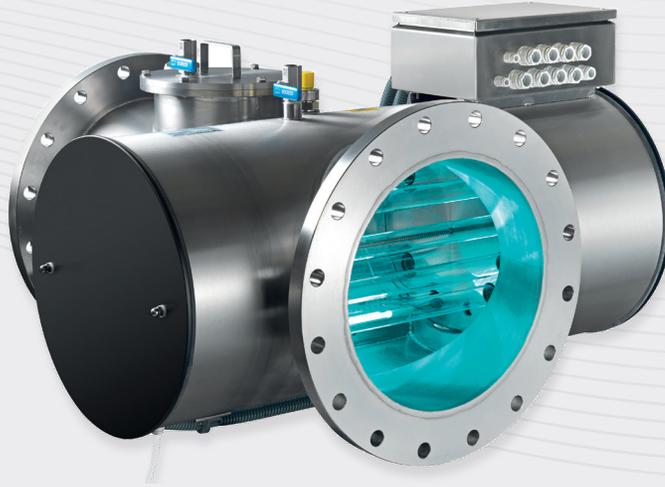




NUVONIC

formerly Aquionics, Berson, Hanovia and Orca GmbH



PROLINE WW IL

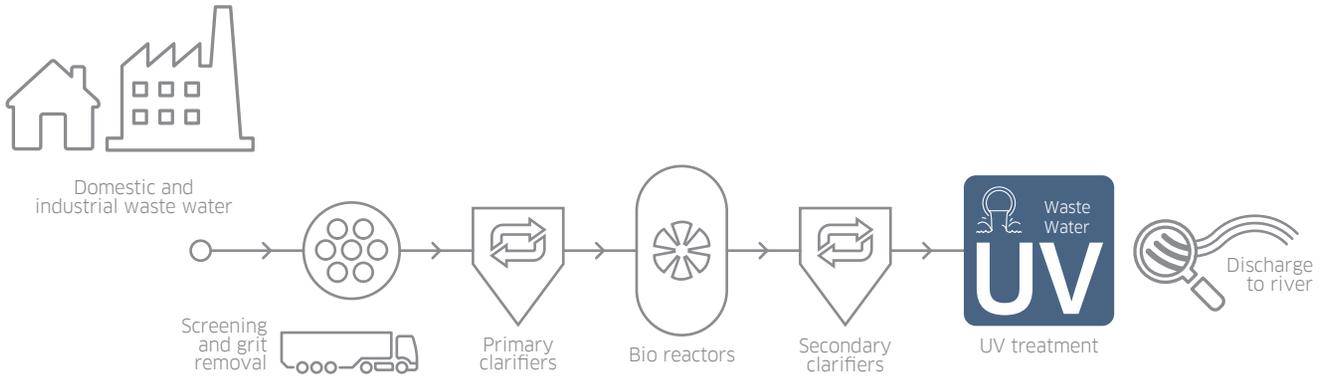
UV TREATMENT FOR WASTE WATER

Our ProLine WW IL systems for UV treatment of waste water are particularly suited to low UVT applications and can be deployed after clarifiers, sand filters and membranes. With increasing urbanization and water stress, the need for tertiary treatment and treatment of waste water is growing, particularly for discharge to sensitive environments. UV is also growing in popularity as it provides a proven alternative to Chlorination avoiding the generation of potentially harmful by-products. The ProLine WW IL are compact medium pressure lamp systems and are intended as a cost-effective treatment for less critical applications where there is no risk to people or the food chain. For more critical applications we recommend our reuse range.

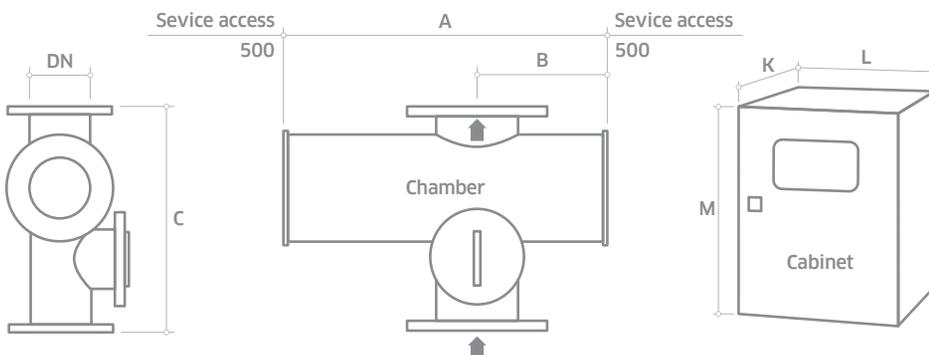


Application
Optimised UV for
Waste Water Reuse

POTENTIAL LOCATION OF THE PROLINE WW IL™ IN WASTE WATER TREATMENT PLANT PROCESS



KEY FEATURES	WHAT IT GIVES YOU	BENEFITS FOR YOU
INTELLIGENCE		
Dry DVGW approved UV sensor measuring active wavelengths	Continuous verification of performance with real time dose reading and in-built low dose warning	Easy to monitor
Flow meter input	Dose reading based on actual flow conditions when meter is connected	Accurate UV dose reading guaranteed under wide range of operating conditions
OPTIMISATION		
UV waste water treatment	Protects the environment from harmful microbiological contamination	No chemicals
Designed for municipal and industrial reuse and waste water applications	Flanged connections, high standard internal finish	Designed to international standards
	Automatic wiper (quartz cleaning)	Self cleaning to maintain performance
	*Ultrawipe (chemically enhanced wiper)	Clean quartz sleeves despite high fouling potential
INTEGRATION		
Compact design *Option	Can be retrofitted to existing process	Easy integration



- * 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
 - » Attention: the optional cabinet with A/C is bigger. Ask for dimensions.
- 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.

MODEL NUMBER	MAX POWER (KW)	NO OF LAMPS	DIMENSIONS (MM)				APPROX WEIGHT (KG)						
			Chamber				Cab. No***	Cabinet (fan cooled) ^a					
			A	B	C	DN		K*	L	M**	Chamber Empty	Cabinet Fan cooled	
ProLine WW IL 100	1.8	2	780	310	400	100	1	300	800	1000	42	50	
ProLine WW IL 250	5.6	2	780	310	540	150	1	300	1000	1200	55	80	
ProLine WW IL 400	11	4	780	310	465	150	1	300	1000	1200	55	100	
ProLine WW IL 1000	11	4	780	310	600	200	1	300	1000	1200	80	100	
ProLine WW IL 1250	16.5	6	780	310	600	200	1	300	1200	1200	80	165	
ProLine WW IL 4500	26	6	896	368	800	350	1	600	1000	2100	170	200	
ProLine WW IL 5000	35	8	896	368	800	350	1	600	1200	2100	170	230	
ProLine WW IL 7500	52	12	896	368	800	350	1 CC	400	600	2000	170	130	
							1 PC	600	1200	2100			310
ProLine WW IL 14000	52	8	1052	446	900	500	1 CC	400	600	2000	260	130	
							1 PC	600	1200	2100			290
ProLine WW IL 15000	52	12	1052	446	900	500	1 CC	400	600	2000	260	130	
							1 PC	600	1200	2100			310
ProLine WW IL 16000	78	12	1052	446	900	500	1 CC	400	600	2000	260	130	
							2 PC	600	1200	2100			260
ProLine WW IL 18000	117	18	1052	446	900	500	1 CC	600	1000	2010	270	130	
							2 PC	600	1200	2100			260
							3 PC	600	1200	2100			260

UV CHAMBER	
Material:	StSt 316L / 1.4404
Internal finish:	< 0.8 µm Ra, welds ground out, electropolished and passivated
External finish:	Brushed to K280, electropolished and passivated
Process (mating) connections:	Flange EN 1092-1 PN10
Drain connection:	BSP Socket or NPT if ANSI flange
Air vent connection:	BSP Socket or NPT if ANSI flange
End plate:	Removable end plate
Inspection hatch:	Removable plate (except WW IL 100)
Degree of protection:	IP54 equivalent to NEMA 12
Wiper:	Automatic (electrically driven)
Arc tube (lamp):	Medium pressure
Arc tube enclosure:	Pure quartz (F200)
Number of arc tubes (lamps):	See table above
Expected lamp life:	12000 hours
Temperature sensor:	Yes
UV sensor:	Dry DVGW compliant UV sensor (one per UV chamber)
Working fluid temperature:	1°C to 60°C
Hydrostatically pressure tested:	Yes
Chamber mounting:	Flow horizontal or vertical (lamps horizontal only)
Operating pressure:	6 bar (positive pressure only)
Seals:	EPDM, ADI free, EC 1935/2004, FDA 21 CFR 177.2600 approved

OPTIONS	
Document Support Pack	
Cabinet: Stainless steel 304	
Cabinet: Stainless steel 304 with air conditioning (5°-50°C), IP66 (NEMA 4X), relative humidity <95% non condensing*	
Cabinet: Stainless steel 316 with air conditioning with slooping roof (5°-50°C), IP66 (NEMA 4X), relative humidity <95% non condensing*	
Operation and Maintenance manual and printed Installation and Commissioning manual in Chinese, English, French, German & Spanish	
Flange options: PN16, ANSI 150, JIS, Table 'E'	
Lead length: 20 and 29 m	
In-field UV reference sensor kit	
Bleed: valve with BSP connection or NPT if ANSI flange	
Operating pressure: 10 Bar	
Water level sensor: Full water detection UV chamber	
Water leak detection: Detects water leaks from quartz sleeve	

OPTIONS (CONTINUED)	
Quartz sleeve F240 (reduces performance)	
Ultrawipe (for WW IL 250-18000)	
UL 508A shop approval	
Welder pack	
CABINET (CONTROLLER UVTRONIC)	
Material:	Polyester coated carbon steel, RAL 7035
Degree of protection:	IP54 (NEMA 12)
Supply voltages:	WW IL 100-1000: 208-277V (+/-10%) 1L+N, 2L, 3L 50/60 Hz 360-480V (-5/+10%) 3L+N, 50/60 Hz WW IL 1250: 208-277V (+/-10%) 3L 50/60 Hz 360-480V (-5/+10%) 3L+N, 50/60 Hz WW IL 4500-18000: 380-480V (-5/+10%) 3L, 3L+N 50/60 Hz
Operating temperature range:	5°C to 35°C
Relative humidity:	<85% non-condensing
Cooling fans:	Yes
Interconnecting cable:	10 m
Variable power:	Stepless variable power (70% reduction from maximum ballast power)

HMI/CONTROL	
Display:	4 line LCD, indicating system status including alarms
Operating menu:	3 levels (2 with password protection)
Fault finding:	Event log

CUSTOMER OUTPUTS	
4-20 mA passive output:	UV dose, ballast power
VFC outputs:	Standby in remote, system standby, system cooling down, any trip, any warning, UV dose failure, system ready, wiper failure, lamp failure, full water level detection water leak, water temperature warning, water and cabinet temperature alarm

CUSTOMER INPUTS	
4-20 mA active or passive inputs:	Flow meter and transmittance meter
VFC inputs:	Remote stop/start, remote clear message, remote wipe, remote set power high

CUSTOMER COMMUNICATIONS PORT	
Modbus RS 485 serial RTU for SCADA connection	

APPROVALS	
CE marked	

* See sales drawings for dimensions



ProLine WW IL

Also available in our Waste Water product range...



**PROLINE
PQ WW AL**

Range of amalgam products with NWRI validation for waste water reuse



**PROLINE
PQ WW IL**

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

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