



UV

## VGE Pro UV INOX System



### Reactors

#### INOX

The high quality 316L stainless steel reactor of the VGE Pro INOX series have been designed to perform. After the high quality welding process the units are leak tested. After this process they get a pickling and passivation treatment which drastically improves the corrosion resistance and lifetime of the unit. Another last treatment with glass pearls (shot peening) gives the units a nice, matt grey surface.

### VGE Pro UV-C control units

Each VGE Pro UV-C disinfection system is equipped with a control cabinet. There are several control units which can be combined with a suitable VGE Pro unit and several other options like a temperature sensor and a flow switch.

### UV-C & temperature sensor

VGE Pro UV-C units can be equipped with a UV-C & temperature sensor. These digital sensors can be delivered in teflon (only the UV-C sensor) or stainless steel. The VGE Pro control monitors are designed to work with these UV-C & temperature sensor

### Smart Pin Technology

The VGE Pro UV-C disinfection systems are equipped with the unique Smart Pin Technology (SPT). This innovative system is a reliable way to integrate the UV-C lamp(s) in a safe, efficient and smart way in a reactor. The SPT makes it possible to replace the lamp safely, although the system is filled with water and pressurized.

#### Features

- Prevents the release of harmful UV-C radiation
- Changing the UV-C lamp with water in the system
- Resistant to corrosion
- Splash proof
- Visual inspection for operation of the lamp
- Clamping system for optimal seal function
- Lamp replacement without tools

## Advanced Oxidation Processes

Advanced Oxidation Processes (AOP): are chemical treatments to reduce organic and inorganic components from water via oxidation. AOP's use the oxidative power of the hydroxyl radical ( $\cdot\text{OH}$ ), which has the second best oxidation potential and is the strongest oxidiser that can be used in water. The process converts the contaminant materials to a large extent in stable compounds such as water, carbon dioxide and salts, i.e they are mineralized. In general, when used in the correct way, AOP's can significantly reduce the COD and TOC levels in your water. In general it is advised to apply the AOP as final treatment step in a water treatment system so that all natural present scavengers of the hydroxyl radical are reduced as much as possible, especially bicarbonate ions ( $\text{HCO}_3$ )

### Pro-UV-C control units

for the VGE Pro UV-C systems 4 different control units are available, knowing: Basic, control timer, control monitor and control monitor Plus. the Basic version is suited with an electronic ballast to drive the lamp(s). The control timer has additionally a LED display for showing the operational lamp hours. The control monitor has a colour display and an optional UV sensor can be connected for monitoring the treatment process. The most complete control panel is the control monitor Plus. A UV sensor, temperature sensor and a flowswitch can be connected and the control unit has alarm and warning functions built-in.

### VGE PRO INOX

Model	Reactor shape	Max. pressure		Connection	Capacity (1)	Quality water (2)		
		[bar]				Good	Medium	Bad
400-54	Z	6		1"	18			✓
40-76	L	6		3/4"	3	✓		✓
75-76	L	6		3/4"	6			
140-76	U	6		1 1/2"	12	✓		✓
200-76	U	6		2"	17	✓		✓
75-114	U	6		2"	10	✓		✓
140-114	U	6		2"	20	✓		✓
200-154	U	6		DN80	38	✓		
420-168	U	6		3"	78	✓		✓
400-204	U	6		DN100	92	✓		
600-219	U	6		DN125	140	✓		
975-306	L	6		DN250	306	✓		
1950-306	L	6		DN250	600	✓		

Note : Manufactured by Blue Lagoon, Netherlands



## Timer UV-C

The Blue Lagoon Timer is equipped with an integrated timer which accurately monitors the number of operating hours. You can therefore see exactly when the lamp must be replaced.

### Operation

The UV-C radiation inactivates bacteria, viruses and other microorganisms and stops them from multiplying. This device is able to reduce the chlorine concentration up to 50-80%!



### Features

- Timer function that indicates the remaining lifetime of the lamp
- A built-in electronic ballast to ensure an efficient and stable power supply
- Up to 35% more UV-C yield as a result of reflection by the stainless steel reactor
- 316L stainless steel housing
- Easy to install and easy to maintain
- Comes with Ø63mm to Ø50mm fittings, 1½" female threaded

### Technical Specification

	TIMER UV-C 40W	TIMER UV-C 75W	TIMER UV-C 130W	AOP COMPACT OZONE & UV-C 75W
Type	40.000 / 40W	75.000 / 75W	150.000 / 130W	75.000 / 75W
Rec. flow for 30 mJ/cm <sup>2</sup>	11 m <sup>3</sup> /h	16 m <sup>3</sup> /h	22 m <sup>3</sup> /h	18 m <sup>3</sup> /h
Max. pressure	2 bar	2 bar	2 bar	2 bar
Max. flow	23 m <sup>3</sup> /h	23 m <sup>3</sup> /h	23 m <sup>3</sup> /h	23 m <sup>3</sup> /h
Diameter unit Ø	70 mm	70 mm	70 mm	70 mm
Length unit	100 cm	100 cm	100 cm	100 cm
Diameter in-outlet Ø	63mm / 50mm / 1 ½"	63mm / 50mm / 1 ½"	63mm / 50mm / 1 ½"	63mm / 50mm / 1 ½"
Stainless steel	316L	316L	316L	PVC
Electronic ballast	230V AC 50/60Hz	230V AC 50/60Hz	230V AC 50/60Hz	230V AC 50/60Hz
Maximum current	0,29A	0,57A	1,1A	0,57A
Lamp power	40W	75W	130W	75W
Lamp	Philips TUV 36T5 4P-SE (40 Watt)	Philips TUV 36T5 HO 4P-SE (75 Watt)	Philips TUV 130 Watt 4P-SE Amalgam	VEGE TS 75W Ozone
Lifespan lamp	9.000 h	9.000 h	12.000 h	4.500 hours ozone - 9.000 hours UV-C
Timer	✓	✓	✓	✓
Replace lamp alert	✓	✓	✓	✓
Flow switch	-	-	✓	✓

Note : Manufactured by Blue Lagoon, Netherlands

## Ozone UV-C

The combination of ozone and UV-C, integrated in this smart designed disinfection system, ensures fresh and healthy pool water with the possibility of providing a minimum use of chlorine. Especially developed for disinfection of saltwater.

### Operation

Air is sucked in from the outside, into the space between the UV-C lamp and the quartz sleeve. The 185 nm radiation converts the available oxygen into ozone. The produced ozone is mixed with water through the venturi to perform its disinfection and oxidising job.



### Features

- This unit provides triple disinfection: Ozone, OH radicals and UV-C. A built-in electronic ballast to ensure an efficient and stable power supply.
- 100% effective and constant operation
- The ozone UV-C lamp produces ozone for 4.500 hours and produces UV-C for 9.000 hours
- The device will indicate when the lamp needs replacing
- Easy to install and easy to maintain