV to remove free chlorine, we protect RO membranes and boiler feed water from residual chlorine.

UV dechlorination provides distinct advantages over traditional technologies such as Activated Carbon Filtration (ACF) or Sodium Metabisulfite dosing (SMB). These proven chlorine removal methods are prone to microbial contamination, resulting in higher membrane CIP frequency, and leading to a higher total cost of ownership compared to UV.

UV provides equivalent or better performance in a consistent, reliable, and low maintenance solution.

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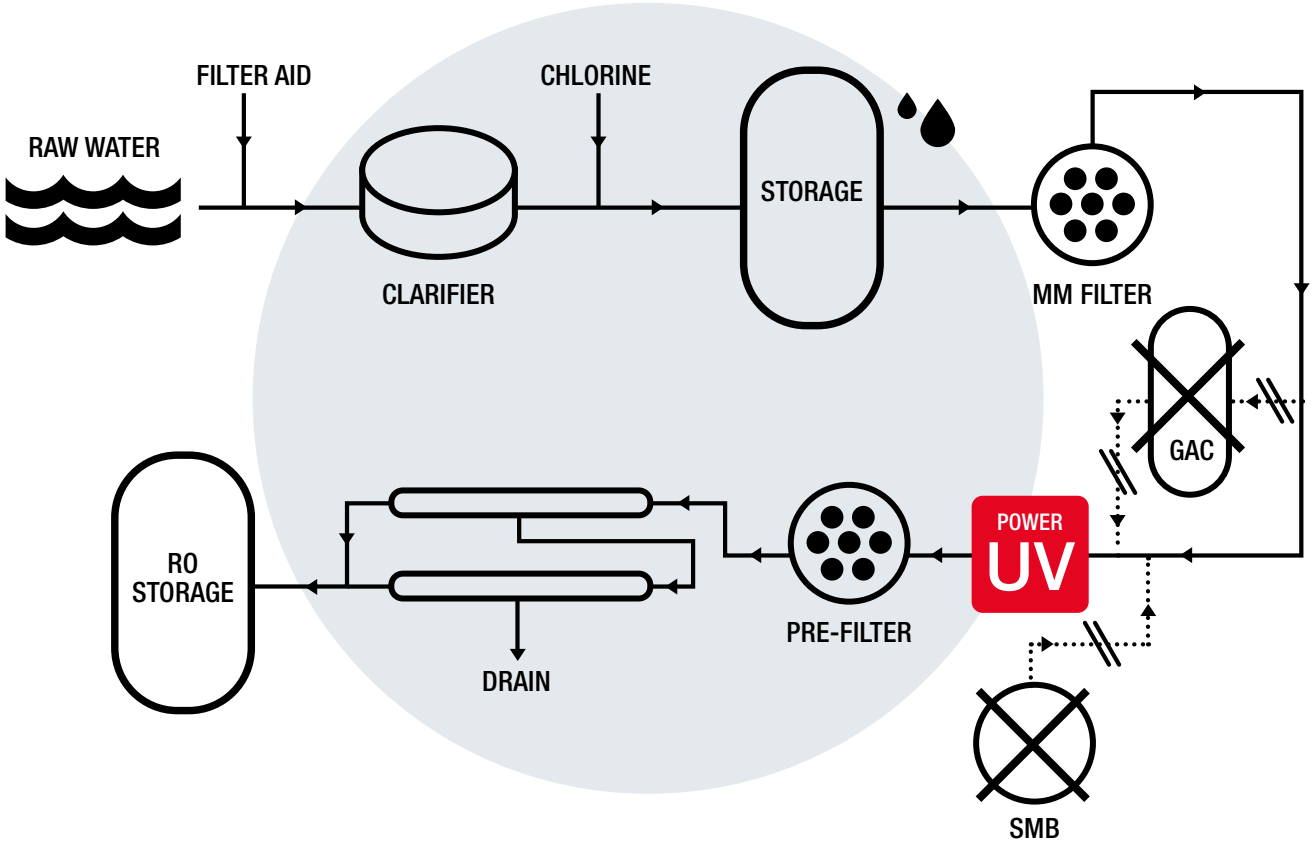
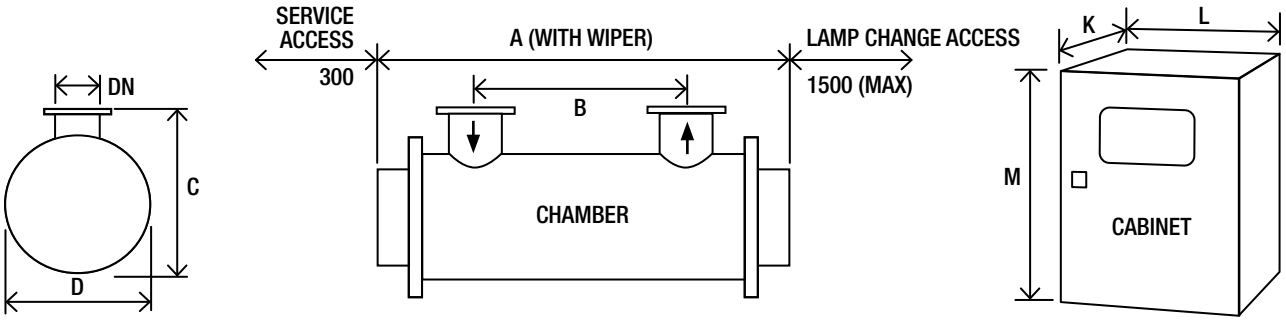
Potential location of the PurePower DC PH™



KEY FEATURES	WHAT IT GIVES YOU	BENEFITS FOR YOU
INTELLIGENCE		
UV intensity monitor	Continuous verification of performance with in-built low intensity alarm	Easy to monitor and log system performance
OPTIMISATION		
Medium pressure lamp	Provides high intensity UV light at 200 to 400 nm wavelengths ideal for the destruction of free chlorine (HOCl and OCl^-)	Prolongs the life of RO equipment by removing free chlorine
	Chemical free reduction of free chlorine	No risk of contamination or running out of chemical
	Unlike ACF does not require backwashing or media replacement	Saves on water and maintenance costs
	Provides high intensity germicidal wavelengths to disinfect the water	Prolongs the life of RO equipment compared to ACF by reducing the bio-burden
Designed for the power generation industry	FDA-approved materials used for all wetted parts	Industry compliant materials
	*Chamber with <0.38 µm internal surface finish and tri-clamp connections	Sanitary design
	*Automatic wiper (quartz cleaning)	Self cleaning to maintain performance
INTEGRATION		
Compact design	Can be fitted to skids	Easy integration
	Can be retrofitted to existing process	
Robust design	Maximum of 2 service visits annually	Easy to maintain compared to ACF and SMB dosing

*Option



			Dimensions (mm)									Approx weight (Kg)	
			Chamber					Cab.	Cabinet (fan cooled)			Chamber	Cabinet
Model Number	Maximum Power (kW)	Min T_{10}(%)	A	B	C	D	DN	No***	K*	L	M**	Empty	Fan cooled
PurePower DC PH 50	1.6	85	850	280	319	240	40	1	330	750	850	45	80
PurePower DC PH 100	2.7	90	1300	682	319	240	40	1	330	750	850	50	85
PurePower DC PH 200	4.2	85	1300	674	319	240	40	1	330	750	850	50	85
PurePower DC PH 250	5.8	85	1300	674	319	240	40	1	330	900	1100	50	165
PurePower DC PH 300	5.8	85	1300	674	319	240	50	1	330	900	1100	50	165
PurePower DC PH 320	12.5	85	1300	674	420	290	80	1	330	1100	1600	65	265
PurePower DC PH 360	16.5	85	1300	674	420	290	100	1	330	1100	1600	65	282
PurePower DC PH 400	25.2	85	1300	674	505	410	50	1 CC	330	900	1100	140	165
								1 PC	330	1100	1600		282
PurePower DC PH 500	25.2	85	1300	674	505	410	100	1 CC	330	900	1100	140	165
								1 PC	330	1100	1600		282

* 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).
*** CC: Control cabinet, PC: Power cabinet
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
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
End plate:	Removable end plate
Degree of protection:	IP65 equivalent to NEMA 4 but not for outside use
Arc tube (lamp):	Medium pressure
Arc tube enclosure:	Pure quartz (F200)
Number of arc tubes (lamps):	1 (DC PH 50-300), 3 (DC PH 320), 4 (DC PH 360), 6 (DC PH 400-500)
Expected lamp life:	8000 hours, 4000 hours DC PH 250 and 300
Temperature sensor:	Yes
UV monitor:	Wet UV monitor
Working fluid temperature:	1°C to 60°C (80°C unwiped)
Maximum CIP temperature:	95°C with cabinet electrically isolated
Hydrostatically pressure tested:	Yes to PED requirements EN 13445
Chamber mounting:	Horizontal only
Operating pressure:	6 bar (postive pressure only)
Seals:	EPDM, ADI free, EC 1935/2004, FDA 21 CFR 177.2600 approved

OPTIONS

Document Support Pack
Cabinet material: Stainless steel 316
Operation and Maintenance manual and printed Installation and Commissioning manual in Chinese, English, French, German and Spanish
Wiper: Automatic (electrically driven)
Flange options: ANSI 150, JIS, Table 'E' and tri-clamp
Chamber internal finish: <0.38 µm welds polished out, electropolished and passivated
Lead length: 20 m, 30 m or 50 m cabinet to chamber
Bleed valve: Hygienic valve with tri-clamp connection
Maximum CIP temperature: 130°C (panel switched off)
Welder Document Pack for chamber construction

OPTIONS (CONTINUED)

Skid mounting (not ship board or earthquake zone)
Operating pressure: 10 bar
Air vent connection: Tri-clamp blanked off
Stainless steel cabinet IP upgrade: air to air heat exchangers stainless steel IP 56, NEMA 4X, relative humidity <95% non condensing. See sales drawings for sizes.
Aggressive water package: For 400 ppm to 20000 ppm chloride water
UVShield™: Power cut-out for lamp access (except DC PH 320 to 500)
Water leak detection: Detects water leaks from quartz sleeve (except DC PH 320 to 500)
Arc tube enclosure: Doped quartz F240 (reduces performance)

CABINET (CONTROLLER PHOTON)

Material:	Polyester coated carbon steel
Degree of protection:	IP54 NEMA 12
Supply voltages (nominal):	DC PH 50-100 95 V to 260 V (+/-10%) DC PH 200-300 190 V to 480 V (+/-10%) DC PH 320-500 380 V to 480 V (+/-10%) 50/60 Hz
Operating temperature range:	5°C to 40°C
Relative humidity:	<85% non-condensing
Cooling fans:	Yes
Interconnecting cable lengths:	10 m cabinet to chamber

CUSTOMER OUTPUTS

4-20 mA passive or active output:	UV intensity %
VFC outputs:	System warning, lamp ready, low UV intensity, common trip, remote reset, ELCB or water leak, system available, local or remote mode

CUSTOMER INPUTS

4-20 mA passive or active input:	Flow meter
VFC inputs:	Remote stop/start and remote reset

CUSTOMER COMMUNICATIONS PORT

None

APPROVALS

CE marked, UL listed E 149108

PUREPOWER DC+DCD

Also available in our Power product range...

PROLINE PQ WW IL

Range of medium pressure products with NWRI validation for waste water reuse

PROLINE WW IL

Range of compact medium pressure products for waste water disinfection

PUREPOWER PQ IL

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

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