

## PRODUCT CATALOGUE

**UV-C;  
THE DIFFERENCE  
IS CLEAR**





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## Our Blue Lagoon UV experts



**Arjan van der Spank**  
Managing Director



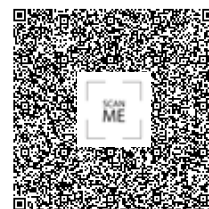
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**Bas Tips**  
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**Koen van der Meijs**  
Accountmanager





# About Blue Lagoon



## Crystal-clear, healthy and safe water - Naturally effective

*Blue Lagoon UV-C systems offer a proven method of water disinfection—chemical-free where possible, and maximally effective by design. Whether it's a private pool, a compact hot tub, or a large commercial installation, Blue Lagoon UV-C guarantees sparkling clear water in an environmentally responsible way when combined with a properly functioning filtration system.*



### Private Pools

In private pools, the goal is to enjoy the water as long as possible without frequent refills. However, prolonged water retention increases the risk of contamination by bacteria, viruses, and algae, a process accelerated by higher water temperatures. Additional contamination is introduced by swimmers, pets, and organic debris.

Blue Lagoon UV-C disinfection provides an energy-efficient and highly effective solution to microbial contamination. Whether installed in a high-end in-ground pool or a temporary above-ground setup, Blue Lagoon UV-C systems are a critical component to any pool filtration system. UV-C



neutralizes bacteria and viruses, significantly reduces chloramine formation and chlorine odors, and minimizes the overall chemical demand.

### Advantages:

- Crystal-clear swimming water
- Reduced chemical usage
- Lower maintenance requirements
- Safe and healthy water for swimmers





### Spas & hot tubs

Hot tubs and spas create ideal conditions for microbial growth due to elevated water temperatures. To protect user health, a reliable low-chemical disinfection method is essential. The Blue Lagoon Spa Series is specifically engineered for compact systems, delivering effective disinfection without the negative effects of excessive chlorine use. The result: odorless, crystal-clear water that is gentle on the skin and eyes.

#### Advantages:

- Significantly reduced chlorine demand
- Odor-free water
- Low-maintenance operation

### Commercial Pools

High-traffic environments such as hotels, wellness centers, campgrounds, and public swimming facilities place intensive demands on water treatment systems. Ensuring safe, healthy, and clear water in an efficient and eco-friendly way is a continuous challenge, especially with growing concerns around the overuse of chemicals.

For such demanding applications, Blue Lagoon UV-C offers high-capacity professional-grade systems capable of continuous disinfection of large water volumes in compliance with national and international standards. A major advantage of the Blue Lagoon Medium Pressure series is its ability to effectively reduce chloramine concentrations. Chloramines not only cause the typical “chlorine smell,” but also lead to skin, eye, and respiratory irritation.



By significantly reducing chloramines, Blue Lagoon UV-C enhances the overall experience while reducing chemical dependency.

With high-quality Stainless steel housings, automated operation, and seamless integration into existing pump and filtration setups, these systems ensure consistent water quality in even the most demanding commercial settings.

#### Advantages:

- Effective chloramine reduction
- Consistent and reliable water quality through UV-C disinfection
- Lower operational costs
- Reduced chemical usage for environmentally friendly water treatment
- Fresh, clean, and clear swimming water

# Blue Lagoon Pool UV-C



## Why Blue Lagoon UV-C is an essential part of any pool filtration system

*UV-C technology offers a highly effective method for maintaining safe, clean, and healthy swimming pool water. By neutralizing bacteria, viruses and fungi, UV-C keeps water fresher, clearer, and significantly reduces strain on the skin, eyes, and respiratory system. When integrated with a conventional filtration system, UV-C provides reliable, protection for all swimmers.*

### **Prevents Skin Irritation**

By reducing the need for chlorine and other chemical disinfectants, UV-C helps protect skin and maintain its natural waterbalance.

### **Protects Against Red and Irritated Eyes**

UV-C minimizes eye discomfort commonly caused by chlorine exposure, especially during periods of high pool usage.

### **Eliminates Harmful Bacteria, Viruses, and Fungi**

UV-C delivers safe and effective disinfection, neutralizing pathogens in the water without altering its chemical composition.

### **Ensures Fresh, Clear, and Clean Water**

UV-C enhances water clarity and preserves a natural, sparkling appearance, without the haze often associated with chemical overuse.







#### **Ideal for Individuals with Allergies or Sensitive Skin**

With fewer chemicals in the water, there's a lower risk of allergic reactions, making UV-C ideal for children, people with allergies, and sensitive skin types.

#### **Reduced Exposure to Harsh Chemicals**

UV-C disinfection significantly lowers the need for aggressive water treatment agents, helping to maintain a healthier and more eco-friendly pool environment.

#### **Minimizes Risk of Respiratory Irritation from Chlorine Vapors**

By reducing airborne chlorine by-products (such as chloramines), UV-C contributes to better air quality in and around the pool, lowering the chance of respiratory irritation.



## Legenda



#### **Pool Pro Only**

This product is only intended for sale and installation by a professional installer.



#### **Salt-water**

This product is for salt-water applications. The housing is designed to avoid corrosion or damage of the unit from the salt-water in swimming pools.



#### **Duplex housing**

The housing of this product is made of DUPLEX, designed for saltwater applications to avoid corrosion or damage and provides a reflection of UV radiation to increase the efficiency of the radiation up to 35%.



#### **Stainless steel housing**

A Stainless steel interior provides a reflection of UV radiation and this increases the efficiency of the radiation by up to 35%. In addition, the Stainless steel ensures a longer life of the housing.



#### **ETL certified**

The ETL Listed Mark is proof that your product has been independently tested and meets the applicable published standard. The ETL Mark is proof of product compliance to North American safety standards.



#### **UL certified**

UL is a world leader in product safety testing and certification. For more than a 100 years, manufacturers have had their merchandise evaluated and tested for safety risks by an independent, third-party safety certification organization.

Blue Lagoon Xpert-Series especially for Pool professionals!

Blue Lagoon Xpert-Series



Medium Pressure 400



Medium Pressure 600



Medium Pressure 1000



Medium Pressure 1500

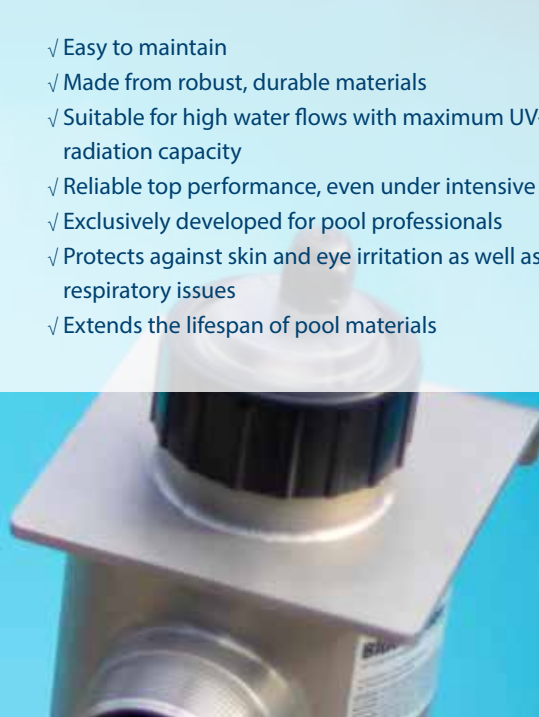
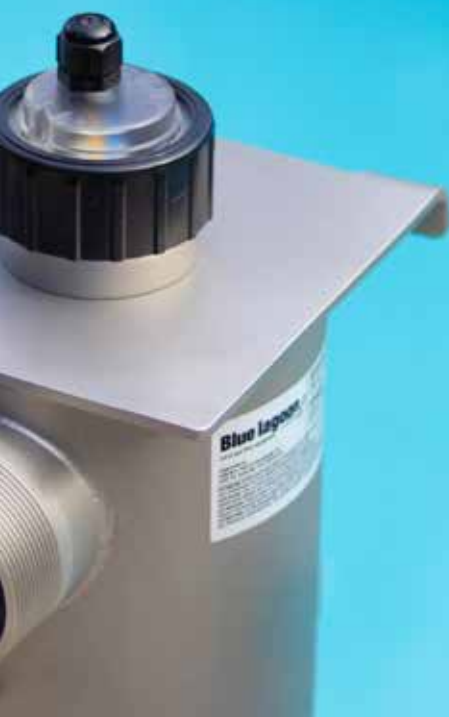


Medium Pressure 1500 Manual Wiper



Engineered for customers who demand peak performance, reliability, and durability in pool water treatment. The Blue Lagoon Xpert-Series represents the next generation of high-end UV-C disinfection systems, purpose-built for commercial pools, wellness centers, hotels, and luxury private pools where maximum water quality is non-negotiable.

- ✓ Easy to maintain
- ✓ Made from robust, durable materials
- ✓ Suitable for high water flows with maximum UV-C radiation capacity
- ✓ Reliable top performance, even under intensive use
- ✓ Exclusively developed for pool professionals
- ✓ Protects against skin and eye irritation as well as respiratory issues
- ✓ Extends the lifespan of pool materials



Buster  
80 W/140 W  
Ø 114



Buster  
80 W/140 W  
Ø 154



Buster  
420 W  
Ø 219



Compact AOP UV



Duplex UV-C

# Medium Pressure 400 W UV-C



## Advantages

- Suitable for all chlorinated pools
- Compact chamber design for space-saving installation
- Easy to install and integrate into new and existing systems
- Powerful chloramine reduction for healthy and clear water
- Single-ended lamp for quick and simple replacement
- Long lamp life minimizes replacement frequency and costs



**More information?**  
Scan the QR-code



	<b>400 W</b>
Article number	BPM00401
Type	400-85
EAN	8714404042338
Maximum rated pressure	10 bar
Flow 400 J/m <sup>2</sup> (Disinfection)	13 m <sup>3</sup> /h
Flow 600 J/m <sup>2</sup> (Chloramine reduction)	8 m <sup>3</sup> /h
In/outlet connections Ø	2" BSPT male
Housing material	AISI 316L
Control panel	Compact
Lifespan lamp	9 000 hours
Temperature switch	✓
Lamp function indicator	✓
Replace lamp alert	✓
Flow switch	Optionally connectable but not included

**POOL  
PRO  
ONLY**

**STAINLESS  
STEEL**

## Spare parts

<b>A</b>	F980600	Lamp Blue Lagoon MP 400 W SBT
<b>B</b>	QG101	Quartz glass MP 195 x 38 x 1,5 mm 400 - 600 W (incl. seal service set)
<b>D</b>	EPM00402	Blue Lagoon Xpert UV Electrical Part MP Compact 400
<b>G</b>	SP0054	Seal Service Set MP UV-C

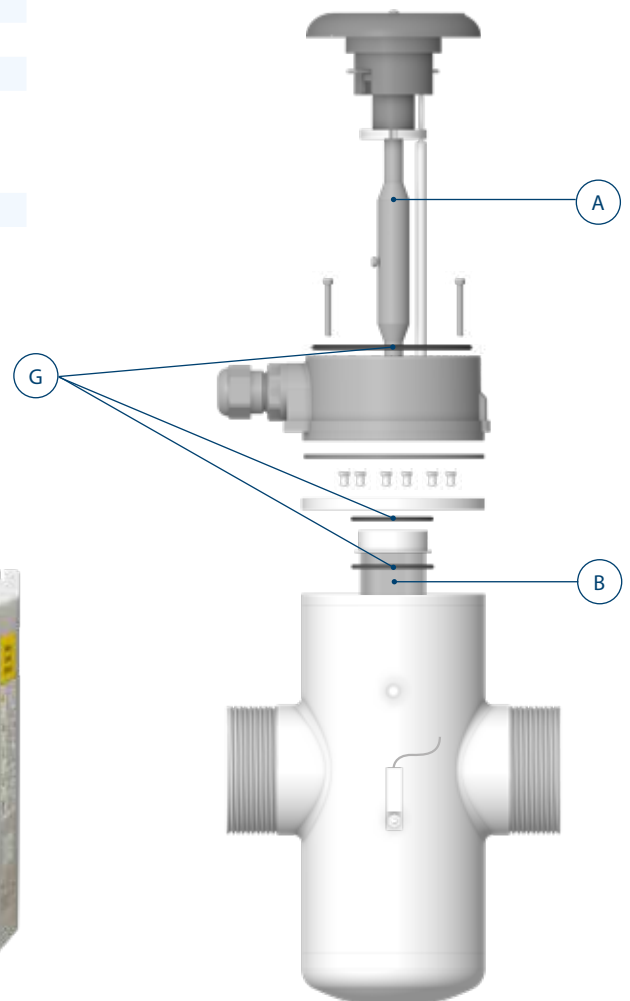
Optional

<b>SP0058</b>	Torque screwdriver
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F980600 - Lamp Blue Lagoon MP 400 W SBT



Temperature switch 60 °C 10 m cable



# Medium Pressure 600 W UV-C



## Advantages

- Suitable for all chlorinated pools
- Compact chamber design for space-saving installation
- Easy to install and integrate into new and existing systems
- Powerful chloramine reduction for healthy and clear water
- Single-ended lamp for quick and simple replacement
- Long lamp life minimizes replacement frequency and costs



**More information?**  
Scan the QR-code



	<b>600 W</b>
Article number	BPM00601
Type	600-85
EAN	8714404042406
Maximum rated pressure	10 bar
Flow 400 J/m <sup>2</sup> (Disinfection)	19 m <sup>3</sup> /h
Flow 600 J/m <sup>2</sup> (Chloramine reduction)	11 m <sup>3</sup> /h
In/outlet connections Ø	DN80 flange
Housing material	AISI 316L
Control panel	Compact
Lifespan lamp	9 000 hours
Temperature switch	✓
Lamp function indicator	✓
Replace lamp alert	✓
Flow switch	Optionally connectable but not included

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PRO  
ONLY**

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STEEL**

## Spare parts

A	F980605	Lamp Blue Lagoon MP 600 W SBT
B	QG101	Quartz glass MP 195 x 38 x 1,5 mm 400 - 600 W (incl. seal service set)
D	EPM00603	Blue Lagoon Xpert UV Electrical Part MP Compact 600
Y	B212103	Stainless steel 316L plug 1/4" with collar
Z	SP0054	Seal Service Set MP UV-C

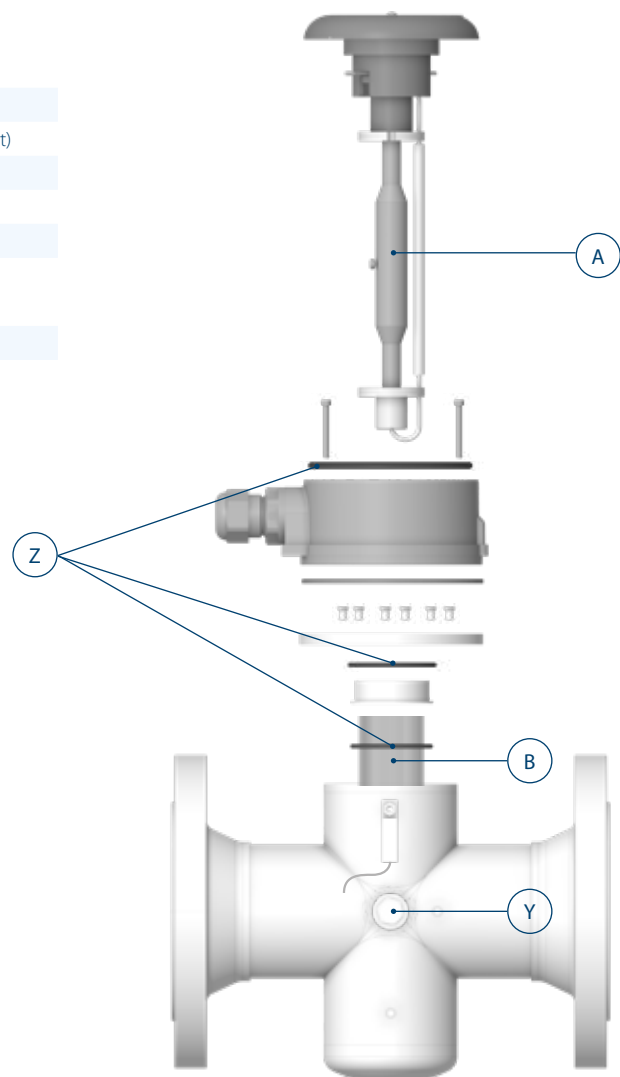
### Optional

	SP0058	Torque screwdriver
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F980605 - Lamp Blue Lagoon MP 600 W SBT



Temperature switch 60 °C 10 m cable



# NEW!

## Medium Pressure 1000 W UV-C

Blue Lagoon Xpert-Series

### Advantages

- Suitable for all chlorinated pools
- Compact chamber design for space-saving installation
- Easy to install and integrate into new and existing systems
- Powerful chloramine reduction for healthy and clear water
- Single-ended lamp for quick and simple replacement
- Long lamp life minimizes replacement frequency and costs



**More information?**  
Scan the QR-code



	<b>1000 W</b>
Article number	BPM01001
Type	1000-104
EAN	871440404725
Maximum rated pressure	10 bar
Flow 400 J/m <sup>2</sup> (Disinfection)	41 m <sup>3</sup> /h
Flow 600 J/m <sup>2</sup> (Chloramine reduction)	25 m <sup>3</sup> /h
In/outlet connections Ø	DN100 flange
Housing material	AISI 316L
Control panel	Compact
Lifespan lamp	9 000 hours
Temperature switch	✓
Lamp function indicator	✓
Replace lamp alert	✓
Flow switch	Optionally connectable but not included

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STEEL**

## Spare parts

A	F980610	Lamp Blue Lagoon MP 1000 W SBT
B	QG137	Quartz glass MP 215 x 38 x 1,5 mm AM (incl. seal service set)
D	EPM01002	Blue Lagoon UV Electrical Part MP Compact 1000
Y	B212103	Stainless steel 316L plug 1/4" with collar
Z	SP0054	Seal Service Set MP UV-C

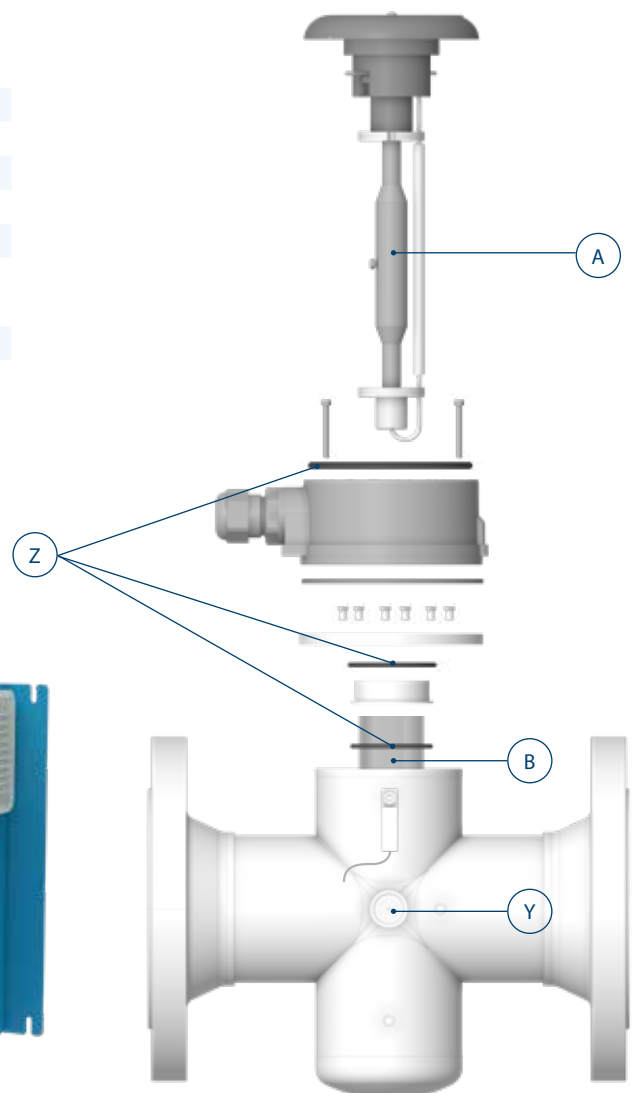
### Optional

SP0058	Torque screwdriver
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F980610 - Lamp Blue Lagoon MP 1000 W SBT



Temperature switch 60 °C 10 m cable



# NEW!

## Medium Pressure 1500 W UV-C

### Advantages

- Suitable for all chlorinated pools
- Compact chamber design for space-saving installation
- Easy to install and integrate into new and existing systems
- Powerful chloramine reduction for healthy and clear water
- Single-ended lamp for quick and simple replacement
- Long lamp life minimizes replacement frequency and costs



**More information?**  
Scan the QR-code



	<b>1500 W</b>
Article number	BPM01501
Type	1500-168
EAN	871440404726
Maximum rated pressure	10 bar
Flow 400 J/m <sup>2</sup> (Disinfection)	107 m <sup>3</sup> /h
Flow 600 J/m <sup>2</sup> (Chloramine reduction)	62 m <sup>3</sup> /h
In/outlet connections Ø	DN150 flange
Housing material	AISI 316L
Control panel	Compact
Lifespan lamp	9 000 hours
Temperature switch	✓
Lamp function indicator	✓
Replace lamp alert	✓
Flow switch	Optionally connectable but not included

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ONLY**

**STAINLESS  
STEEL**

## Spare parts

A	F980615	Lamp Blue Lagoon MP 1500 W SBT
B	QG138	Quartz glass MP 265 x 38 x 1,5 mm AM (incl. seal service set)
D	EPM01502	Blue Lagoon UV Electrical Part MP Compact 1500
Y	B212103	Stainless steel 316L plug 1/4" with collar
Z	SP0054	Seal Service Set MP UV-C

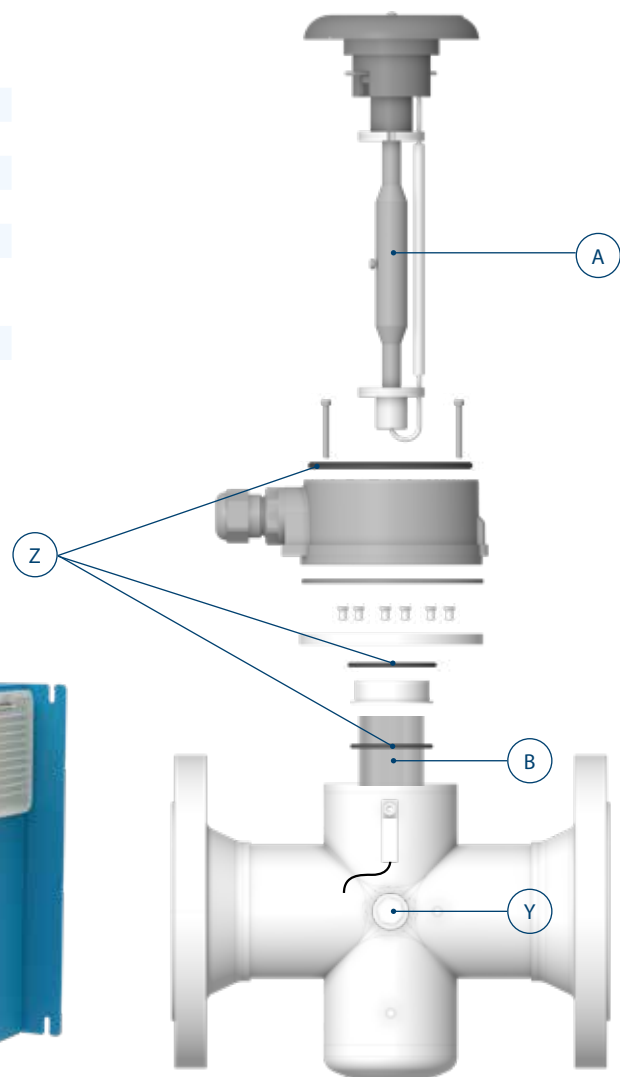
### Optional

	SP0058	Torque screwdriver
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F980615 - Lamp Blue Lagoon MP 1500 W SBT



Temperature switch 60 °C 10 m cable



**NEW!**

## Medium Pressure 1500 W Manual Wiper UV-C

### Advantages

- Suitable for all chlorinated pools
- Compact chamber design for space-saving installation
- Easy to install and integrate into new and existing systems
- Powerful chloramine reduction for healthy and clear water
- Single-ended lamp for quick and simple replacement
- Long lamp life minimizes replacement frequency and costs



**More information?**  
Scan the QR-code



	<b>1500 W Manual Wiper</b>
Article number	BPM01502
Type	1500-168 MW
EAN	871440404739
Maximum rated pressure	3 bar
Flow 400 J/m <sup>2</sup> (Disinfection)	107 m <sup>3</sup> /h
Flow 600 J/m <sup>2</sup> (Chloramine reduction)	62 m <sup>3</sup> /h
In/outlet connections Ø	DN150 flange
Housing material	AISI 316L
Control panel	Compact
Lifespan lamp	9 000 hours
Temperature switch	✓
Lamp function indicator	✓
Replace lamp alert	✓
Flow switch	Optionally connectable but not included

**POOL  
PRO  
ONLY**

**STAINLESS  
STEEL**



## Spare parts

<b>A</b>	F980615	Lamp Blue Lagoon MP 1500 W SBT
<b>B</b>	QG175	Quartz glass MP 265 x 38 x 1,5 mm MW AM (incl. seal service set)
<b>D</b>	EPM01502	Blue Lagoon UV Electrical Part MP Compact 1500
<b>Y</b>	B212103	Stainless steel 316L plug 1/4" with collar
<b>Z</b>	SP0107	Seal Service Set
<b>Q</b>	SP0112	Service Set Manual cleaning mechanism

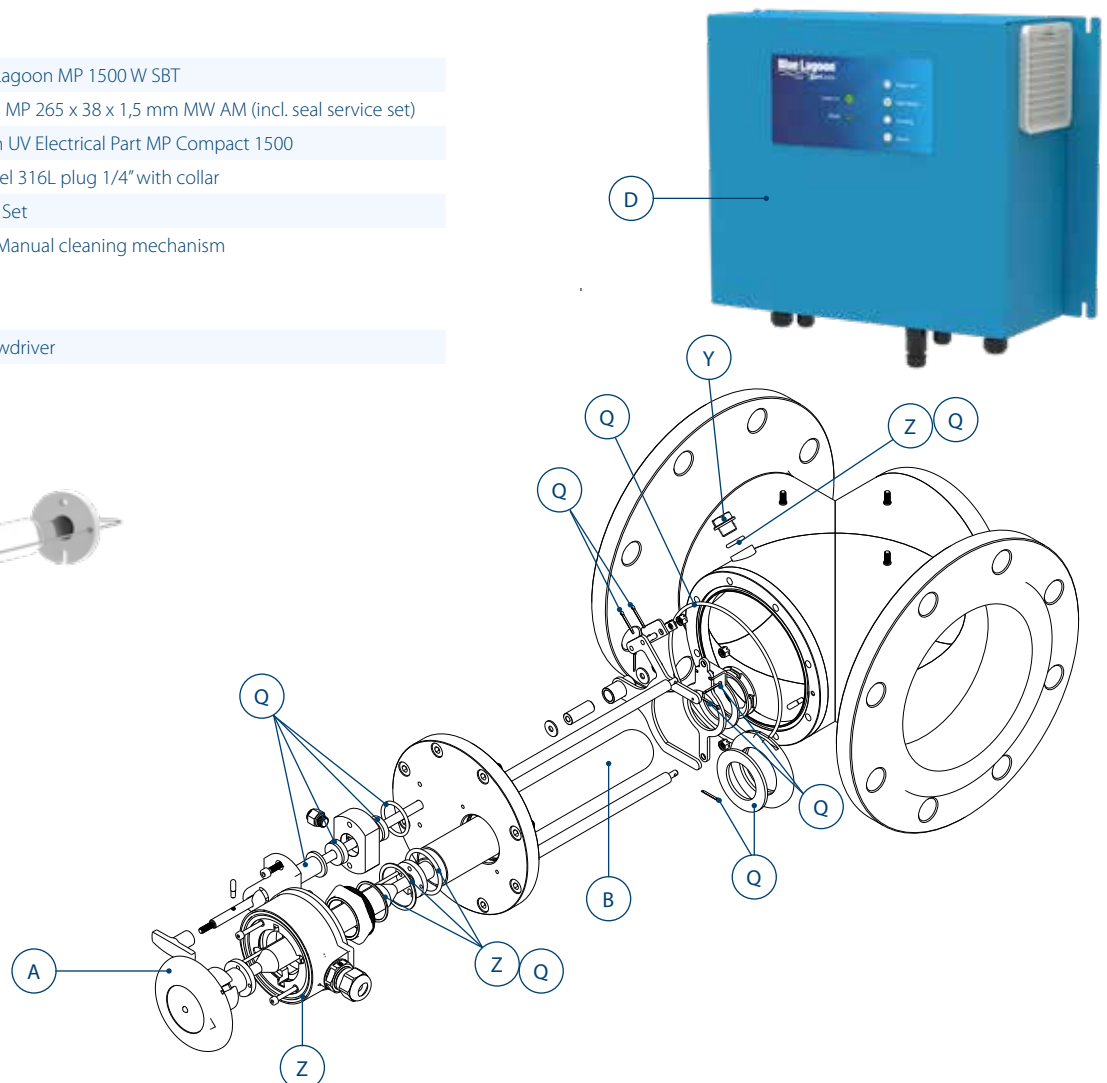
### Optional

<b>SP0058</b>	Torque screwdriver
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F980615 - Lamp Blue Lagoon MP 1500 W SBT



Temperature switch 60 °C 10 m cable





## Advantages

- Can be mounted horizontally or vertically for flexible installation
- Large chamber ensures long UV contact time for clean and healthy water
- 316L Stainless steel chamber for corrosion and chlorine resistance
- Transparent lamp head allows easy visual check of system operation
- Handles higher water flows for efficient treatment of larger pool volumes



**More information?**  
Scan the QR-code



	80 W Ø 114	140 W Ø 114 Amalgam	140 W Ø 154 Amalgam	420 W Ø 219 Amalgam
Article number	BP07082	BP07133	BP07132	BP07392
Type	80 W	140 W Amalgam	140 W Amalgam	420 W Amalgam
EAN	8714404040136	8714404040990	8714404045216	8714404045773
Maximum flow for 30 mJ/cm <sup>2</sup>	15 m <sup>3</sup> /h	24 m <sup>3</sup> /h	34 m <sup>3</sup> /h	49 m <sup>3</sup> /h (for 40 mJ/cm <sup>2</sup> )
Maximum pressure	4 bar	4 bar	4 bar	2,5 bar
In/outlet connections Ø	2" BSPT male	2" BSPT male	2 ½" BSPT male	3" BSPT male
Housing material	AISI 316L	AISI 316L	AISI 316L	AISI 316L
Operating environment ballast temperature	1-40 °C	1-40 °C	1-40 °C	1-40 °C
Lifespan lamp	9 000 hours	16 000 hours	16 000 hours	16 000 hours
Indicator	✓	✓	✓	✓
Replace lamp alert	✓	✓	✓	✓
Flow switch	No	✓	✓	✓

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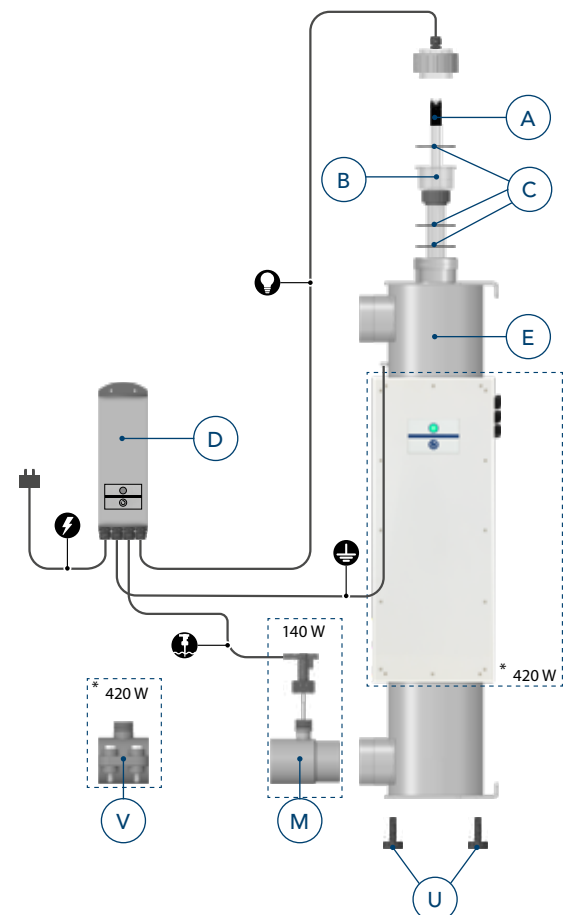
**STAINLESS  
STEEL**

## Spare parts

			Available for:			
			80 W Ø 114	140 W Ø 114	140 W Ø 154	420 W Ø 219
A	F980010	F980010AM Lamp VGE T5 80 W 4P Base X AM Packed	✓			
	F980020	F980020AM Lamp VGE T6 140 W 4P Base X AM Packed		✓	✓	✓
B	QG075	Quartz glass VSC 870 x 30 mm AM	✓	✓	✓	✓
C	E800912	Set O-ring for quartz glass	✓	✓	✓	✓
D	EP080020	Electrics Xpert Buster UV-C 80 W	✓			
	EP130016	Electrics Xpert Buster UV-C 140 W incl. flow switch		✓	✓	
	EP390005	Electrics Xpert Buster UV-C 420 W incl. flow switch				✓
E	B212130	Housing Xpert Buster UV-C Ø 114 mm	✓	✓		
	B212131	Housing Xpert Buster UV-C Ø 154 mm			✓	
	B212120	Housing Xpert Buster UV-C Ø 219 mm				✓
M	B290020	Reduction piece 63/63 mm 3/4" male threaded for flow switch		✓	✓	✓
	B290021	Reduction piece 60.3/60.3 mm 3/4" USA-UK male threaded for flow switch		✓	✓	✓
U	E801533	Adjustable foot stainless steel M8	✓	✓	✓	✓

### Optional

V	B290177	Tapping saddle 50 x 3/4" male thread for flow switch
	B290170	Tapping saddle 63 x 3/4" male thread for flow switch
	B290176	Tapping saddle 75 x 3/4" male thread for flow switch

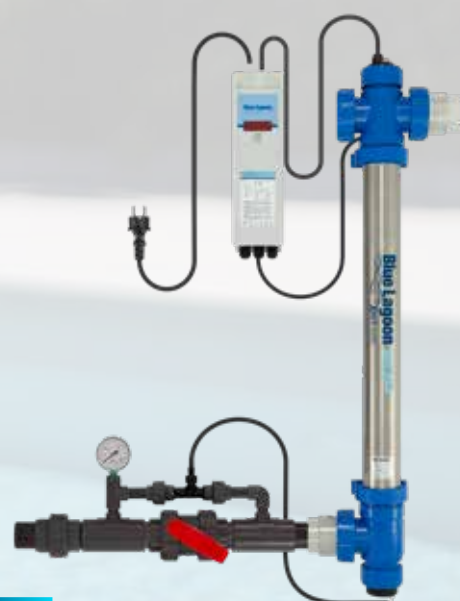


# Compact AOP UV



## Advantages

- Double effect, disinfection and water quality improvement.
- Powerful combination of oxidation and UV-C boosts overall disinfection efficiency
- Suitable for all pools
- Durable duplex housing
- Replacement indicator for hassle-free maintenance
- Easy to integrate into new or existing filtration systems



**More information?**  
Scan the QR-code

	Compact AOP Timer 75 W	Compact AOP 75 W
Article number	BH12752	BH12753
Type	75 W	75 W
EAN	8714404040617	8714404042352
Maximum flow for 30 mJ/cm <sup>2</sup>	18 m <sup>3</sup> /h	18 m <sup>3</sup> /h
Maximum pressure	2,5 bar	2,5 bar
Diameter unit Ø	70 mm	70 mm
Length unit	100 cm	100 cm
In/outlet connections Ø	63 mm/50 mm/1½" BSPP female	63 mm/50 mm/1½" BSPP female
Housing material	Duplex	Duplex
Lifespan lamp	9 000 hours	9 000 hours
Ozone	0,6 gr/h	0,6 gr/h
Timer	✓	No
Replace lamp alert	✓	No

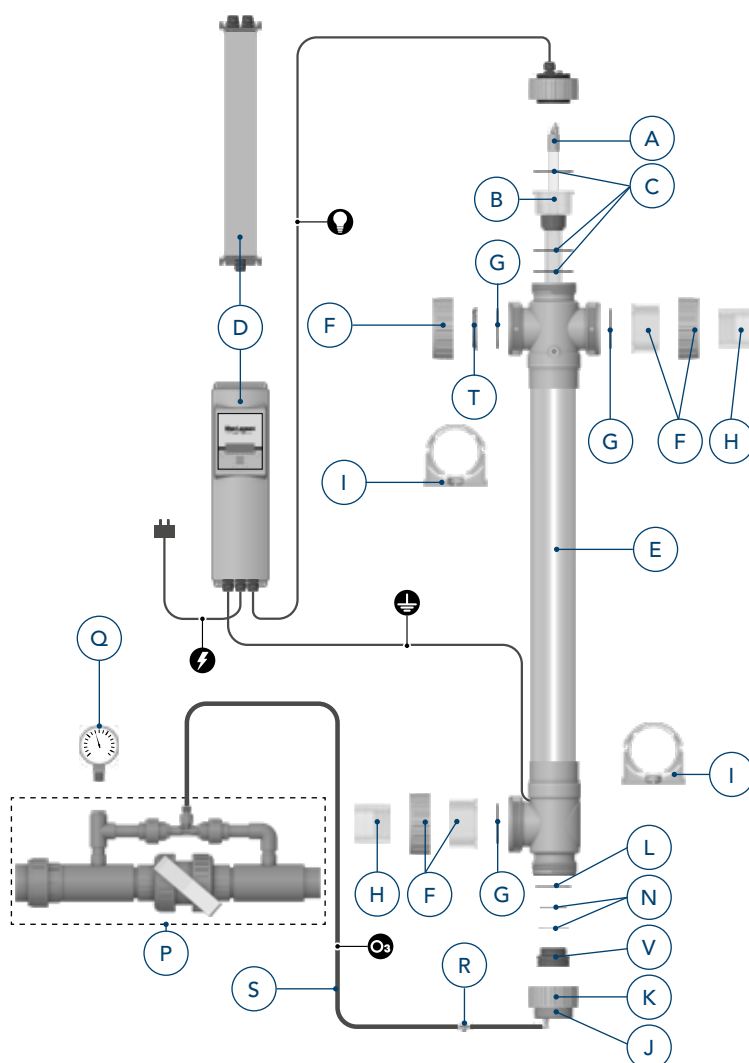
POOL  
PRO  
ONLY

SALT-  
WATER

DUPLEX

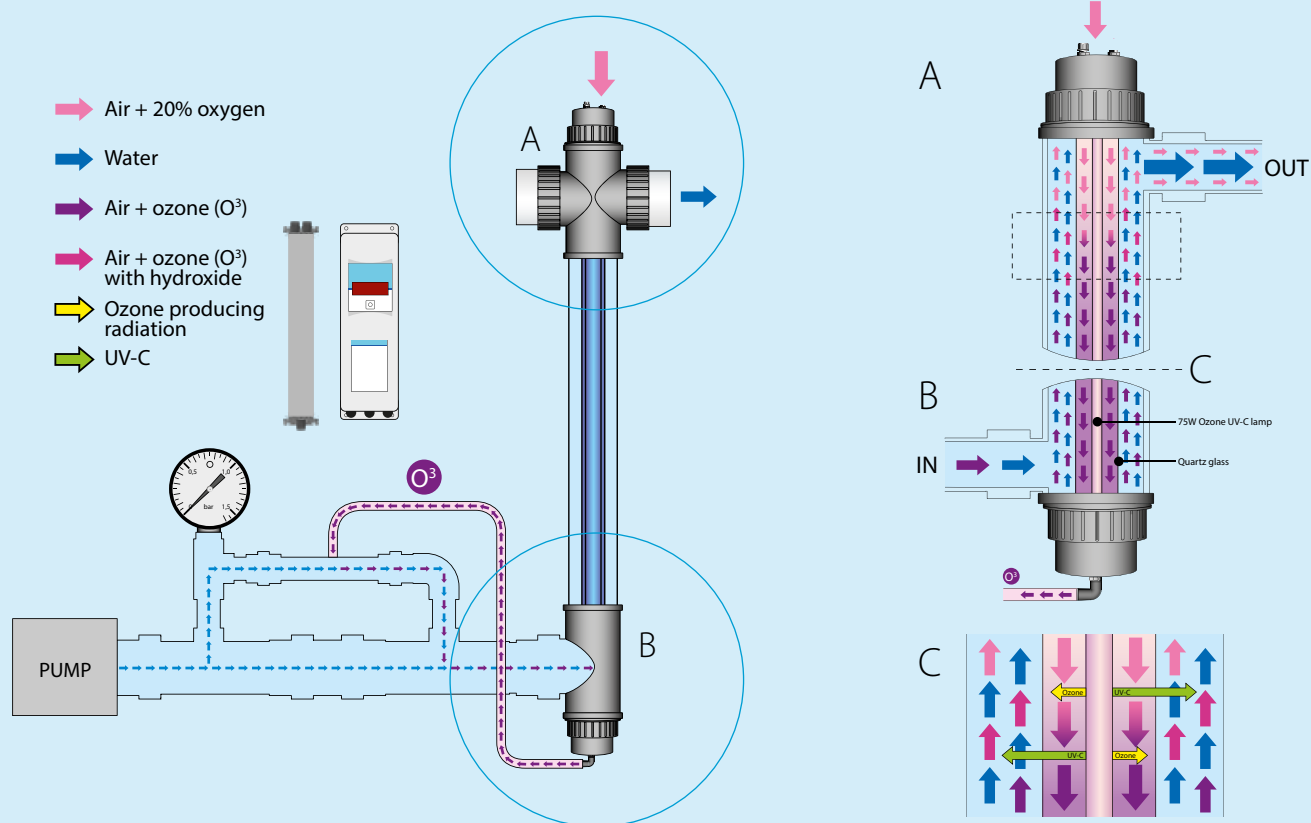
## Spare parts

				Available for:	
				75 W Timer	75 W
A	4800033AM	Lamp VGE T5 75 W Ozon Base H AM Packed	✓	✓	
B	QG109	Quartz glass VSC 925 x 30 mm open end AM	✓	✓	
C	E800912	O-Ring for quartz sleeve	✓	✓	
D	EP075070	Electrics for BL Xpert Compact AOP UV-C Timer 75 W	✓		
	EP075083	Electrics for BL Xpert Compact AOP UV-C 75 W		✓	
E	H170024	Housing BL Xpert Compact AOP UV-C	✓	✓	
F	B915000	Set 3-way connection blue 63 mm	✓	✓	
	E800944	Set 3-way connection <b>USA-UK</b> 60½ mm	✓	✓	
G	E800941	Set O-rings 3-way connection	✓		
H	F990115	Reduction piece 1½" female threaded x 63mm out/50mm in ABS	✓	✓	
I	B290006	Mounting bracket 75 mm PP blue	✓	✓	
J	4800106	End cap AOP with single air plug black	✓	✓	
K	B290010	Nut 70 mm x 33.5 mm ABS blue	✓	✓	
L	3902158	O-ring NBR 57 mm x 2.5 mm	✓	✓	
N	3902269	Sealing set BL Xpert Compact AOP UV-C	✓	✓	
P	4800068	Venturi unit BL Xpert Compact AOP UV-C (excl. manometer)	✓	✓	
Q	4800057	Manometer BL Xpert Compact AOP UV-C	✓	✓	
R	4800145	Ozone Viton Check valve + hose (short 16 cm + 72 cm)	✓	✓	
S	4800020	PU hose black for Ozone	✓	✓	
T	F990196BU	Closing lid black	✓	✓	
V	3901013	Open Glass adapter T-piece ABS Black	✓	✓	
* For pre 2021 model, please see our website					
Optional sets					
GFH	SP0094	Blue Lagoon Connection Kit	✓	✓	
GFH	SP0097	Blue Lagoon Connection Kit <b>USA-UK</b>	✓	✓	





# Compact AOP UV



## Triple disinfection for maximum protection

Say goodbye to smelly, chlorine-filled pool water with the Blue Lagoon Xpert Compact AOP UV-C. This innovative disinfection system is the ultimate solution to keep your pool water fresh and healthy with minimal chlorine usage. It provides triple disinfection, combining ozone, OH-radicals, and UV-C to ensure maximum protection against harmful bacteria and viruses.

## Operation

The combination of ozone and UV-C makes it possible to have a pool with minimal chlorine usage. Through the supplied venturi, air is sucked in from the outside into the space between the UV-C lamp and the quartz sleeve. The special UV-C lamp generates radiation of both 254 nm and 185 nm. The 185 nm radiation converts the available oxygen into ozone. The produced ozone (max. 0,6 g/h) is mixed with water through the venturi to perform its disinfection and oxidising job. Inside the UV-C housing, any residual ozone will be converted by the 254 nm UV-C radiation into OH radicals (the so called Advanced Oxidation Process) that have an even stronger oxidising power than ozone.

## Revolutionary Operation for Maximum Results

Blue Lagoon Xpert Compact AOP UV-C's revolutionary combination of ozone and UV-C produces OH radicals that have an even stronger oxidizing power than ozone, resulting in the oxidation of organic pollutants in the water. This system's

double-function lamp produces both ozone and UV-C, ensuring that the water is disinfected and purified at the same time.

## Long-Lasting Performance and Easy Maintenance

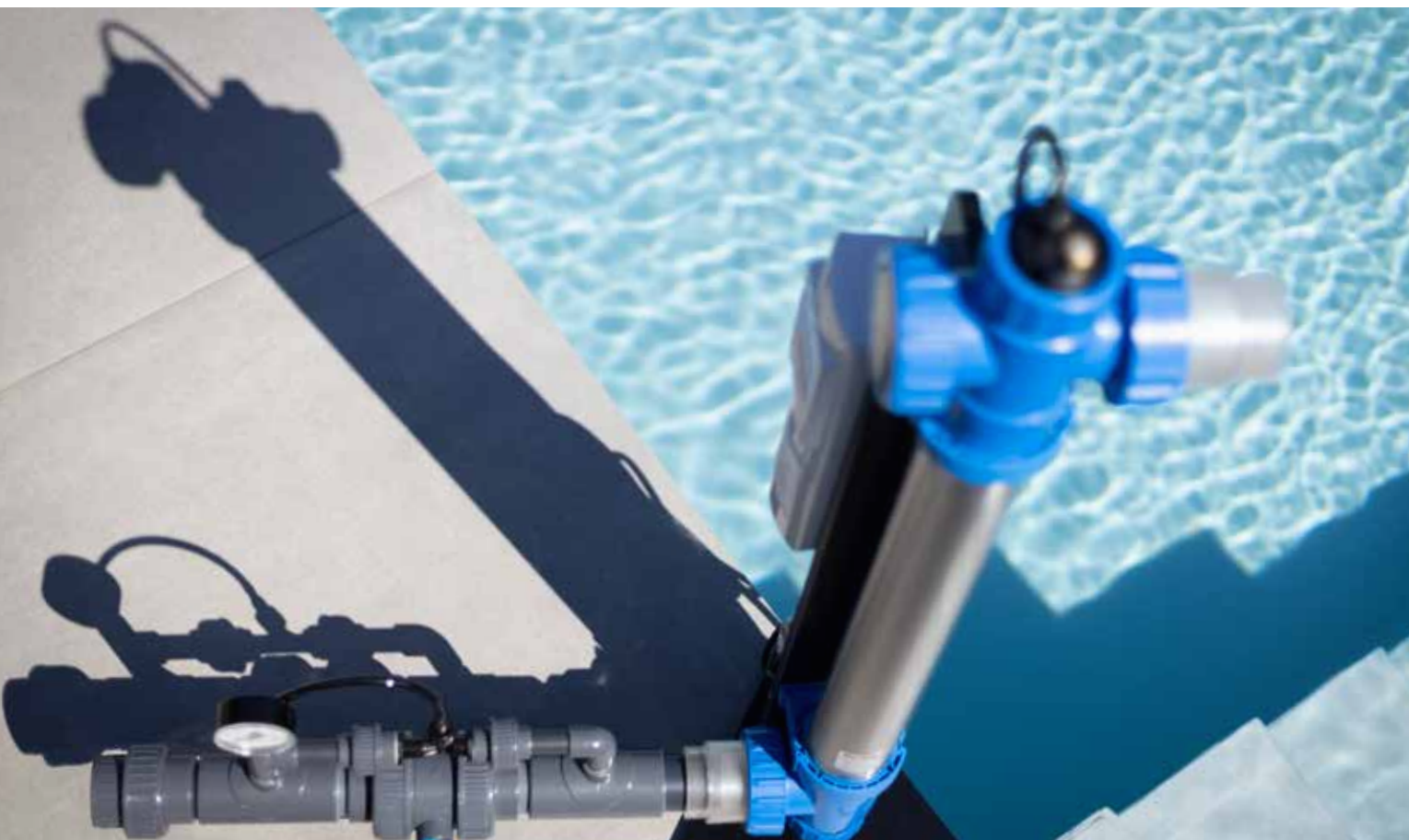
The device's ozone UV-C lamp produces ozone and UV-C for up to 9 000 hours, and the unit will indicate when the lamp needs replacing. Additionally, the Blue Lagoon Xpert Compact AOP UV-C is easy to install and maintain, making it a hassle-free solution for clean pool water.

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



## What is AOP?

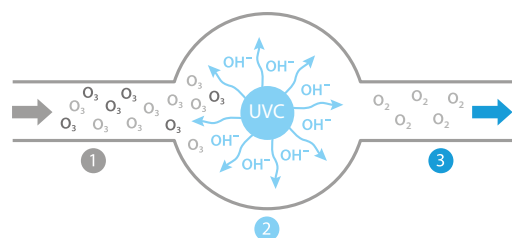
The VGE Advanced Oxidation Process (AOP) combines the benefits of ozone and UV-C into one device. When ozone is



used in combination with UV-C light in water, hydroxyl radicals ( $\bullet\text{OH}$ ) are created. These radicals are very effective in oxidizing micropollutants in the water and therefore reducing the organic and inorganic pollution in the water. Chlorine disinfection by-products such as THM and chloramines are being reduced. The UV-C light not only disinfects the water very effectively, also chlorine resistant organisms like *Cryptosporidium* and *Giardia* are successfully being inactivated. Lastly it directly reduces the chloramines in the water. The UV-C system is designed in a way that all the ozone in the water is being used for the AOP process, therefore no deozoneation device is needed if the advised flowrates are met. AOP is a very effective and efficient way of sanitizing and disinfecting your pool. As a result the amount of chlorine in a pool can be kept to a minimum.

#### More about AOP

The Advanced Oxidation Process (AOP) is the best available water treatment technology at this moment. AOP uses  $\bullet\text{OH}$  radicals which have the highest oxidation potential of oxidants that can be used in water treatment systems. When dissolved ozone (1) is irradiated by UV-C radiation in a UV treatment chamber (2), then  $\bullet\text{OH}$ -radicals are created. The lifetime of OH-radicals is extremely short, because of that the entire treatment process takes place within the UV treatment chamber. Treated water (3) is without  $\bullet\text{OH}$ -radicals



The lamp has a double function, producing ozone and UV-C radiation at the same time. The ozone in the water will be completely broken down by the UV-C radiation. Because of this, so called OH-radicals are being produced which have a high oxidation potential. This results in oxidation of the organic pollution in the water and the UV-C radiation will also disinfect the water at the same time.

#### Benefits AOP:

- Strong combination of ozone (oxidation) and UV-C (disinfection);
- Improves the disinfection efficiency;
- Makes a pool with a minimal amount of chlorine possible;
- Effective against chlorine-resistant microorganisms;
- Prevents skin and eye irritation;
- Can be quickly added to existing filtration systems.

# Duplex UV-C



## Advantages

- Suitable for all pools
- 140 Watt Amalgam unit includes flow switch for safe operation
- Multiple installation options for easy installation and integration
- Efficient UV-C treatment for healthy and clear water
- Universal fittings included (63mm/50mm/1½" BSPP female)



**More information?**  
Scan the QR-code



	80 W	140 W Amalgam
Article number	BP08752	BP08132
Type	80 W	140 W Amalgam
EAN	8714404046329	8714404980920
Maximum flow for 30 mJ/cm <sup>2</sup>	17 m <sup>3</sup> /h	23 m <sup>3</sup> /h
Maximum pressure	2,5 bar	2,5 bar
Diameter unit Ø	70 mm	70 mm
Length unit	100 cm	100 cm
In/outlet connections Ø	63 mm/50 mm/1½" BSPP female	63 mm/50 mm/1½" BSPP female
Housing material	Duplex	Duplex
Lifespan lamp	9 000 hours	16 000 hours
Indicator	✓	✓
Replace lamp alert	✓	✓
Flow switch	No	✓

POOL  
PRO  
ONLY

SALT-  
WATER

DUPLEX

## Spare parts

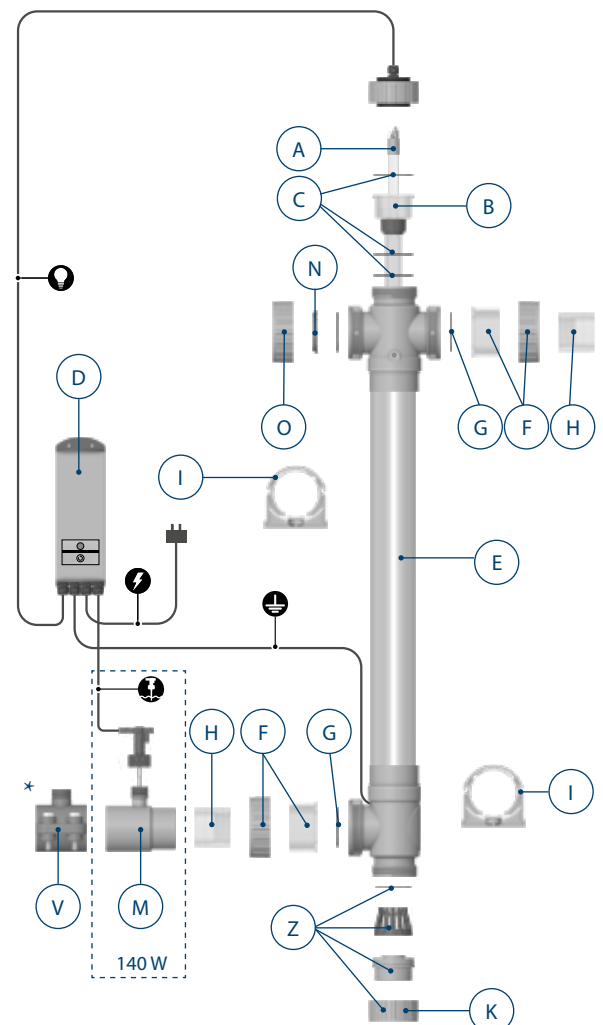
			Available for:	
			80 W	140 W
A	F980010AM	Lamp VGE T5 80 W 4P Base X AM Packed	✓	
	F980020AM	Lamp VGE T6 140 W Amalgam 4P Base X		✓
B	QG015	Quartz glass VSC 933 x 25 mm 40/75/80 W AM	✓	
	QG012	Quartz glass VSC 920 x 30 mm 130/140 W AM		✓
C	E800912	Set O-ring for quartz glass	✓	✓
D	EP080008	Electrics for BL Xpert Duplex UV-C 80 W	✓	
	EP130021	Electrics for BL Xpert Duplex UV-C 140 W incl. flow switch		✓
E	H170004	Housing BL Xpert UV-C Duplex 80 W/140 W	✓	✓
F	B915000	Set 3-way connection blue 63 mm	✓	✓
	E800944	Set 3-way connection <b>USA-UK</b> 60½ mm	✓	✓
G	E800941	Set O-rings 3-way connection	✓	✓
H	F990115	Reduction piece 1.5" female threaded x 63 mm out/ 50 mm in ABS	✓	✓
I	E801107	Mounting bracket 75 mm PP black	✓	✓
K	B290010	Nut 70 mm x 33.5 mm for end cap ABS blue	✓	✓
M	B290020	Reduction piece 63/63 3/4" male thread for flow switch	✓	✓
	B290021	Reduction piece 60.3/60.3 3/4" <b>USA-UK</b> male thread for flow switch	✓	✓
N	F990196BU	Closing lid black	✓	✓
O	B290009	Nut 83.5 mm x 32 mm ABS blue	✓	✓
Z	SP0095	BL quartz glass stabilizer replacement Kit	✓	✓

### \* Optional part

V	SP0070	Tapping saddle 50 x 3/4" male thread for flow switch
	SP0071	Tapping saddle 63 x 3/4" male thread for flow switch
	SP0072	Tapping saddle 75 x 3/4" male thread for flow switch

### Optional sets

GFH	SP0094	Blue Lagoon Connection Kit
GFH	SP0097	Blue Lagoon Connection Kit <b>USA-UK</b>



# Blue Lagoon Series

Blue Lagoon Series



Timer 4ALL



Tech 4ALL



Inox



Signal

Blue Lagoon is the market leader in UV-C disinfection systems for residential swimming pools. Our systems are available in various models and can be easily integrated into any pool filtration system.

- ✓ Significantly reduces chemical usage (by 50–80%)
- ✓ Sustainable disinfection technology without harmful by-products
- ✓ Easy to install and compatible with all types of pools
- ✓ Ensures healthy, crystal-clear swimming water
- ✓ Less maintenance and lower operational costs
- ✓ Protects swimmers from skin and eye irritation as well as respiratory issues
- ✓ Extends the lifespan of pool materials



Tech



Copper Ionizer



Xpose



# Timer UV-C 4ALL



## Advantages

- Timer function indicates when lamp needs replacement
- Suitable for all pools
- Durable duplex Stainless steel
- Corrosion resistant
- Horizontal or vertical installation possible
- Fits in new & existing pool filtration systems
- Universal fittings included (63mm/50mm/1½" BSPP female)
- Optimized flow with minimal pressure loss



**More information?**  
Scan the QR-code

	40 W	75 W	130 W Amalgam
Article number	BD01402	BD01752	BD01132
Type	40 W	75 W	130 W Amalgam
EAN	8714404040501	8714404040570	8714404040648
Maximum 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
Maximum pressure	2 bar	2 bar	2 bar
Diameter unit Ø	70 mm	70 mm	70 mm
Length unit	100 cm	100 cm	100 cm
In/outlet connections Ø	63 mm/50 mm/1½" BSPP female	63 mm/50 mm/1½" BSPP female	63 mm/50 mm/1½" BSPP female
Housing material	Duplex	Duplex	Duplex
Lifespan lamp	9 000 hours	9 000 hours	16 000 hours
Timer	✓	✓	✓
Replace lamp alert	✓	✓	✓
Flow switch	No	No	✓

DUPLEX

SALT-WATER

## Spare parts

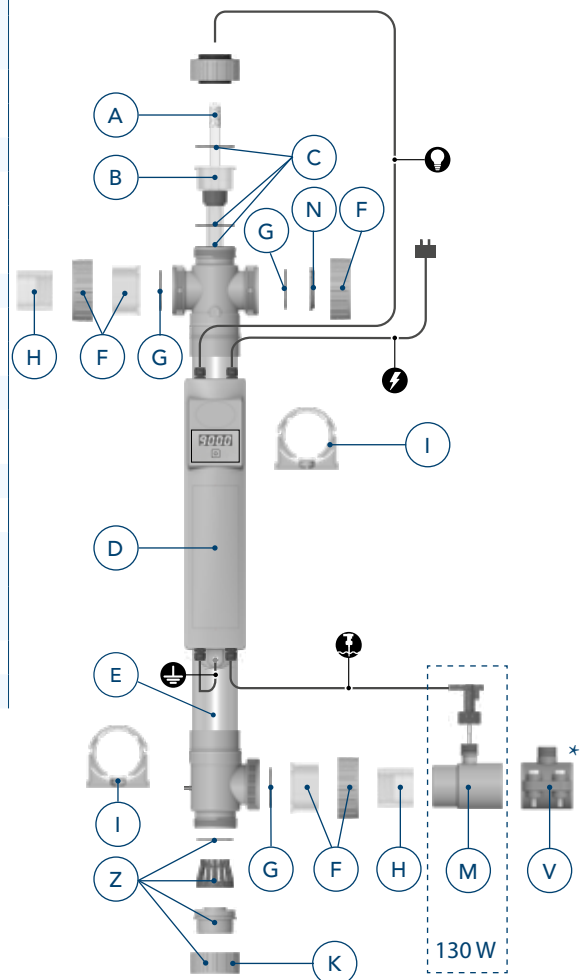
			Available for:		
			40 W	75 W	130 W
A	E800901LAM	Lamp LightTech T5 40 W 4P-SE Base C AM Packed	✓		
	E800902LAM	Lamp LightTech T5 75 W 4P-SE Base C AM Packed		✓	
	F980005AM	Lamp VGE LightTech T6 130 W Amalgam 4P Base E AM Packed			✓
B	QG015	Quartz glass VSC 933 x 25 mm AM	✓	✓	
	QG012	Quartz glass VSC 920 x 30 mm AM			✓
C	E800912	Set O-ring for quartz glass	✓	✓	✓
D	EP040004	Electrics for BL Timer UV-C 4ALL 40 W	✓		
	EP075006	Electrics for BL Timer UV-C 4ALL 75 W		✓	
E	EP130006	Electrics for BL Timer UV-C 4ALL 130 W Amalgam			✓
	H170054	Housing BL Timer UV-C Duplex/4ALL 40/75/130W	✓	✓	✓
F	B915000	Set 3-way connection blue 63 mm	✓	✓	✓
	E800944	Set 3-way connection <b>USA-UK</b> 60½ mm	✓	✓	✓
G	E800941	Set O-rings 3-way connection	✓	✓	✓
H	F990115	Reduction piece 1.5" female threaded x 63 mm out/ 50 mm in ABS	✓	✓	✓
I	B290006	Mounting bracket 75 mm PP blue	✓	✓	✓
K	B290010	Nut 70 mm x 33.5 mm for end cap ABS blue	✓	✓	✓
M	B290020	Reduction piece 63/63 mm 3/4" male threaded for flow switch	✓	✓	✓
	B290021	Reduction piece 60.3/60.3 mm 3/4" <b>USA-UK</b> male threaded for flow switch	✓	✓	✓
N	F990196BU	Closing lid black	✓	✓	✓
Z	SP0095	Quartz glass Stabilizer Replacement Kit	✓	✓	✓

### \* Optional part

V	SP0070	Tapping saddle <b>50 x 3/4"</b> male thread for flow switch
	SP0071	Tapping saddle <b>63 x 3/4"</b> male thread for flow switch
	SP0072	Tapping saddle <b>75 x 3/4"</b> male thread for flow switch

### Optional sets

GFH	SP0094	Blue Lagoon Connection Kit
GFH	SP0097	Blue Lagoon Connection Kit <b>USA-UK</b>







## Advantages

- Suitable for all pools
- Durable duplex Stainless steel
- Corrosion & chlorine resistant
- Horizontal or vertical installation possible
- Fits in new & existing pool filtration systems
- Universal fittings included (63 mm/50 mm/1½" BSPP female)
- Optimized flow with minimal pressure loss



**More information?**  
Scan the QR-code



	40 W	75 W	130 W Amalgam
Article number	BD02402	BD02752	BD02132
Type	40 W	75 W	130 W Amalgam
EAN	8714404040297	8714404040433	8714404040365
Maximum 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
Maximum pressure	2,5 bar	2,5 bar	2,5 bar
Diameter unit Ø	70 mm	70 mm	70 mm
Length unit	100 cm	100 cm	100 cm
In/outlet connections Ø	63 mm/50 mm/1½" BSPP female	63 mm/50 mm/1½" BSPP female	63 mm/50 mm/1½" BSPP female
Housing material	Duplex	Duplex	Duplex
Lifespan lamp	9 000 hours	9 000 hours	16 000 hours
Flow switch	No	No	√

DUPLEX

SALT-WATER

## Spare parts

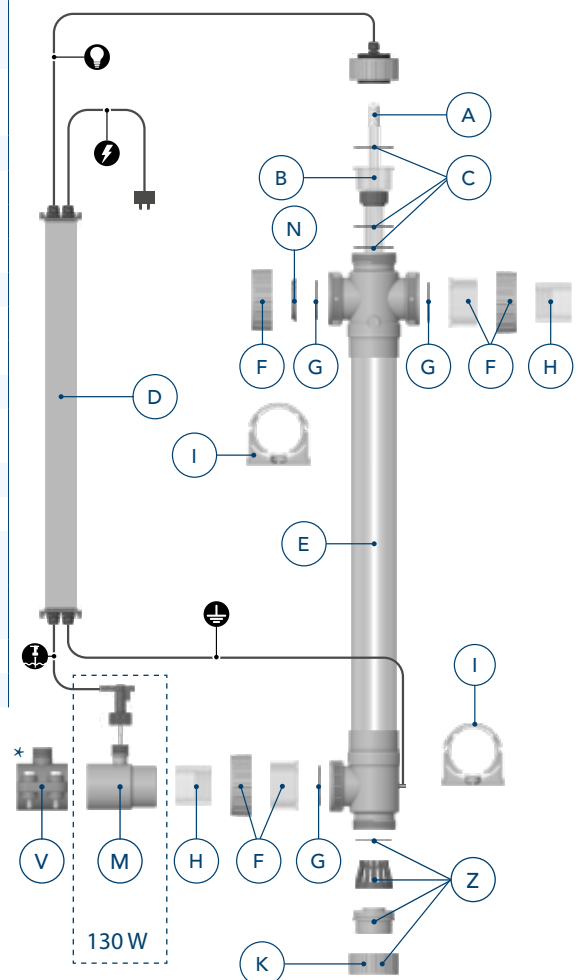
			Available for:			
			40 W	75 W	130 W	
A	F980172AM	Lamp VGE T5 40 W 4P Base M AM Packed	√			
	F980173AM	Lamp VGE T5 75 W HO 4P Base M AM Packed		√		
	F980008AM	Lamp VGE T6 130 W Amalgam 4P Base M AM Packed			√	
B	QG015	Quartz glass VSC 933 x 25 mm 40/75/80 W AM	√	√		
	QG012	Quartz glass VSC 920 x 30 mm 130/140 W AM			√	
C	E800912	Set O-ring for quartz glass	√	√	√	
D	EP040056	Electrics for BL Tech UV-C 4ALL 40 W	√			
	EP075080	Electrics for BL Tech UV-C 4ALL 75 W		√		
	EP130030	Electrics for BL Tech UV-C 4ALL 130 W			√	
E	H170053	Housing BL Tech UV-C Duplex/4ALL 40/75/130 W	√	√	√	
F	B915000	Set 3-way connection blue 63 mm	√	√	√	
	E800944	Set 3-way connection <b>USA-UK</b> 60½ mm	√	√	√	
G	E800941	Set O-rings 3-way connection	√	√	√	
H	F990115	Reduction piece 1½" female threaded x 63mm out/ 50mm in ABS	√	√	√	
I	B290006	Mounting bracket 75 mm PP blue	√	√	√	
K	B290010	Nut for end cap Blue Lagoon Tech UV-C	√	√	√	
M	B290020	Reduction piece 63/63 mm 3/4" male threaded for flow switch	√	√	√	
	B290021	Reduction piece 60.3/60.3 mm <b>USA-UK</b> 3/4" male threaded for flow switch	√	√	√	
N	F990196BU	Closing lid black	√	√	√	
Z	SP0095	Quartz glass Stabilizer Replacement Kit	√	√	√	

### \* Optional part

V	SP0070	Tapping saddle 50 x 3/4" male thread for flow switch
	SP0071	Tapping saddle 63 x 3/4" male thread for flow switch
	SP0072	Tapping saddle 75 x 3/4" male thread for flow switch

### Optional sets

GFH	SP0094	Blue Lagoon Connection Kit
GFH	SP0097	Blue Lagoon Connection Kit <b>USA-UK</b>





## Advantages

- Complete 316L Stainless steel housing
- Standard equipped with flow switch for safe operation
- Integrated timer indicates when lamp replacement is needed
- Handles up to 5 bar pressure for robust performance
- Efficient UV-C treatment in 316L Stainless steel housing



**More information?**  
Scan the QR-code



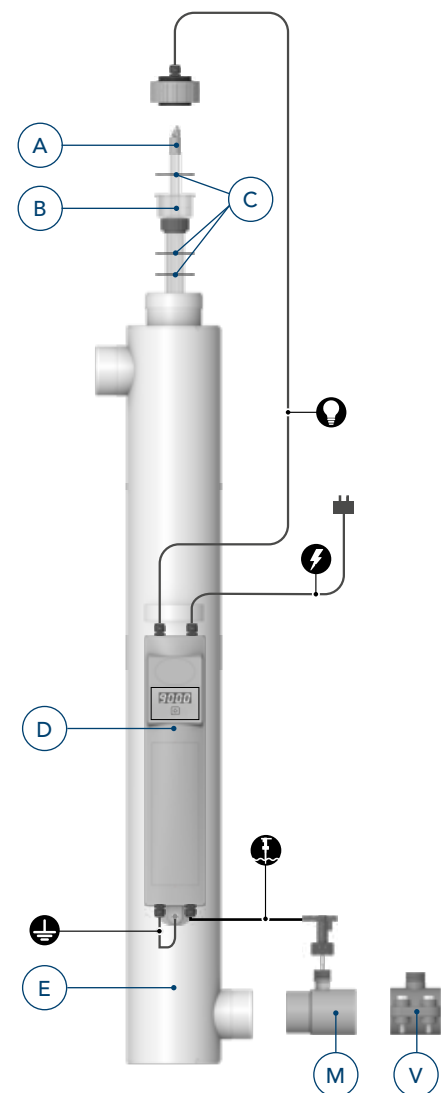
	75 W	130 W Amalgam
Article number	BP02752	BP02132
Type	75 W	130 W Amalgam
EAN	8714404038669	8714404038676
Maximum flow for 30 mJ/cm <sup>2</sup>	18 m <sup>3</sup> /h	22 m <sup>3</sup> /h
Maximum pressure	5 bar	5 bar
Diameter unit Ø	114 mm	114 mm
Length unit	100 cm	100 cm
In/outlet connections Ø	2" BSPT male	2" BSPT male
Housing material	AISI 316L	AISI 316L
Lifespan lamp	9 000 hours	12.000 hours
Timer	✓	✓
Replace lamp alert	✓	✓
Flow switch	✓	✓

## Spare parts

		Available for:	75 W	130 W
A	E800902PAM	Lamp Philips TUV 36T5 75 W HO 4P-SE Base C AM Packed	✓	
	E800904AM	Lamp Philips TUV XPT 130 W 4P-SE Amalgam Base E AM Packed		✓
B	QG015	Quartz glass VSC 933 x 25 mm 40/75/80 W AM	✓	
	QG012	Quartz glass VSC 920 x 30 mm 130/140 W AM		✓
C	E800912	Set O-ring for quartz glass	✓	✓
D	EP075010.1	Electrics for BL UV-C INOX 75 W incl. flow switch	✓	
	EP130007	Electrics for BL UV-C INOX 130 W Amalgam incl. flow switch		✓
E	B212002	Housing for BL Inox UV-C	✓	✓
M	B290020	Reduction piece 63/63 mm 3/4" male threaded for flow switch	✓	✓
	B290021	Reduction piece 60.3/60.3 mm 3/4" USA-UK male threaded for flow switch	✓	✓

### \* Optional part

V	SP0070	Tapping saddle 50 x 3/4" male thread for flow switch
	SP0071	Tapping saddle 63 x 3/4" male thread for flow switch
	SP0072	Tapping saddle 75 x 3/4" male thread for flow switch







## Advantages

- LED indication shows when lamp replacement is needed
- 316L Stainless steel housing
- Easy to install and maintain, minimizing downtime
- Universal fittings included (63mm/50mm/1½" BSPP female)
- Efficient UV-C treatment for clean and healthy water



**More information?**  
Scan the QR-code



	40 W	75 W	130 W Amalgam
Article number	BH11402	BH11752	BH11132
Type	40 W	75 W	130 W Amalgam
EAN	8714404045193	8714404045261	8714404045124
Maximum 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
Maximum pressure	2 bar	2 bar	2 bar
Diameter unit Ø	70 mm	70 mm	70 mm
Length unit	100 cm	100 cm	100 cm
In/outlet connections Ø	63 mm/50 mm/1½" BSPP female	63 mm/50 mm/1½" BSPP female	63 mm/50 mm/1½" BSPP female
Housing material	AISI 316L	AISI 316L	AISI 316L
Lifespan lamp	9 000 hours	9 000 hours	16 000 hours
Indicator	✓	✓	✓
Replace lamp alert	✓	✓	✓
Flow switch	No	No	✓

## Spare parts

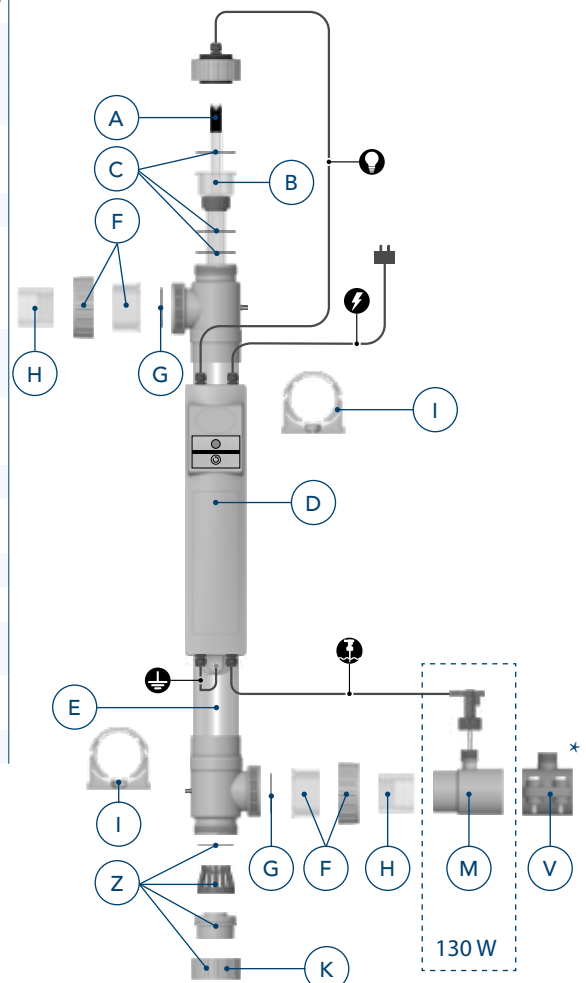
			Available for:		
			40 W	75 W	130 W
A	F980002AM	Lamp VGE T5 40 W 4P Base F AM Packed	✓		
	F980004AM	Lamp VGE T5 75 W 4P Base F AM Packed		✓	
	F980008AM	Lamp VGE T6 130 W Amalgam 4P Base M AM Packed			✓
B	QG015	Quartz glass VSC 933 x 25 mm 40/75/80 W AM	✓	✓	
	QG012	Quartz glass VSC 920 x 30 mm 130/140 W AM			✓
C	E800912	Set O-ring for quartz glass	✓	✓	✓
D	EP040035	Electrics for BL UV-C Signal 40 W	✓		
	EP075039	Electrics for BL UV-C Signal 75 W		✓	
	EP130014	Electrics for BL UV-C Signal 130 W			✓
E	B212003	Housing BL Timer/Signal UV-C 40/75 W	✓	✓	
	B910003	Housing BL Timer/Signal UV-C 130 W			✓
F	B915000	Set 3-way connection blue 63 mm	✓	✓	✓
	E800944	Set 3-way connection <b>USA-UK</b> 60½ mm	✓	✓	✓
G	E800941	Set O-rings 3-way connection	✓	✓	✓
H	F990115	Reduction piece 1.5" female threaded x 63 mm out/ 50 mm in ABS	✓	✓	✓
I	B290006	Mounting bracket 75 mm PP blue	✓	✓	✓
K	B290010	Nut 70 mm x 33.5 mm for end cap ABS blue	✓	✓	✓
M	B290020	Reduction piece 63/63 mm 3/4" male threaded for flow switch	✓	✓	✓
	B290021	Reduction piece 60.3/60.3 mm 3/4" <b>USA-UK</b> male threaded for flow switch	✓	✓	✓
Z	SP0095	Quartz glass Stabilizer Replacement Kit	✓	✓	✓

### \* Optional part

V	SP0070	Tapping saddle <b>50 x 3/4"</b> male thread for flow switch
	SP0071	Tapping saddle <b>63 x 3/4"</b> male thread for flow switch
	SP0072	Tapping saddle <b>75 x 3/4"</b> male thread for flow switch

### Optional sets

GFH	SP0094	Blue Lagoon Connection Kit
GFH	SP0097	Blue Lagoon Connection Kit <b>USA-UK</b>





## Advantages

- Easy to install and maintain, minimizing downtime
- 316L Stainless steel housing
- Universal fittings included (63mm/50mm/1½" BSPP female)
- Efficient UV-C treatment ensures clean and healthy water



**More information?**  
Scan the QR-code



	16 W	40 W	75 W	130 W Amalgam
Article number	BE02162	BE02402	BE02752	BE03132
Type	16 W	40 W	75 W	130 W Amalgam
EAN	8714404034456	8714404034234	8714404034166	8714404029988
Maximum flow for 30 mJ/cm <sup>2</sup>	5 m <sup>3</sup> /h	11 m <sup>3</sup> /h	16 m <sup>3</sup> /h	22 m <sup>3</sup> /h
Maximum pressure	2,5 bar	2,5 bar	2,5 bar	2,5 bar
Diameter unit Ø	70 mm	70 mm	70 mm	70 mm
Length unit	56 cm	100 cm	100 cm	100 cm
In/outlet connections Ø	63 mm/50 mm/1½" BSP female	63 mm/50 mm/1½" BSP female	63 mm/50 mm/1½" BSP female	63 mm/50 mm/1½" BSP female
Housing material	AISI 316L	AISI 316L	AISI 316L	AISI 316L
Lifespan lamp	9 000 hours	9 000 hours	9 000 hours	16 000 hours
Flow switch	No	No	No	✓
ETL certified	No	Production order only	Production order only	Production order only



## Spare parts

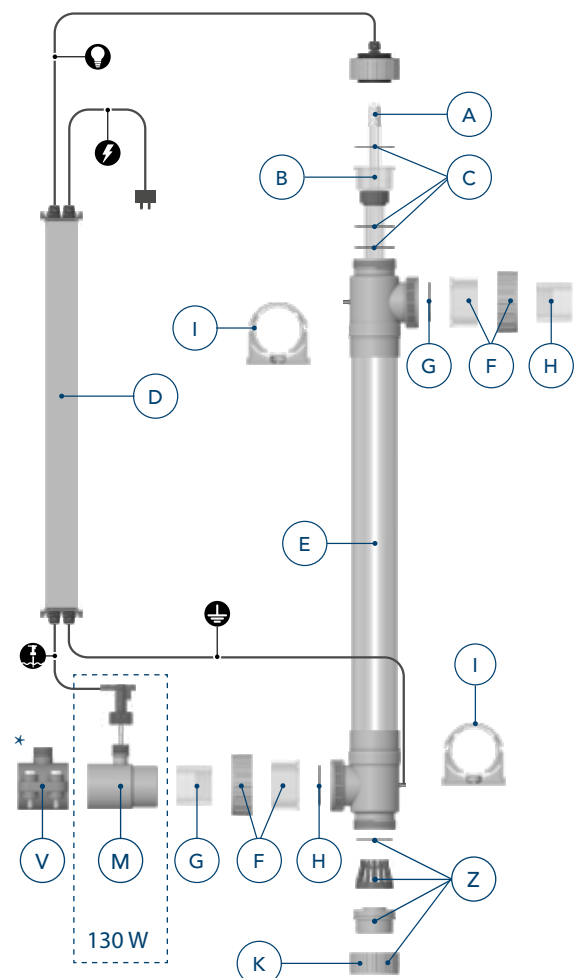
			Available for:			
			16 W	40 W	75 W	130 W
A	F980065AM	Lamp VGE T5 16 W 4P Base F AM Packed	✓			
	F980002AM	Lamp VGE T5 40 W 4P Base F AM Packed		✓		
	F980004AM	Lamp VGE T5 75 W 4P Base F AM Packed			✓	
	F980005	Lamp VGE LightTech T6 130W Amalgam 4P Base E				✓
B	QG018	Quartz glass VSC 400 x 25 mm AM	✓			
	QG015	Quartz glass VSC 933 x 25 mm AM		✓	✓	
	QG012	Quartz glass VSC 920 x 30 mm AM				✓
C	E800912	Set O-ring for quartz glass	✓	✓	✓	✓
	EP040011	Electrics for BL UV-C Tech 16/40 W	✓	✓		
	EP075014	Electrics for BL UV-C Tech 75 W			✓	
	EP130009	Electrics for BL UV-C Amalgam 130 W + flow switch				✓
E	B910000	Housing BL Tech UV-C 16 W	✓			
	B910002	Housing BL Tech UV-C 40/75 W		✓	✓	
	B910005	Housing BL Tech UV-C 130 W				✓
F	B915000	Set 3-way connection blue 63 mm	✓	✓	✓	✓
	E800944	Set 3-way connection <b>USA-UK</b> 60½ mm	✓	✓	✓	✓
G	E800941	Set O-ring 3-way connection	✓	✓	✓	✓
H	F990115	Reduction piece 1½" female threaded x 63mm out/ 50mm in ABS	✓	✓	✓	✓
I	B290006	Mounting bracket 75 mm PP blue	✓	✓	✓	✓
K	B290010	Nut for end cap Blue Lagoon Tech UV-C	✓	✓	✓	✓
M	B290020	Reduction piece 63/63 mm 3/4" male threaded for flow switch	✓	✓	✓	✓
	B290021	Reduction piece 60.3/60.3 mm 3/4" <b>USA-UK</b> male threaded for flow switch	✓	✓	✓	✓
Z	SP0095	Quartz glass Stabilizer Replacement Kit	✓	✓	✓	✓

### \* Optional part

V	SP0070	Tapping saddle <b>50 x 3/4"</b> male thread for flow switch
	SP0071	Tapping saddle <b>63 x 3/4"</b> male thread for flow switch
	SP0072	Tapping saddle <b>75 x 3/4"</b> male thread for flow switch

### Optional sets

GFH	SP0094	Blue Lagoon Connection Kit
GFH	SP0097	Blue Lagoon Connection Kit <b>USA-UK</b>



# Copper Ionizer UV-C



## Advantages

- Combines copper ionization with UV-C for enhanced disinfection
- Copper ions help prevent algae growth and reduce chemical use
- 316L Stainless steel housing for maximum corrosion resistance
- Easy to install and maintain, minimizing downtime
- Universal fittings included (63mm/50mm/1½" BSPP female)



**More information?**  
Scan the QR-code



	40 W	75 W
Article number	BH04402	BH04752
Type	40 W	75 W
EAN	8714404034241	8714404036689
Maximum flow for 30 mJ/cm <sup>2</sup>	11 m <sup>3</sup> /h	16 m <sup>3</sup> /h
Maximum pressure	2 bar	2 bar
Diameter unit Ø	70 mm	70 mm
Length unit	100 cm	100 cm
In/outlet connections Ø	63 mm/50 mm/1½" BSPP female	63 mm/50 mm/1½" BSPP female
Housing material	AISI 316L	AISI 316L
Lifespan lamp	9 000 hours	9 000 hours
Copper ionizer	0,7 ppm	0,7 ppm
Replace lamp alert	√	√

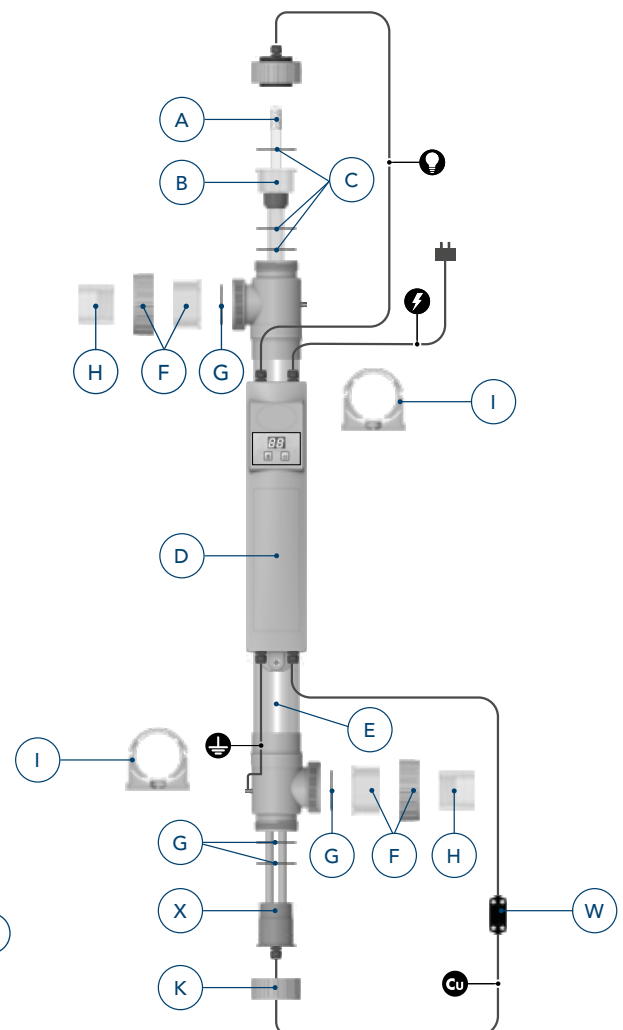
Pending EU regulations or conditional approval, national regulations apply to the trade and use of copper-containing products. The copper used in these units complies with the REACH registration. It is the sole responsibility of the buyer to inform himself/herself about applicable local regulations regarding the use of (and trade in) copper for water disinfection.

## Spare parts

			Available for:	
			40 W	75 W
A	B280002AM	Lamp Blue Lagoon T5 40 W Ionizer Base K AM Packed	√	
	B280001AM	Lamp Blue Lagoon T5 75 W Ionizer Base K AM Packed		√
B	QG017	Quartz glass VSC 695 x 25 mm 40/75 W AM	√	√
C	E800912	Set O-ring for quartz glass	√	√
D	EP040007	Electrics for BL UV-C Ionizer 40 W	√	
	EP075011	Electrics for BL UV-C Ionizer 75 W		√
E	B220002	Housing BL Ionizer UV-C 40/75 W	√	√
F	B915000	Set 3-way connection blue 63 mm	√	√
	E800944	Set 3-way connection <b>USA-UK</b> 60½ mm	√	√
G	E800941	Set O-rings 3-way connection	√	√
H	F990115	Reduction piece 1.5" female threaded x 63 mm out/ 50 mm in ABS	√	√
I	B290006	Mounting bracket 75 mm PP blue	√	√
K	E801215	Nut 70 mm x 33.5 mm for end cap ABS blue	√	√
W	B290010	Cable connector	√	√
X	B290029	Copper set base + cable connector	√	√
Y	B200020	Test strips for ionizer (50 strips)	√	√

### Optional sets

GFH	SP0094	Blue Lagoon Connection Kit
GFH	SP0097	Blue Lagoon Connection Kit <b>USA-UK</b>







## Advantages

- Designed specifically for above ground pools
- Affordable solution for efficient UV-C treatment
- Automatic air bleed for safe and reliable operation
- 4 ground-secure mounting holes for stable installation
- Easy to connect and disconnect for quick setup and maintenance



**More information?**  
Scan the QR-code

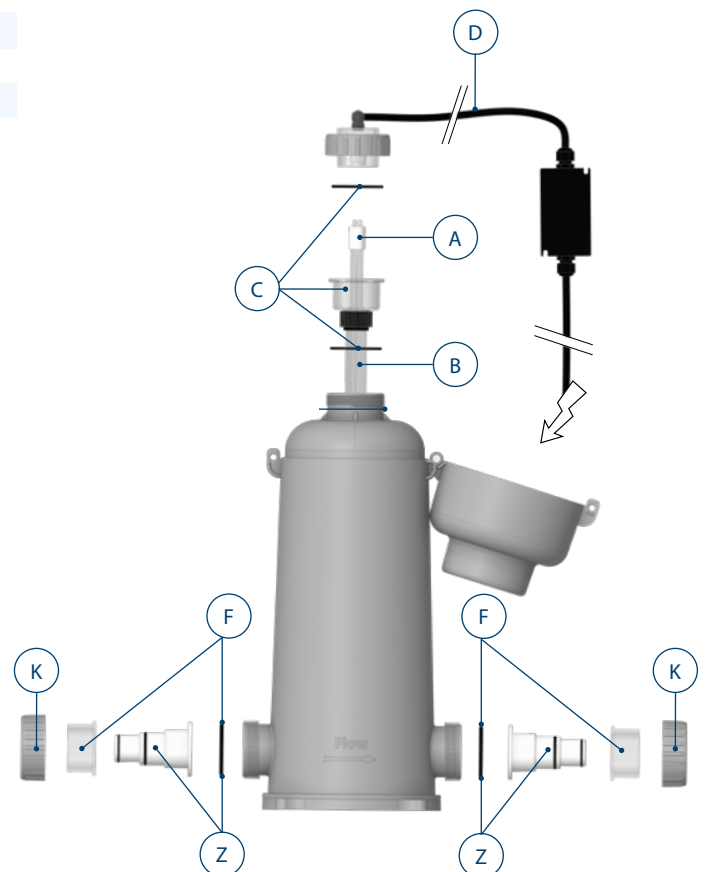
	<b>Xpose 42 W</b>
Article number	BE09422
Type	42 W
EAN	8714404040693
Maximum flow for 30 mJ/cm <sup>2</sup>	14 m <sup>3</sup> /h - 230 L/min
Maximum pressure	1 bar
Diameter unit Ø	200 mm
Length unit	55 cm
In/outlet connections Ø	32 mm/38 mm flexible tube/50 mm hard tube
Housing material	High quality copolymer
Lifespan lamp	9 000 hours
Indicator	✓

PVC

SALT-WATER

## Spare parts

A	3903114AM	Lamp VGE T5 42W Base Y AM Packed
B	QG129	Quartz glass VSC 478 x 25 mm AM
C	E800912	O-Ring for quartz sleeve
D	SP0080	Electrics for Blue Lagoon Xpose 42 W
F	SP0078	2 x reduction piece 50mm + sealing rings Xpose
K	SP0079	2 x Nut for end cap Blue Lagoon Xpose + O-Ring
Z	SP0077	2 x hose adaptor flanged 65 mm 38/32 mm + sealing rings Xpose



# Blue Lagoon Spa-Series

Blue Lagoon Spa Series



SpAOP



SpAOP-U20



SpAOP-Z20





The warm water in spas and hot tubs provides an ideal breeding ground for viruses, bacteria, and other microorganisms. Blue Lagoon offers a comprehensive range of UV-C units, specifically engineered for spas and hot tubs.

- ✓ Easy integration into existing systems
- ✓ Compact units with maximum disinfection performance
- ✓ Trusted worldwide by leading spa manufacturers
- ✓ Reduces chemical usage and maintenance requirements
- ✓ Ensures healthy, crystal-clear water
- ✓ Units specifically designed for operating temperatures up to 40°C (104°F)
- ✓ UL options available



Spa 21 W



Spa 21W U20



Spa 21W Z20

# NEW!

## SPAOP UV



### Advantages

- Cost-efficient: UV initiated radical generation eliminates the need for Ozone
- Combines oxidation and disinfection with OH-radicals and UV for superior water quality
- High-energy UV at 185 nm enhances color, smell and clarity
- Compact and easy to integrate into existing spa systems
- Maximum disinfection effectiveness with minimal chemical use
- Stand-alone unit with LED indicator for easy monitoring
- Designed for safe operation up to 40°C/104°F



21 W



21 W U20



21 W Z20



**More information?**

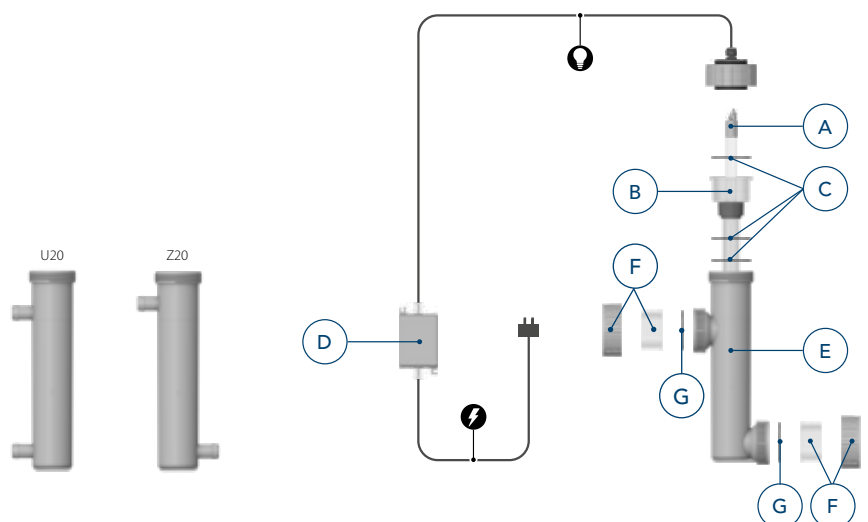
Scan the QR-code

	<b>21 W Z50</b>	<b>21 W U20</b>	<b>21 W Z20</b>
Article number	BE01215	BE01217	BE01216
Type	21 W	21 W	21 W
EAN	8714404042468	8714404042604	8714404042536
Maximum flow for 30 mJ/cm <sup>2</sup>	3 m <sup>3</sup> /h	2,5 m <sup>3</sup> /h	2,5 m <sup>3</sup> /h
Maximum pressure	1 bar	1 bar	1 bar
Diameter unit Ø	58 mm	58 mm	58 mm
Length unit	35 cm	35 cm	35 cm
In/outlet connections Ø	50 mm/1½" BSPP female	20 mm	20 mm
Housing material	PC/ASA	PC/ASA	PC/ASA
Lifespan lamp	9 000 hours	9 000 hours	9 000 hours



## Spare parts

Available for:			<b>21 W Z50</b>	<b>21 W U20</b>	<b>W 21 Z20</b>
<b>A</b>	F980180AM	Lamp VGE T5 21 W 185Nm 4P Base K packed	√	√	√
<b>B</b>	QG089	Quartz glass VSC 281 x 25 mm 21 W AM	√	√	√
<b>C</b>	E800912	Set O-ring for quartz glass	√	√	√
<b>D</b>	EP021012	Electrics for BL UV-C SpAOP 21 W LED indicator	√	√	√
<b>E</b>	B212502	Housing BL Spa UV-C/Copper Electrolyzer	√		
	B212503	Housing BL Spa UV-C U20 21 W 230V		√	
	B212504	Housing BL Spa UV-C Z20 21 W 230V			√
<b>F</b>	B212014	Set 3-way connection 50 mm	√		
	B212015	Set 3-way connection 48 mm <b>USA-UK</b>	√		
<b>G</b>	E801509	O-ring 3-way connection NBR 53x4,5	√		
<b>GFH</b>	SP0096	Blue Lagoon SPA Connection Kit	√		







## Operation

The SpAOP UV-C uses a special UV lamp that emits energy at wavelengths of both 254 nm and 185 nm. UV radiation at the specific wavelength of 185 nanometres is highly energetic and has enough energy to break molecular bonds in water molecules ( $H_2O$ ). By doing so free radicals ( $\cdot OH$ ) will be created in the water through a process known as photodissociation. The newly formed free radicals react with dissolved substances and (in)organic pollutants, leading to the oxidation of these substances. This improves the transmission rate which in time benefits the regular UV-C disinfection.

## Double function, double performance

The Blue Lagoon SpAOP UV-C's efficiency is based on the units special double-function lamp that produces both direct OH-radicals, that have an even stronger oxidizing power than ozone, and UV-C disinfection, ensuring that the water is disinfected and purified at the same time.

## Sustainable & Efficient Performance, Easy Maintenance

The double function lamp has an efficient lamp life up to 9 000 hours with an LED replacement indication integrated in the ballast. In addition to the long lamp life, the Blue Lagoon SpAOP UV-C is easy to install and maintain, making it a sustainable, easy to install and maintain, energy efficient and cost-efficient water treatment for Spa and Hot Tub.



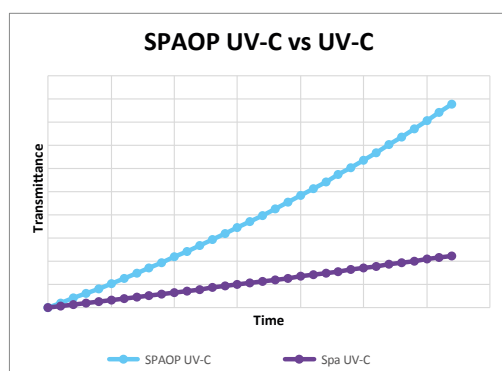
## Reliable and effective disinfection

The by the UV lamp emitted UV-C energy at a wavelength of 254 nm is responsible for the disinfection of the water. This wavelength is absorbed by the DNA/RNA of microorganisms and viruses and because of this their reproduction mechanism is damaged. This results in a reliable disinfection of the water. Not only bacteria but also viruses, spores, algae, moulds, yeasts and protozoa including Cryptosporidium and Giardia will be eliminated.

## What is AOP by Photodissociation?

The Advanced Oxidation Process (AOP) in the Blue Lagoon SpAOP UV-C is an oxidation process based on OH-radicals. The 185 nm emitted by the UV lamp is absorbed by the water molecules resulting the generation of OH-radicals. OH-radicals are the strongest in water available oxidant and will oxidise organic and inorganic pollutants present in the water. The 185 nm wavelength based AOP process improves the water quality by improving the visibility and smell of the water.

Because of the disinfection of the water by the 254 nm wavelength and the oxidation of the water by the 185 nm wavelength makes the Blue Lagoon SpAOP UV-C the perfect addition to your Spa water treatment process.





### Complete process AOP by Photodissociation

**UV-C Absorption:** Water molecules (1) absorb the UV radiation at 185 nm. This absorption is facilitated by the oxygen-hydrogen (O-H) bonds within the water molecule.

**Bond Breakage:** The absorbed UV radiation provides enough energy to break the O-H bonds in the water molecule, leading to the formation of hydroxyl radicals (2).

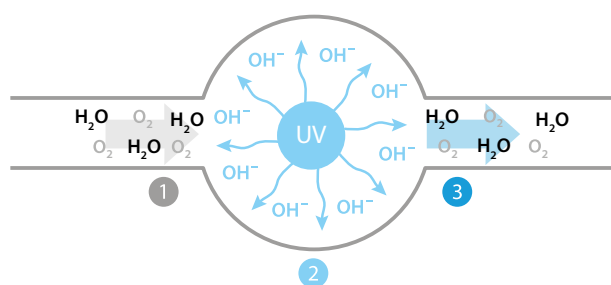
**Formation of Free Radicals:** The hydroxyl radical ( $\cdot\text{OH}$ ) is highly reactive. Free radicals are highly reactive and unstable, seeking to stabilize themselves by either gaining electrons. This gives them a high oxidation potential.

**Chemical Reactions:** The newly formed free radicals react with organic and inorganic substances, leading to the degradation of these substances which also improves the water quality and UV transmittance rate. Because of the double function of the lamp (creating free radicals and disinfection by UV-C) the improvement of the transmittance rate will also benefit the disinfection rate from the water which is disinfected in the same time.

**The lifetime of OH-radicals** is extremely short, because of that the entire treatment process takes place within the UV treatment chamber. Treated water (3) is without  $\cdot\text{OH}$ -radicals

### Benefits AOP by Photodissociation :

- **Efficiency:** With direct UV radiation at 185 nanometres, we use the power of photon energy to break down water molecules directly, creating hydroxyl radicals ( $\cdot\text{OH}$ ) leaving contaminants no chance.
- **Precision Targeting:** Our technology precisely targets the oxygen-hydrogen bonds within water molecules, guaranteeing the highest level of contaminant oxidation.
- **Maximum Reactivity:** The high energy of UV radiation at 185 nanometres initiates immediate reactions, improving the colour and smell of the water.
- **Cost-Efficient Solution:** Unlike traditional methods direct UV-C radical generation technology offers a cost-efficient alternative by eliminating the need for ozone generation.
- **Environmental Sustainability:** Our innovative approach minimizes the use of chemicals and eliminates harmful by-products.





# Spa UV-C 21 W



## Advantages

- Includes ballast with LED indicator for easy monitoring
- UV-C unit specially designed for high temperatures ( $\pm 40^{\circ}\text{C}/\pm 104^{\circ}\text{F}$ )
- Compact design for easy integration into spa systems
- Easy to install and maintain, minimizing downtime



21 W Z50



21 W U20



21 W Z20



**More information?**  
Scan the QR-code



	<b>21 W Z50</b>	<b>21 W U20</b>	<b>21 W Z20</b>
Article number	BE01212	BE01213	BE01214
Type	21 W	21 W	21 W
EAN	8714404045742	8714404040228	8714404042673
Maximum flow for 30 mJ/cm <sup>2</sup>	3 m <sup>3</sup> /h	2,5 m <sup>3</sup> /h	2,5 m <sup>3</sup> /h
Maximum pressure	1 bar	1 bar	1 bar
Diameter unit Ø	58 mm	58 mm	58 mm
Length unit	35 cm	35 cm	35 cm
In/outlet connections Ø	50 mm/1½" BSPP female	20 mm	20 mm
Housing material	PC/ASA	PC/ASA	PC/ASA
Lifespan lamp	9 000 hours	9 000 hours	9 000 hours

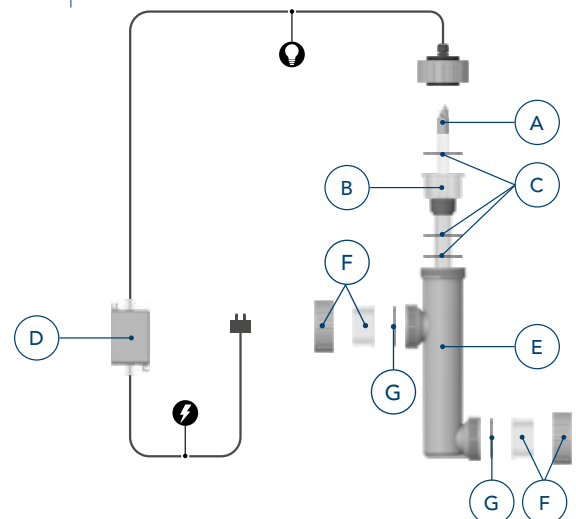
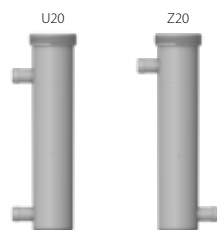


## Spare parts

			Available for:	21 W Z50	21 W U20	21 W Z20
A	F980120AM	Lamp VGE T5 21 W 4P Base G AM Packed	✓	✓	✓	
B	QG089	Quartz glass VSC 281 x 25 mm 21 W AM	✓	✓	✓	
C	E800912	Set O-ring for quartz glass	✓	✓	✓	
D	EP021001	Electrics for BL UV-C Spa 21 W LED indicator	✓	✓	✓	
E	B212013	Housing BL Spa UV-C/Copper Electrolyzer	✓			
	B212500	Housing BL Spa UV-C U20 21 W 230V		✓		
	B212501	Housing BL Spa UV-C Z20 21 W 230V			✓	
F	B212014	Set 3-way connection 50 mm	✓			
	B212015w	Set 3-way connection 48 mm <b>UK/USA</b>	✓			
G	E801509	O-ring 3-way connection NBR 53x4,5 mm	✓			

### Optional set

<b>GFH</b>	SP0096	Blue Lagoon SPA Connection Kit	√		
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# UV-C Lamps



Each Blue Lagoon UV unit is equipped with a UV lamp. Depending on the system the choice of lamp has been made. To make sure a UV-C disinfection system keeps protecting bathers against pathogens such as moulds, viruses and bacteria, it is important to replace a UV-C lamp in time. The average effective lifespan of a UV-C lamp is 9 000 hours.

An amalgam lamp has a longer lifespan of approximately 12.000 - 16 000 hours. Although the lamp will still continue to work after this period, its disinfecting value will rapidly decline from then on. To still guarantee the health of the bathers, it is important to replace the UV-C lamp in time.

## T5 lamps



**T5 lamps** are single-ended UV-C (germicidal) lamps used in professional water and air disinfection units. The small 16 mm diameter of the lamp allows for a small system design and design flexibility.

## T6 lamps



**T6 lamps** are single-ended UV-C (germicidal) lamps that are used in professional water and air disinfection devices. The diameter of the lamp of 19 mm allows a small system design. The T6 is mainly used in the amalgam version.



Besides the lamps used in Blue Lagoon products, VGE offers different replacement lamps. On page 54 you find the different lamp types that VGE B.V. uses in her products. Furthermore you can find an overview of the lamps that can be bought for replacement next to the Blue Lagoon replacement lamps.

For the professional market it is also possible to deliver special high quality lamps with a higher wattage. For example lamps of 325 W and 400 W. Please contact us for the actual prices and delivery times.

### Smart Pin Technology (SPT)



VGE Smart Pin Technology lamps (SPT) makes it possible to replace the lamp safely, while the system remains filled with water. If the lamp is not turned off during the replacement, it will switch off automatically as soon as it is removed from the socket.

### SBT Single-end Bayonet Technology (SBT)



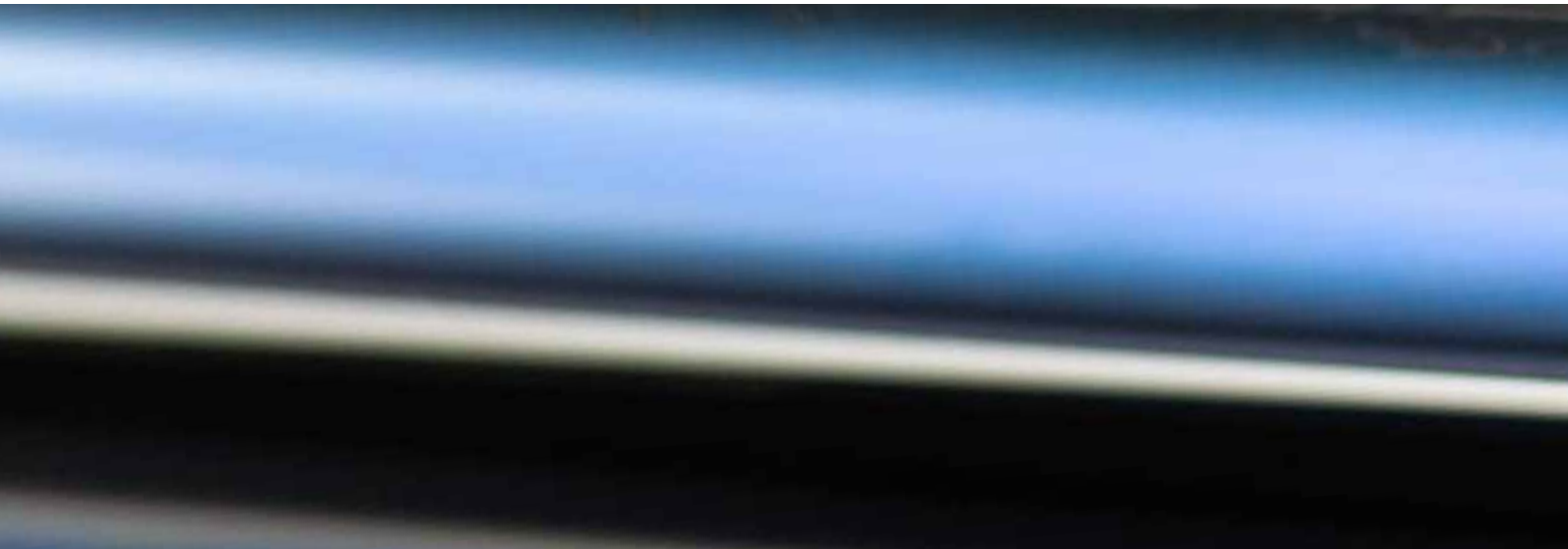
VGE Single-end Bayonet Technology lamps (SBT) are equipped with a bayonet technology closure. The lamp itself is single-ended which not only makes it easy to install and replace but also requires service space at only one side of the treatment chamber.



**More information?**  
Scan the QR-code



# UV-C Lamps

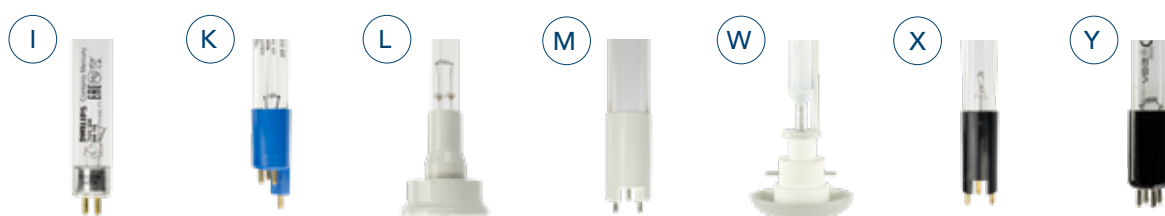


### Blue Lagoon Xpert-Series Medium Pressure

Item. Nr.	Brand	Model	Box	Type	Base
F980600	VGE - LightTech	Blue Lagoon MP 400 W SBT	1	-	W
F980605	VGE - LightTech	Blue Lagoon MP 600 W SBT	1	-	W
F980610	VGE - LightTech	Blue Lagoon MP 1000 W SBT	1	-	W
F980615	VGE - LightTech	Blue Lagoon MP 1500 W SBT	1	-	W

### Blue Lagoon Xpert-Series

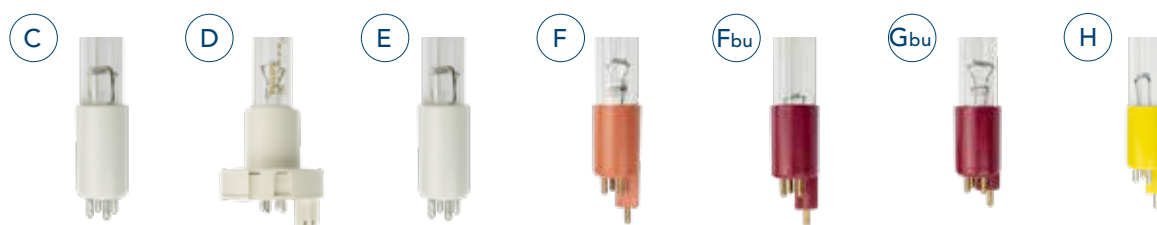
Item. Nr.	Brand	Model	Box	Type	Base
F980010	VGE - LightTech	T5 80 W 4P	48	T5	X
F980020	VGE - LightTech	T6 140 W Amalgam 4P	34	T6	X
4800033	VGE - LightTech	Lamp VGE T5 75 W 185 nm Base H	48	T5	H
F980010AM	VGE - LightTech	Lamp VGE T5 80 W 4P Base X Packed	1	T5	X
F980020AM	VGE - LightTech	Lamp VGE T6 140 W Amalgam 4P Base X Packed	1	T6	X
4800033AM	VGE - LightTech	Lamp VGE T5 75 W 185 nm Base H AM Packed	1	T5	H



### Blue Lagoon Series

Item. Nr.	Brand	Model	Box	Type	Base
E800901L	VGE - LightTech	Lamp LightTech T5 40 W 4P-SE Base C	48	T5	C
E800901LAM	VGE - LightTech	Lamp LightTech T5 40 W 4P-SE Base C AM Packed	1	T5	C
E800902L	VGE - LightTech	Lamp LightTech T5 75 W 4P-SE Base C	48	T5	C
E800902LAM	VGE - LightTech	Lamp LightTech T5 75 W 4P-SE Base C AM Packed	1	T5	C
F980005	VGE - LightTech	Lamp VGE LightTech T6 130 W Amalgam 4P Base E	36	T6	E
F980005AM	VGE - LightTech	Lamp VGE LightTech T6 130 W Amalgam 4P Base E AM Packed	1	T6	E
F980172	VGE - LightTech	Lamp VGE T5 40 W 4P Base M	48	T5	M
F980172AM	VGE - LightTech	Lamp VGE T5 40 W 4P Base M AM Packed	1	T5	M
F980173	VGE - LightTech	Lamp VGE T5 75 W HO 4P Base M	48	T5	M
F980173AM	VGE - LightTech	Lamp VGE T5 75 W HO 4P Base M AM Packed	1	T5	M
F980008	VGE - LightTech	Lamp VGE T6 130 W Amalgam 4P Base M	36	T6	M
F980008AM	VGE - LightTech	Lamp VGE T6 130 W Amalgam 4P Base M AM Packed	1	T6	M
E800902P	Philips	Lamp Philips TUV 36T5 75 W HO 4P-SE Base C AM	1	T5	C
E800902PAM	Philips	Lamp Philips TUV 36T5 75 W HO 4P-SE Base C AM Packed	1	T5	C
E800904	Philips	Lamp Philips TUV XPT 130 W 4P-SE Amalgam Base E	1	T6	E
E800904AM	Philips	Lamp Philips TUV XPT 130 W 4P-SE Amalgam Base E AM Packed	1	T6	E
F980002	VGE - LightTech	Lamp VGE T5 40 W 4P Base F	48	T5	F
F980002AM	VGE - LightTech	Lamp VGE T5 40 W 4P Base F AM Packed	1	T5	F
F980004	VGE - LightTech	Lamp VGE T5 75 W 4P Base F	48	T5	F
F980004AM	VGE - LightTech	Lamp VGE T5 75 W 4P Base F AM Packed	1	T5	F
F980065	VGE - LightTech	Lamp VGE T5 16 W 4P Base F	48	T5	F
F980065AM	VGE - LightTech	Lamp VGE T5 16 W 4P Base F AM Packed	1	T5	F
B280002	VGE - LightTech	Lamp Blue Lagoon T5 40 W Ionizer Base K	48	T5	K
B280002AM	VGE - LightTech	Lamp Blue Lagoon T5 40 W Ionizer Base K AM Packed	1	T5	K
B280001	VGE - LightTech	Lamp Blue Lagoon T5 75 W Ionizer Base K	48	T5	K
B280001AM	VGE - LightTech	Lamp Blue Lagoon T5 75 W Ionizer Base K AM Packed	1	T5	K
3903114	VGE	Lamp VGE T5 42 W Base Y	48	T5	Y
3903114AM	VGE	Lamp VGE T5 42 W Base Y AM Packed	1	T5	Y

# UV-C Lamps



## Blue Lagoon Spa-Series

Item. Nr.	Brand	Model	Box	Type	Base
F980180	VGE - LightTech	Lamp VGE T5 21 W 185 nm 4P Base H	48	T5	H
F980180AM	VGE - LightTech	Lamp VGE T5 21 W 185 nm 4P Base H AM Packed	1	T5	H
F980120	VGE - LightTech	Lamp VGE T5 21 W 4P Base G	48	T5	G
F980120AM	VGE - LightTech	Lamp VGE T5 21 W 4P Base G AM Packed	1	T5	G

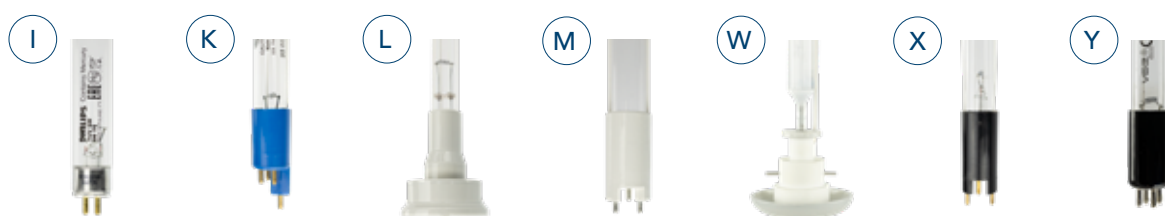
## PL-S & PL-L Bulbs

Item. Nr.	Brand	Model	Box	Type	Base
3903005	Philips	Lamp Philips TUV PL-S 5 W /2P Base A	60	PL-S	A
3903020	Philips	Lamp Philips TUV PL-S 11 W /2P Base A	60	PL-S	A
3903030	Philips	Lamp Philips TUV PL-L 18 W /4P Base B	25	PL-L	B
3903040	Philips	Lamp Philips TUV PL-L 36 W /4P Base B	25	PL-L	B
3903050	Philips	Lamp Philips TUV PL-L 55 W /4P Base B	25	PL-L	B

## T5 & T6 Bulbs

Item. Nr.	Brand	Model	Box	Type	Base
E800900	Philips	Lamp Philips TUV 16W 4P-SE UNP Base C	1	T5	C
E800901P	Philips	Lamp Philips TUV 36T5 40 W 4P-SE Base C	1	T5	C
E800902P	Philips	Lamp Philips TUV 36T5 75 W HO 4P-SE Base C AM	1	T5	C
3903567	Philips	Lamp Philips TUV 64T5 75 W 4P-SE Base C Verpakt (1.56m)	1	T5	C
B280005	Philips	Lamp Philips TUV Smart Cap 75W Base D AM	1	T5	D
B280006	Philips	Lamp Philips TUV Smart Cap 40W Base D AM	1	T5	D
E800904	Philips	Lamp Philips TUV XPT 130 W 4P-SE Amalgam Base E	1	T6	E
F980005	VGE - LightTech	Lamp VGE LightTech T6 130 W Amalgam 4P Base E	36	T6	E
3903025	VGE - LightTech	Lamp VGE T6 325W 4P Amalgam Base E	36	T6	E
F980115	VGE - LightTech	Lamp VGE LightTech T6 200 W Amalgam 4P Base E	36	T6	E
4800070AM	VGE - LightTech	Lamp VGE LightTech T5 40 W Amalgam Base C	48	T5	C
4800082AM	VGE - LightTech	Lamp VGE LightTech T5 80 W Amalgam Base C	48	T5	C
3903110	VGE	Lamp VGE T5 40 W Amalgam Base C	25	T5	C
3903111	VGE	Lamp VGE T5 80 W Amalgam Base C	25	T5	C
3903073	VGE	Lamp VGE 4P-SE 40 W T5 Base C	25	T5	C
3903074	VGE	Lamp VGE 4P-SE 75 W T5 Base C	25	T5	C





#### TL bulbs

Item. Nr.	Brand	Model	Box	Type	Base
3903560	Philips	Lamp Philips TUV TL 15W 1SL T8 Base I	25	TL	I
3903561	Philips	Lamp Philips TUV TL 25W 1SL T8 Base I	25	TL	I
3903071	VGE	Lamp VGE TL 30 W T8 Base I	25	TL	I
3903072	VGE	Lamp VGE TL 55 W T8 Base I	25	TL	I

#### Unit specific lamps

Item. Nr.	Brand	Model	Box	Type	Base
F980102	VGE Pro - LightTech	Lamp VGE Pro T6 140 W 867 SPT	6	T6	L
F980103	VGE Pro - LightTech	Lamp VGE Pro T6 200 W 1115 SPT	6	T6	L
F980107	VGE Pro - LightTech	Lamp VGE Pro T5 40 W 389 SPT AM	6	T5	L
F980108	VGE Pro - LightTech	Lamp VGE Pro T5 75 W 867 SPT AM	6	T5	L
F980104	VGE Pro - LightTech	Lamp VGE Pro T6 325 W 1588 SPT	6	T6	L
F980112	VGE Pro - LightTech	Lamp VGE Pro T6 400 W 2000 SPT	6	T6	L

# Blue Lagoon Pool products



In addition to our UV-C disinfection systems, Blue Lagoon offers a comprehensive range of complementary products designed to streamline and operation of spas, hot tubs, and swimming pools. For optimal performance, we recommend using these products in conjunction with a Blue Lagoon UV-C unit.

Blue Lagoon pool care solutions are engineered to save time and effort, while ensuring that water quality remains consistently at an optimal level.



Flow Switch Plus



Dosatech



Profiheater 3 kW



Copper Electrolyzer





## Advantages

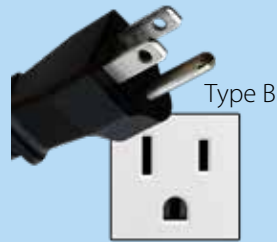
- Enhances overall system safety and efficiency
- Prevents systems from running without flow, protecting pumps and equipment
- Compact design allows for easy installation in new or existing systems
- Easily integrates with other pool or spa equipment
- Reliable operation



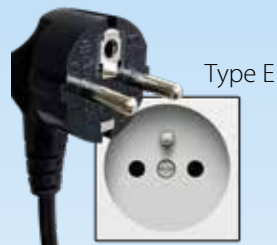
**More information?**  
Scan the QR-code

**SALT-  
WATER**

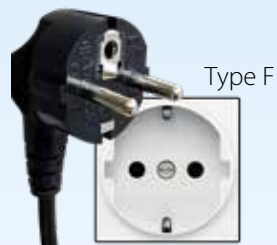
	<b>120 V (Type B)</b>
Article number	5056584
Type	Type B
EAN	8714404044622
Voltage	120 V AC
Frequency	60 Hz
IP Class	54
Connection size, tee fitting	2"
Minimum flow	1,5 m <sup>3</sup> /h
Maximum flow	23 m <sup>3</sup> /h



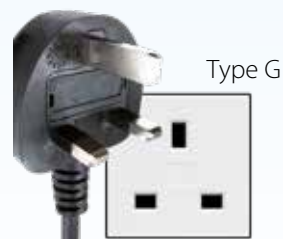
	<b>230 V (Type E)</b>
Article number	5056586
Type	Type E
EAN	8714404044554
Voltage	230 V AC
Frequency	50 Hz
IP Class	54
Connection size, tee fitting	63 mm
Minimum flow	1,5 m <sup>3</sup> /h
Maximum flow	23 m <sup>3</sup> /h



	<b>230 V (Type F)</b>
Article number	5056579
Type	Type F
EAN	8714404044486
Voltage	230 V AC
Frequency	50 Hz
IP Class	54
Connection size, tee fitting	63 mm
Minimum flow	1,5 m <sup>3</sup> /h
Maximum flow	23 m <sup>3</sup> /h



	<b>230 V (Type G)</b>
Article number	5056587
Type	Type G
EAN	8714404044936
Voltage	230 V AC
Frequency	50 Hz
IP Class	54
Connection size, tee fitting	63 mm
Minimum flow	1,5 m <sup>3</sup> /h
Maximum flow	23 m <sup>3</sup> /h





## Advantages

- Reliable and precise chemical dosing for safe, crystal-clear water
- Simple 3-button operation and intuitive programming for ease of use
- Adjustable dosage: up to 600 seconds per run, with a maximum of 24 runs per day
- Flexible scheduling: dosage can be changed hourly to match system needs
- Easy to install and maintain in new or existing systems
- Easy to combine with Blue Lagoon UV-C units for enhanced water treatment



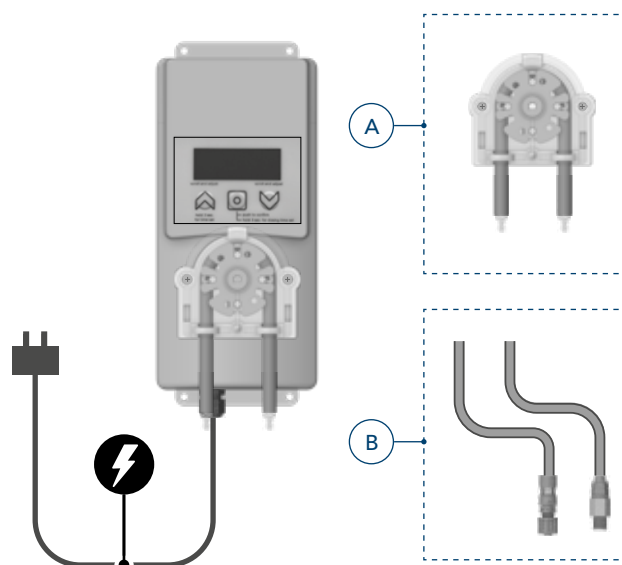
**More information?**  
Scan the QR-code



	<b>Dosatech</b>
Article number	B210010N
EAN	8714404987417
Rotation	30 rpm
Dimensions LxWxH	80 x 90 x 215mm
Electronic ballast	230 V AC 50 Hz
Power	5 W

## Spare parts

<b>A</b>	B290065	Replacement pump head for Dosatech
<b>B</b>	B200030	Replacement kit for dosing pump pool (hose + nipples)



# Copper Electrolyzer



## Advantages

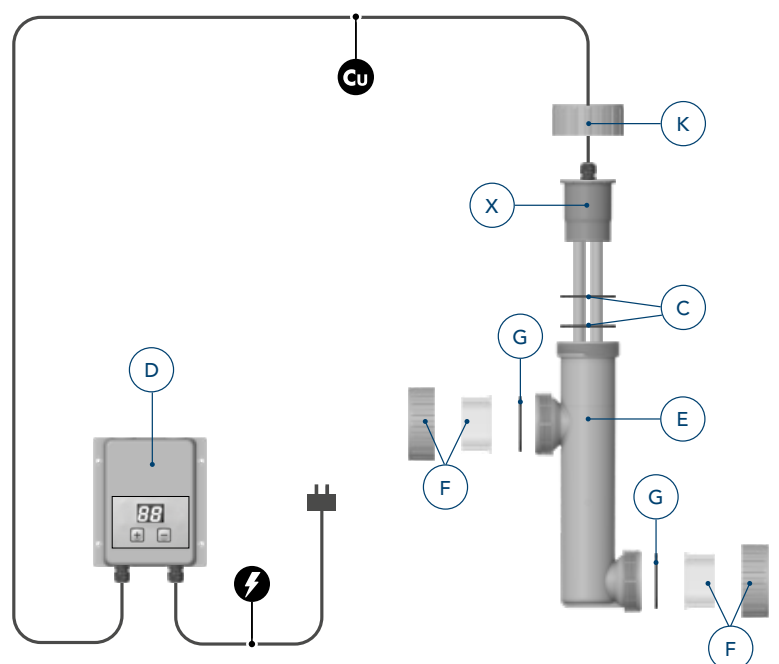
- Effective for up to two swimming seasons
- Easy to install and maintain
- Ideal for use in combination with Blue Lagoon UV-C units for enhanced water quality
- Provides continuous copper ionization to reduce algae and bacteria
- Compact design fits easily into new or existing pool systems



**More information?**  
Scan the QR-code

*Pending EU regulations or conditional approval, national regulations apply to the trade and use of copper-containing products. The copper used in these units complies with the REACH registration. It is the sole responsibility of the buyer to inform himself/herself about applicable local regulations regarding the use of (and trade in) copper for water disinfection.*

C	3902041	O-ring NBR 56x3 mm
D	B290076	Control Box for Copper Electrolyzer
E	B212013	Housing Blue Lagoon Spa UV-C/Copper Electrolyzer
F	B212014	Set 3-way connection 50 mm
	B212015	Set 3-way connection 48 mm
G	E801509	O-ring 3-way connection NBR 53x4,5 mm
K	B290010	Nut 70 mm x 33.5 mm for end cap ABS blue
X	B290029	Copper set base + cable connector
Y	B200020	Test strips for Ionizer (50 strips)





# Profiheater 3 kW



## Advantages

- Reliable and low-maintenance operation for consistent pool heating
- Built-in heating element with thermostat for precise temperature control
- Durable 316L Stainless steel body for corrosion and chlorine resistance
- Universal fittings included (63mm/50mm/1½")
- Easy integration into new or existing pool systems
- Compact design for easy installation and minimal space requirement



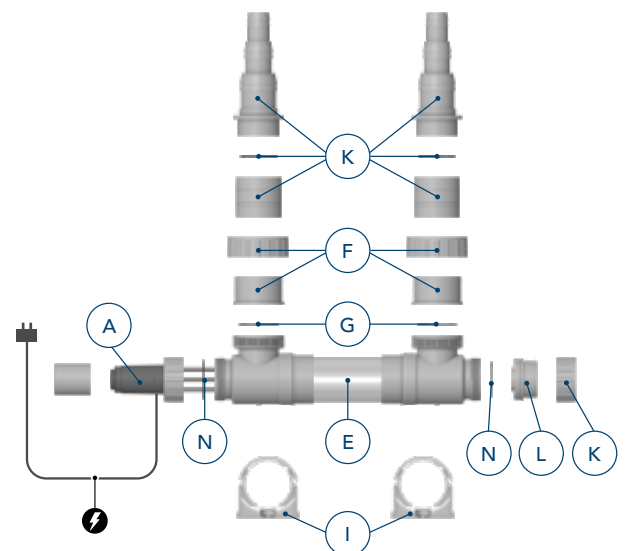
**More information?**  
Scan the QR-code



	<b>3 kW</b>
Article number	E830010
Type	3 kW
EAN	8714404034173
Maximum pressure	2 bar
Maximum flow	10 m <sup>3</sup> /h
Length unit	56 cm
In/outlet connections Ø	63 - 50 - 40 - 32 - 25 mm
Housing material	AISI 316L

## Spare parts

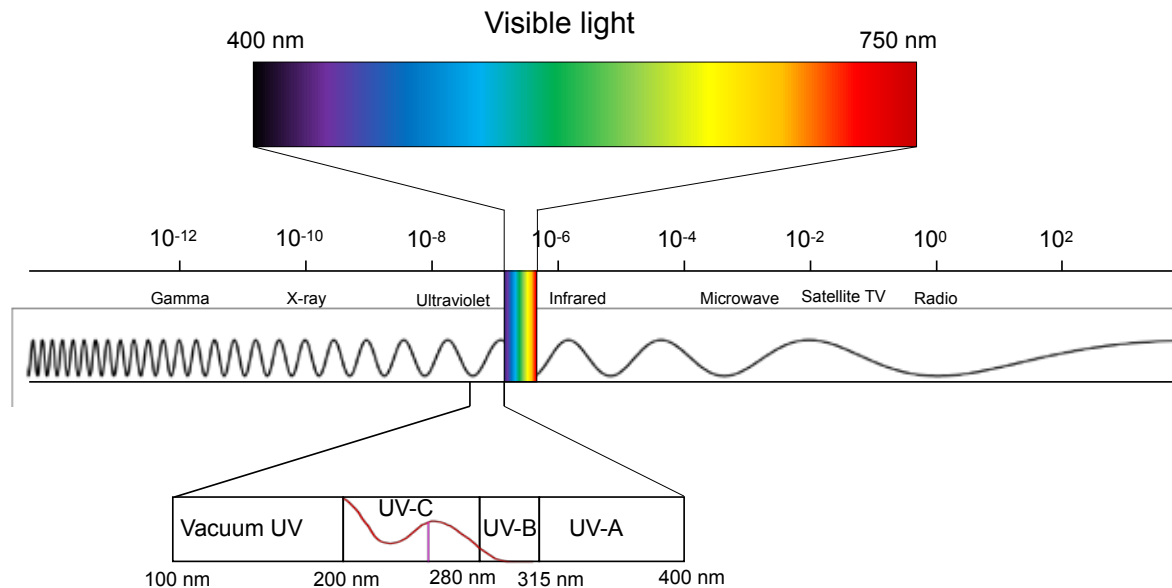
A	6900393	Heater element for ProfiHeater 3 kW
E	E830011	Housing Blue Lagoon ProfiHeater 1/2/3 kW
F	E800940	Set 3-way coupling black
G	E800941	Set O-rings 3-way connection
I	B290006	Mounting bracket 75 mm PP blue
J	F990113	End cap 32 mm ABS blue
K	B290010	Nut 70 mm x 33.5 mm ABS blue
L	F990107	End cap 32 mm ABS Black
N	3902110	O-ring EPDM 59.99 mm x 2.62 mm
Z	7201142	Reduction set 63 mm glue/screw hose connect. 40-32-25 mm



# UV-C Treatment



## Electromagnetic spectrum



UV radiation can be divided into four main categories; UV-A, UV-B, UV-C and Vacuum UV. The UV-C spectrum (200 to 280 nanometers) is the most lethal range of wavelengths for microorganisms. UV-C radiation can cause permanent damage to microorganisms. Each type of microorganism requires a specific UV-C radiation exposure rate to successfully complete the disinfection process.

The targeted microorganism must be directly exposed to the UV-C radiation long enough for the radiation to penetrate the microorganism's cell wall. However, it takes only a fraction of a second for UV-C radiation to inactivate waterborne microorganisms by breaking through the microorganism's cell wall and damaging their DNA. This often destroys the organism, or at the very least will impair its ability to reproduce.





#### **UV radiation is effective against all microorganisms**

Water purification by UV-C radiation is the most effective sanitizing method available today. UV radiation destroys microorganisms in domestic pools up to 99.9%.

#### **UV pool sanitizers contribute to cristal-clear water**

The most important perpetrator of cloudy water, microorganisms such as algae, will be eliminated by UV-C pool sanitizers. Chloramines can also be the indirect cause of cloudy water, especially when the disinfection level of free chlorine in the water is too low. UV-C lamps are able to typically destroys microorganisms up to 99.9% and breaks down chloramines up to 80%.

#### **With UV purifiers, you can reduce the use of chemicals for water treatment**

UV-C purification makes sure there is more stability in pools and spas, therefore adding extra chemicals can be prevented.

#### **The end user will have lower costs in chemicals and maintenance**

Materials in and around the pool suffer from chemicals added to the pool water. Because UV-C radiation destroys most of the harmful chloramines in the water, the materials in and around the pool get affected much less and need less maintenance.

#### **There is no risk of overdosing with UV pool sanitizers**

Overdosing chemicals in pools and spas can, as mentioned before, causing serious health problems and even foamy or cloudy water. UV radiation cannot be overdosed and destroys all of the microorganisms.

#### **UV is a green, non-hazardous technology**

Last but not least - UV radiation is an environmentally friendly way to sanitize pool water!



# Pool bonding



Although most devices, ladders, etc. in swimming-pools are made of stainless steel, oxidation is still possible. There are two important causes for corrosion:

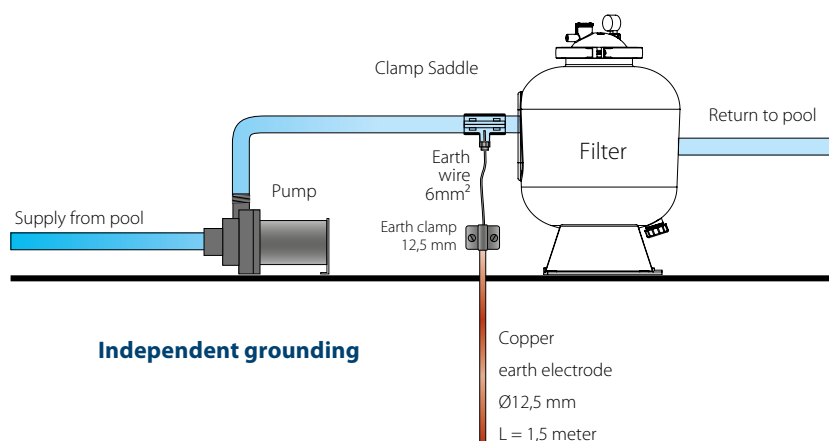
1. Insufficient grounding of pool water (pool bonding)
2. Corrosive water

## Grounding

Every pool must be grounded independently (i.e. not to the electricity network). This in particular for fibreglass/ polyester pools, pools with salt electrolysis and pools with stainless steel parts (pool ladders, UV-C units, etc.). A special grounding set ensures that potential differences created by static electricity, will be lead away. This will prevent depositing and/or oxidation to the pool, parts or technical equipment.

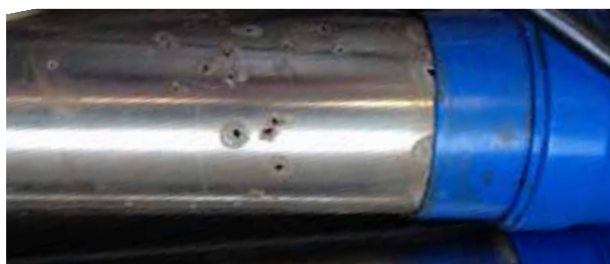
## Salt

For Stainless steel 316 devices (such as UV-C lamps) the **maximum salt concentration is 5 grams/liter** for salt electrolysis systems.



## Corrosive water

The tap water that is used to (re)fill up the pools normally has a constant and known composition. By adding chemical products for disinfection, pH regulation and by heating and moving the water, this composition changes. Pool water might turn corrosive (calcium dissolving) and can slowly dissolve the existing lime (in concrete and in joints between the tiles). Metals (ladders, heaters, UV-C devices, etc.) can also be affected.



Reversely, the water can also have calcium precipitating characteristics that can turn the water cloudy and the walls and floors can be covered by lime scale deposits.

To determine, whether the water is neutral, corrosive or calcium precipitating, you can use the so-called "Langelier Saturation Index". The Langelier saturation index (LSI) is a calculated number used to predict the calcium carbonate stability of water. It indicates whether the water will precipitate, dissolve or be in equilibrium with calcium carbonate. The LSI is expressed as the difference between the actual system pH and the saturation pH.

Examples of stainless steel 316L devices, which are damaged by corrosive water and/or grounding problems. These are no manufacturing or material faults, so they are not covered under warranty.

# Corrosion of metal parts and devices in swimming pools



## Correction in case of a too low saturation index

In case of a negative saturation index, below -0.3, a correction is recommended. The saturation index must be increased. This can be realised by increasing the sum of factors, by increasing one or more parameter values.

### The measuring values are

- pH-value up to max. 7,6
- Alkalinity up to max. 300 mg CaCO<sub>3</sub>/l
- Calcium hardness up to max. 200 mg CaCO<sub>3</sub>/l

### pH-value

An increase of the pH value with caustic soda or soda can be used as a short-time solution. For a good disinfection result a pH value between 7.1 and 7.3 is the best.

### Alkalinity

The increase of alkalinity can be achieved by increasing the hydrogen carbonate content of the water with the help of sodium bicarbonate. If a too low hydrogen carbonate content is the case, it might be caused by a low HCO<sub>3</sub><sup>-</sup> content or by regular loss of the carbonic acid compounds as consequence of water movement or air geysers, you should add a solution of sodium bicarbonate with a dosing system.

### The formula is as follows: pH + TF + AF + CF - 12,1

**pH** The measured pH-value of the pool water

**TF** The influence of the water temperature in the formula

**AF** The influence of the alkalinity in the formula (measured as hydrogen carbonate HCO<sub>3</sub><sup>-</sup> or as calcium carbonate CaCO<sub>3</sub>)

**CF** The influence of the hardness of calcium (measured as calcium carbonate)

°C	TF	CACO <sub>3</sub> MG/L	TF	CF
0	0,0	25	1,4	1,0
3	0,1	50	1,7	1,3
8	0,2	75	1,9	1,5
12	0,3	100	2,0	1,6
16	0,4	150	2,2	1,8
19	0,5	200	2,3	1,9
24,5	0,6	300	2,5	2,1
29	0,7	400	2,6	2,2
34,5	0,8	800	2,9	2,5
40,5	0,9	1000	3,0	2,6

According to this calculation, water in balance should be within the range of -0.3 and +0.3.

Values below -0.3 indicate corrosive water.

Values above +0.3 indicate lime precipitating water.

PARAMETER	MEASURING VALUE	FACTOR
pH-value	7,4	7,4
Temperature	28	0,7
Total alkalinity	150mg/l CaCO <sub>3</sub>	2,2
Calcium hardness	150mg/l CaCO <sub>3</sub>	1,8
Sum of factors		12,1

$$\text{pH} + \text{TF} + \text{AF} + \text{CF} - 12,1$$

$$(7,4 + 0,7 + 2,2 + 1,8) - 12,1 = 0,0$$

Water is in balance,

no correction necessary

PARAMETER	MEASURING VALUE	FACTOR
pH-value	7,8	7,8
Temperature	29	0,7
Total alkalinity	195mg/l	2,3
Calcium hardness	127mg/l	1,7
Sum of factors		12,5

$$\text{pH} + \text{TF} + \text{AF} + \text{CF} - 12,1$$

$$(7,8 + 0,7 + 2,3 + 1,7) - 12,1 = 0,4$$

Water is lime precipitating,

correction is necessary

PARAMETER	MEASURING VALUE	FACTOR
pH-value	7,1	7,1
Temperature	30	0,7
Total alkalinity	100mg/l	2
Calcium hardness	150mg/l	1,8
Sum of factors		11,6

$$\text{pH} + \text{TF} + \text{AF} + \text{CF} - 12,1$$

$$(7,1 + 0,7 + 2 + 1,8) - 12,1 = -0,5$$

Water is corrosive,

correction is necessary

## Calcium Hardness

Tap water with a low hardness often lack carbonic acid compounds, besides low calcium- and magnesium compounds. As a result a negative saturation index might occur. The concentration of calcium compounds in the water can be increased by adding calcium chloride to the water.

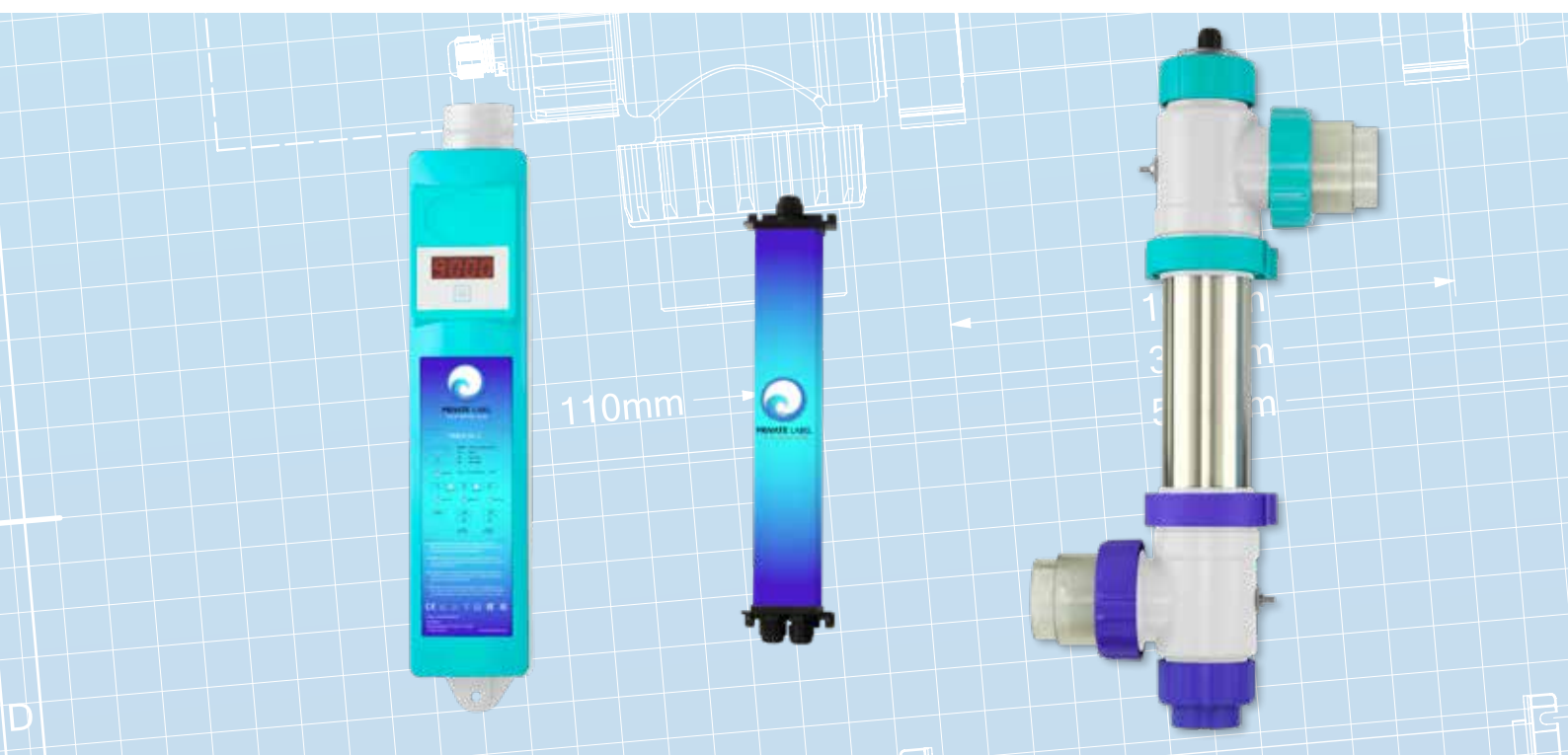
## Correction of a too high saturation index

In case of a positive saturation content of more than +0.3, the saturation index has to be reduced to the value preferred. In contrast to the increase of the saturation factor, the possibility of reduction is more restricted. The reduction of the HCO<sub>3</sub><sup>-</sup> content is possible by intensive aeration in combination with an automatic pH-correction. The reduction of the calcium hardness is only possible through total or partial water softening with a water softener.

**In case of extreme low values for hydrogen carbonate there is a present danger that pH values sink under 5.0. In case of such a value, "chlorine" in the water will be partly available as chlorine gas. Chlorine gases in the water might lead to serious poisoning!**

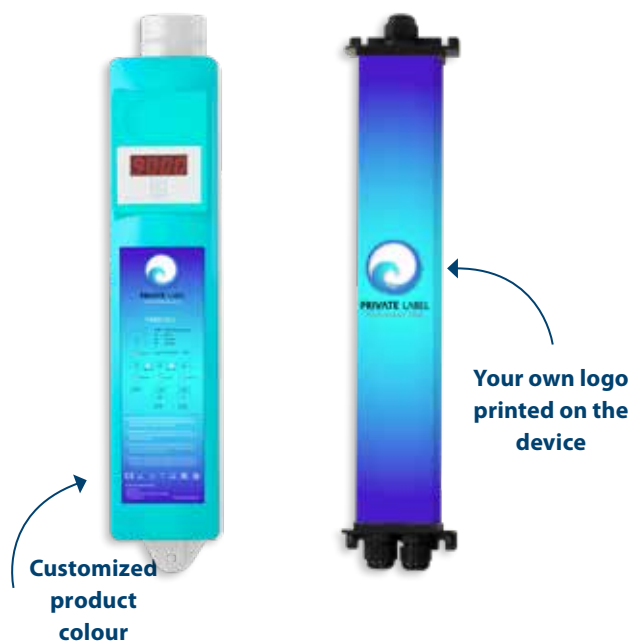


# Private Label



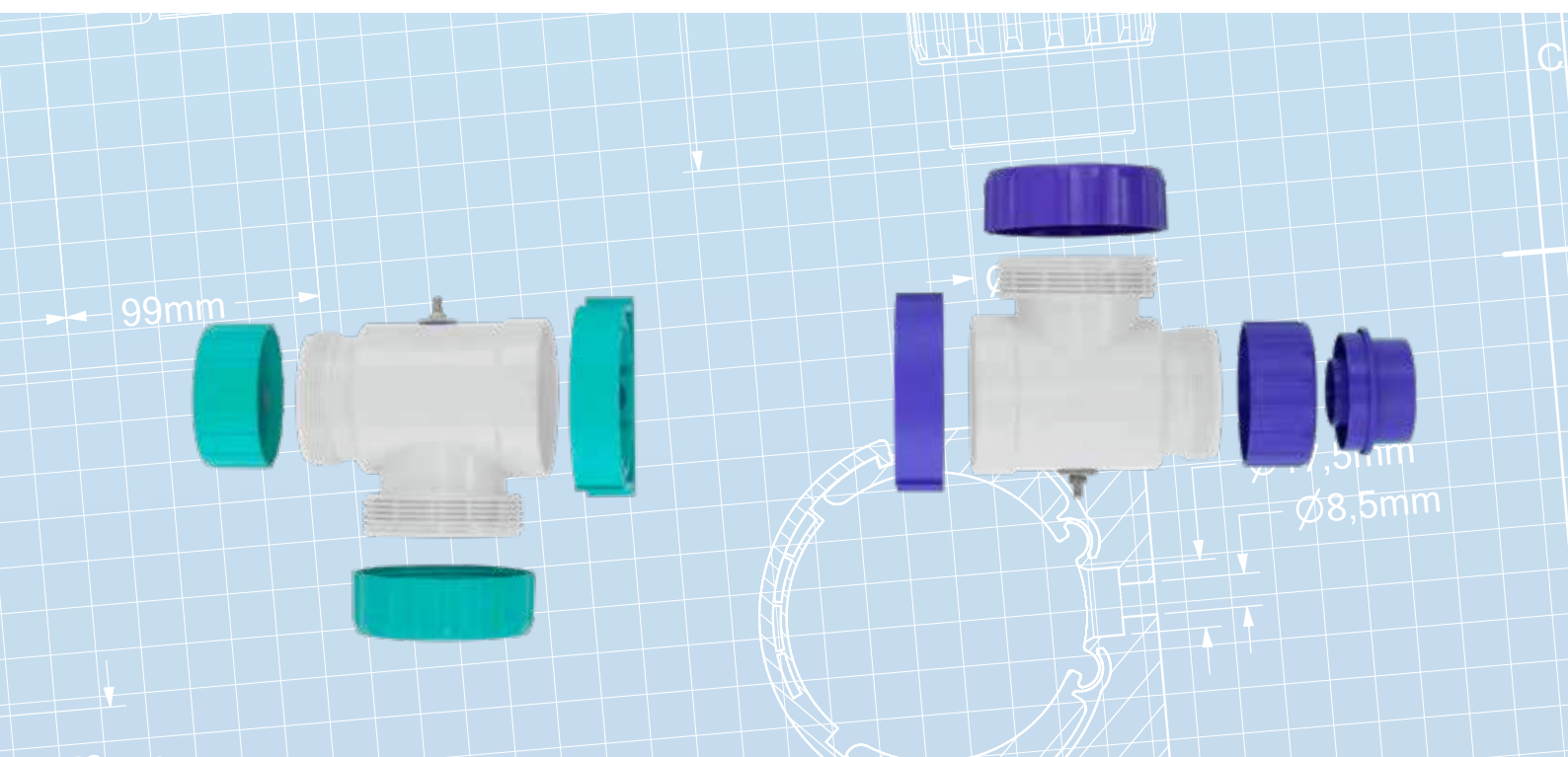
## The power of private label

Distinguish your business in a crowded market with our premium Private Label services. Tailor high-quality products to your unique vision and enjoy exclusive branding that sets you apart. Our expert team ensures a top-tier product and packaging, while you focus on building customer loyalty. Private Label isn't just about products; it's about building a brand that resonates. Elevate your business today and watch your sales soar. Your success story begins here, with Private Label.



## Advantages of our private label program:

- Stand out from your competitors with your exclusive brand
- Your brand will be associated with the proven quality of VGE B.V.
- Personalize the commercial appearance of your products
- Gain more flexibility in crafting promotional campaigns for your brand
- Available in low quantities as well (inquire about the possibilities)



#### Our Private Label Basic Package:

- Neutral packaging with your custom-designed product stickers
- Neutral manual
- Your own product labels
- Standard lamp and spare parts

#### Optional Additions:

- Full-colour packaging
- Customized product colours
- Your own tailored manual
- Private label UV-C lamp (matching colour/logo)
- Private label UV-C lamp (with custom fitting)

Other requests can be discussed.

Please get in touch with our sales department.



# Blue Lagoon promotional activities support



## Blue Lagoon Digital Information Pack

To help our partners inform new and returning customers about the latest UV-C products and innovations, we have assembled a comprehensive digital information pack. Whether you need product details for wholesale distribution or technical specifications for your installation professionals, our pack includes everything you need and is regularly updated.



Scan the QR code on this page to be automatically directed to the download link. Be fully prepared for this year's pool season with Blue Lagoon. The information download includes:

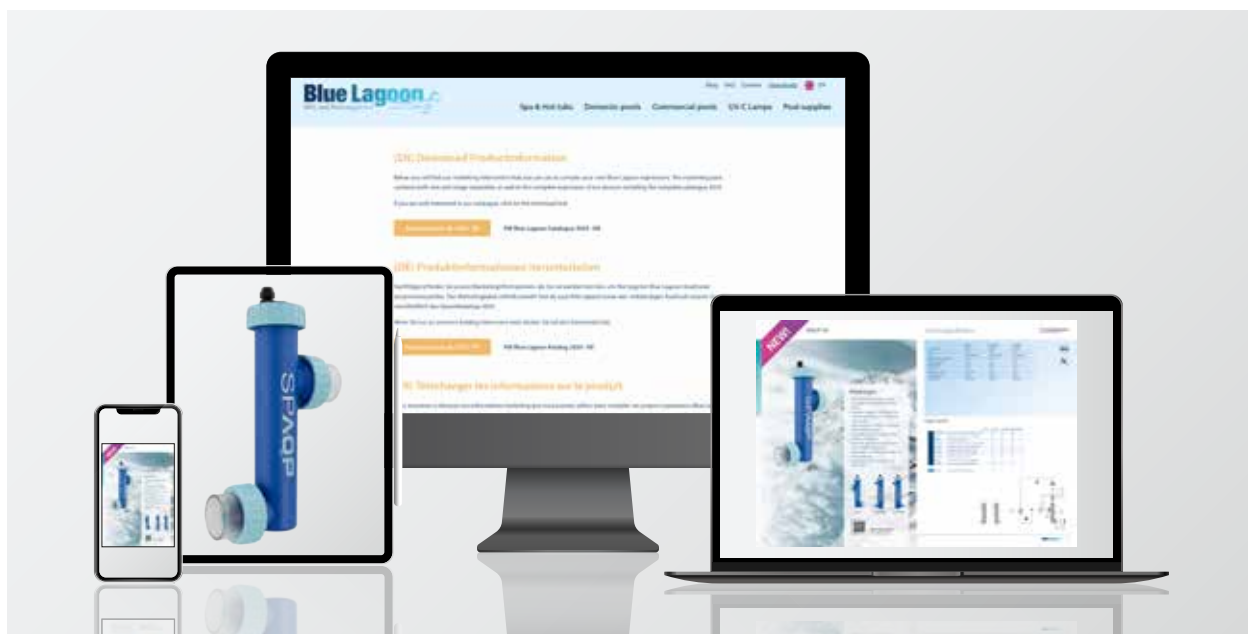
### The Digital Information Pack includes:

- The latest Blue Lagoon catalogue (updated regularly)
- Product images and details for your website
- Product flyers for public distribution
- Detailed product sheets explaining our technology and specifications
- The six key benefits of UV-C disinfection systems for pools
- Spare part overviews
- Links to instructional videos



**Blue Lagoon Catalogue**





Blue Lagoon Information Pack



Blue Lagoon Youtube playlist

# About VGE



*VGE B.V. is the expert in the field of UV-C disinfection. With an international perspective, we closely follow the latest developments and technologies to contribute to a sustainable and future-oriented water industry. Driven by a passion for technology and extensive knowledge of UV-C, we develop innovative systems for swimming pools (Blue Lagoon), ponds (Xclear), and the industrial market (VGE Pro).*



## Clean and Clear Water Since 1982

Water and UV-C technology are at the heart of VGE. Since 1982, we have been developing and manufacturing UV-C technology for water disinfection.

Over 40 years of experience and an unparalleled passion for our products, we have grown into an international market leader with a global impact. From our modern headquarters in Schijndel, we export to more than 80 countries and provide customized solutions.

## Sustainability and Innovation Under One Roof

Our facility is more than just a workplace, it reflects our core values of sustainability and innovation. With the construction of our new building in 2021, we made conscious choices, including the installation of 365 solar panels, making our building almost completely energy neutral. Additionally, our building operates entirely without natural gas, eliminating the need for fossil fuels.







It stands as tangible proof that technology and sustainability can go hand in hand, directly contributing to a greener future.

### **Our People Make the Difference**

At VGE, it's not just about technology, it's about the people who make our UV-C disinfection solutions possible. Our close-knit team of dedicated colleagues works passionately every day to create innovative solutions for clean and safe water. Thanks to our integrated approach and short lines of communication within the organization, we are flexible, solution-oriented, and reliable. Our people are what make VGE what it is, and we're proud of that.



### **Continuing to Innovate**

Water is always in motion, and so is VGE. From optimizing existing products to developing entirely new systems, quality, reliability, and innovation form the foundation of everything we do. Our product developers ensure that our technology meets the highest market standards and complies with all applicable safety regulations.

With our experience, global customer base, and future-focused vision, we work every day on the next step forward.

**Welcome to VGE!**





# Overview

Model number	Model Name	Recommended Flow Rate for 30mJ/cm <sup>2</sup>	Maximum working pressure in bar	Maximum flow rate in m <sup>3</sup> /h	UV-C lamp	Brand lamp	Inlet/outlet diameter (mm/inch)	Height of reactor in cm ±	Distance between inlet/outlet in cm ±	Weight in kg ±	Page number
<b>Xpert series</b>											
BPM00401	Xpert MP UV-C 400 W	13***	10	8***	1 x MP 400 W SBT	Blue Lagoon	2" male	91	15,6	2 + 4**	10
BPM00601	Xpert MP UV-C 600 W	19****	10	11****	1 x MP 600 W SBT	Blue Lagoon	DN80	20	28	11 + 4**	12
BPM01001	Xpert MP UV-C 1000 W	41*****	10	25*****	1 x MP 1000 W SBT	Blue Lagoon	DN100	22	25	12+15**	14
BPM01501	Xpert MP UV-C 1500 W	107*****	10	62*****	1 x MP 1500 W SBT	Blue Lagoon	DN150	28,5	30	18+15**	16
BPM01502	Xpert MP UV-C 1500 W MW	107*****	3	62*****	1 x MP 1500 W SBT	Blue Lagoon	DN150	28,5	33	25+15**	18
BP07082	Xpert Buster UV-C 80 W ø 114	15	4	20	1 x 80 W	VGE - LightTech	2"	93	73,3	9,7	20
BP07133	Xpert Buster UV-C 140 W ø 114	23	4	28	1 x 140 W Amalgam	VGE - LightTech	2"	93	72	9,6	20
BP07132	Xpert Buster UV-C 140 W ø 154	23	4	28	1 x 140 W Amalgam	VGE - LightTech	2,5"	93	72	9,6	20
BP07392	Xpert Buster UV-C 420 W ø 219	49*	4	49	3 x 140 W Amalgam	VGE - LightTech	3"	93	70,4	22,4	20
BH12752	Xpert Compact AOP UV Timer 75 W	18	2,5	23	1 x 75 W/Ozone	VGE - LightTech	63-50	100	77	8,4	22
BH12753	Xpert Compact AOP UV 75 W	18	2,5	23	1 x 75 W/Ozone	VGE - LightTech	63-50	100	77	8,4	22
BP08752	Xpert Duplex UV-C 80 W	17	2,5	23	1 x 80 W	VGE - LightTech	63-50	100	77	5,5	26
BP08132	Xpert Duplex UV-C 140 W	23	2,5	23	1 x 140 W Amalgam	VGE - LightTech	63-50	100	77	5,6	26
<b>Series</b>											
BH01402	Timer UV-C 4ALL 40 W	11	2	23	1 x 40 W	Philips	63-50	100	77	4,1	30
BH01752	Timer UV-C 4ALL 75 W	16	2	23	1 x 75 W	Philips	63-50	100	77	4,3	30
BH01132	Timer UV-C 4ALL 130 W	22	2	23	1 x 130 W Amalgam	Philips	63-50	100	77	4,5	30
BD01402	Tech UV-C 4ALL 40 W	11	2	23	1 x 40 W	VGE - LightTech	63-50	100	77	3,6	32
BD01752	Tech UV-C 4ALL 75 W	16	2	23	1 x 75 W	VGE - LightTech	63-50	100	77	3,9	32
BD01132	Tech UV-C 4ALL 130 W	22	2	23	1 x 130 W Amalgam	Philips	63-50	100	77	5,0	32
BP02752	Inox UV-C 75 W	18	5	23	1 x 75 W	Philips	2"	100	78,5	7,2	34
BP02132	Inox UV-C 130 W	22	5	23	1 x 130 W Amalgam	Philips	2"	100	78,5	7,3	34
BH11402	Signal UV-C 40 W	11	2	23	1 x 40 W	VGE - LightTech	63-50	100	77	4,1	36
BH11752	Signal UV-C 75 W	16	2	23	1 x 75 W	VGE - LightTech	63-50	100	77	4,3	36
BH11402	Signal UV-C 130 W	22	2	23	1 x 130 W Amalgam	VGE - LightTech	63-50	100	77	4,5	36
BE02162	Tech UV-C 16 W	5	2	23	1 x 16 W	VGE - LightTech	63-50	56	34	2,8	38
BE02402	Tech UV-C 40 W	11	2	23	1 x 40 W	VGE - LightTech	63-50	100	77	3,6	38
BE02752	Tech UV-C 75 W	16	2	23	1 x 75 W	VGE - LightTech	63-50	100	77	3,9	38
BE03132	Tech UV-C 130 W	22	2	23	1 x 130 W Amalgam	Philips	63-50	100	77	5,0	38
BH04402	Copper Ionizer UV-C 40 W	11	2	23	1 x 40 W	VGE - LightTech	63-50	100	77	5,0	40
BH04752	Copper Ionizer UV-C 75 W	16	2	23	1 x 75 W	VGE - LightTech	63-50	100	77	5,2	40
BE09422	Xpose	14	1	15	1 x 42 W	VGE	32-38-60	55	19	4,5	42
<b>Spa</b>											
BE01215	SpAOP UV 21 W	3	1	8	1 x 21 W	VGE - LightTech	50	35	17	1,7	46
BE01217	SpAOP UV 21 W - U20	2,5	1	6	1 x 21 W	VGE - LightTech	50	35	22	1,7	46
BE01216	SpAOP UV 21 W - Z20	2,5	1	6	1 x 21 W	VGE - LightTech	50	35	22	1,7	46
BE01212	Spa UV-C 21 W	3	1	8	1 x 21 W	VGE - LightTech	50	35	17	1,7	50
BE01213	Spa UV-C 21 W - U20	2,5	1	6	1 x 21 W	VGE - LightTech	50	35	22	1,7	50
BE01214	Spa UV-C 21 W - Z20	2,5	1	6	1 x 21 W	VGE - LightTech	50	35	22	1,7	50

\* Recommend flow rate for 40 mJ/cm<sup>2</sup>

\*\* 4 kg weight of the control monitor

\*\*\* Flow 400 J/m<sup>2</sup> (Disinfection) 13 m<sup>3</sup>/h Flow 600 J/m<sup>2</sup> (Chloramine reduction) 8 m<sup>3</sup>/h

\*\*\*\* Flow 400 J/m<sup>2</sup> (Disinfection) 19 m<sup>3</sup>/h Flow 600 J/m<sup>2</sup> (Chloramine reduction) 11 m<sup>3</sup>/h

\*\*\*\*\* Flow 400 J/m<sup>2</sup> (Disinfection) 41 m<sup>3</sup>/h Flow 600 J/m<sup>2</sup> (Chloramine reduction) 25 m<sup>3</sup>/h

\*\*\*\*\* Flow 400 J/m<sup>2</sup> (Disinfection) 107 m<sup>3</sup>/h Flow 600 J/m<sup>2</sup> (Chloramine reduction) 62 m<sup>3</sup>/h

# General terms and conditions of sale VGE B.V.

## 1. Orders

- 1.1 VGE B.V. ("VGE") is allowed to accept and reject orders of Buyer at its sole discretion. An agreement will be deemed to have been concluded after VGE has confirmed an order placed by the Buyer, or has commenced the execution of that order.
- 1.2 All offers of VGE are valid for a maximum of 30 calendar days.
- 1.3 In the event that an agreement is concluded by e-mail, an agreement may be concluded without VGE having to fulfill any conditions provided by law pertaining to electronic communication and/or electronic conclusion of agreements.
- 1.4 The Buyer will be entitled to cancel an order only after receiving written consent from VGE, which consent may be made subject to conditions as deemed appropriate by VGE.

## 2. Delivery

- 2.1 Unless otherwise agreed in writing, the goods will be delivered Ex Works, Incoterms 2010 or, if any, a more recent version of the Incoterms. The Buyer will be obliged to take delivery of the goods upon VGE's request.
- 2.2 Any delivery times quoted or agreed on by VGE may not be considered to be firm deadlines, unless explicitly agreed otherwise in writing between the parties. In the event of late delivery, VGE must be declared to be in default in writing, in which connection VGE will be granted a reasonable term of at least 14 calendar days as of the date of the receipt of notification to fulfill its obligations. In the event that such extended term is exceeded, the Buyer will be entitled to dissolve the agreement or part of the agreement only with respect to the goods not delivered. In such an event, VGE will not be liable to pay damages, unless such damages are the consequence of gross negligence or willful misconduct of VGE's executive management.
- 2.3 VGE is entitled to deliver and invoice the goods in installments, unless the goods in question do not have any stand-alone value in VGE's opinion.
- 2.4 If at the request of Buyer VGE holds a specified stock of goods that the Buyer can order on demand, the Buyer will order such goods within 6 months from the date of the Buyer's request to keep such goods in stock. If the Buyer fails to do so, he will nevertheless be liable to pay the purchase price. Unless agreed otherwise the delivery time for goods that are available on demand is 15 working days from the day of the order.
- 2.5 The Buyer is obliged to accept delivery of the goods upon VGE's request. If Buyer fails to accept delivery, the Buyer will be liable for all costs and damages resulting therefrom, including but not limited to the costs of storing and re-delivering the goods.
- 2.6 VGE will be entitled to charge the costs of any packaging separately. The packaging will not be taken back. Should VGE, however, be obliged by law or any regulations to take packaging back, any costs related to taking back or processing packaging will be borne by the Buyer.

## 3. Price and Payment

- 3.1 Unless explicitly agreed otherwise in writing, all prices are quoted exclusive of VAT, transport and insurance costs and all other costs. A quoted or agreed price is valid for one order only, unless the parties have explicitly agreed otherwise in writing.
- 3.2 VGE will be entitled to adjust prices agreed upon before delivery in the event of increases in cost-determining factors such as fluctuations in exchange rates, raw materials, labor costs or in the event of government measures, provided that such increases or measures occurred after the conclusion of the agreement but before delivery.
- 3.3 Unless explicitly agreed otherwise in writing, the Buyer will pay the entire purchase price in advance upon placement of an order, in euros and by transfer to or deposit into an account indicated by VGE, without any deduction, discount or set-off. Submission of a complaint will not suspend the Buyer's obligation to pay.
- 3.4 If the Buyer fails to timely make a payment in accordance with article 3.3, the Buyer will be in default and all claims of VGE will become fully due and payable immediately, without prejudice to any other rights that VGE may have by under these terms and conditions or the law.
- 3.5 If at any time VGE International B.V. has doubts as to the Buyer's creditworthiness, VGE International B.V. will have the right, before commencing or continuing its obligations, to require the Buyer to provide adequate security in the amount of the sums which are or will be owed to VGE International B.V. by the Buyer, whether or not immediately payable, under the agreement, all at VGE International B.V.'s discretion.
- 3.6 In the event of untimely payment, VGE will be entitled to compensation of all extra-judicial costs, including but not limited to costs involved in sending reminders, one or more notices of default or demand notices, which extra-judicial costs will amount to at least 15% of the total amount payable, subject to a minimum of EUR 500, without prejudice to any other rights that VGE may have by virtue of these terms and conditions or the law.
- 3.7 In the event that VGE is fully or largely successful in legal proceedings against the Buyer, the Buyer will be obliged to compensate all costs incurred by VGE in connection with such proceedings, even to the extent that such costs exceed the cost award made by the court. VGE may invoke this clause irrespective of whether the Buyer has appealed against the relevant judgment at the court of appeal or the Supreme Court.

## 4. Retention of title

- 4.1 VGE will retain title to all goods delivered and to be delivered to the Buyer until full payment of all purchase amounts has been received, as well as any amounts owed by the Buyer pertaining to work performed by VGE in connection with such purchase agreements and any claims pursuant to any failure in the performance of such agreements on the part of the Buyer.
- 4.2 The Buyer will be obliged to store the goods delivered under retention of title with due care, ensuring that they are recognizable as the property of VGE. In addition, it will be obliged to insure such goods against, inter alia, fire and water damage and theft. The Buyer will pledge to VGE any claims it has pursuant to such insurance policies upon VGE's first request, as additional security with respect to VGE's claims against the Buyer.
- 4.3 In the event that the Buyer fails in the performance of any obligation vis-à-vis VGE, or in the event that VGE has good reason to fear that the Buyer will fail in the performance of its obligations, VGE will be entitled to recover the goods delivered under retention of title or to have such recovered, even when the goods have to be detached. The Buyer will cooperate accordingly. The Buyer will bear the costs of recovery, without prejudice to VGE's right to further damages.

## 5. Characteristics of Goods

- 5.1 The goods will comply with any specifications explicitly agreed upon in writing and be free from defects in material and workmanship under normal use consistent with VGE's instructions for a period of 12 months from delivery to the Buyer.
- 5.2 Any and all images and specifications of goods in catalogues, price lists, advertisements, etc. and any samples of the goods must be deemed to be representations by approximation only, unless VGE has explicitly indicated the contrary in writing with regard to a specific delivery.
- 5.3 If the goods are intended to be used in a country outside the Netherlands, VGE is not responsible to ensure that the goods comply within any laws and other requirements applicable in such other country, unless the parties have (i) explicitly agreed otherwise in writing and (ii) the Buyer has correctly informed VGE on the exact content of such

requirements.

- 5.4 VGE is at all times entitled to effect adjustments in the goods to be delivered, in order to improve them or comply with government regulations.
- 5.5 VGE has no obligation and Buyer shall have no rights in relation to any characteristics and/or performance of the goods other than the characteristics and the performance that are applicable or agreed pursuant to this article 5.

## 6. Complaints and Inspection

- 6.1 The goods delivered must be checked by or for the Buyer upon delivery with respect to numbers and visible defects and any shortages or visible defects must be reported to VGE within 3 working days after delivery. The Buyer must report defects not visible upon delivery within 3 working days of their discovery, though in any event within 3 working days after the time that the Buyer should reasonably have discovered them.
- 6.2 The Buyer will be obliged to perform the inspection or to have the inspection performed with due care, upon receipt of the goods. The Buyer will bear the risk for inspecting the goods by means of random checks and may not rely on the fact that it did not observe a defect that was visible and could have been discovered upon delivery because it—or a third party engaged by it—did not inspect the entire shipment.
- 6.3 In the event that a good does not comply with article 5 of these conditions, VGE will only be obliged—to be decided at the VGE's discretion—to repair the defect, to replace the relevant good or to credit or refund the amount charged in connection with the defective good in whole or in part, according to its own reasonable judgment and to the exclusion of any other rights of the Buyer by law.
- 6.4 The Buyer will not be entitled to any claim if the non-compliance with article 5 cannot be attributed to VGE, e.g. results from any transport, incorrect operation, installation, storage or maintenance by the Buyer or a third party.
- 6.5 Any and all claims for payment of an amount of money and/or repair of the relevant good and/or replacement of the good and/or supply of any missing part, on whatever basis, as well as any right to dissolve the agreement will lapse at the earliest of the following times: a) upon late reporting pursuant to article 6.1 or b) 12 months after the delivery date.

## 7. Liability

- 7.1 Without prejudice to article 2.2, any liability on the part of VGE on the basis of an attributable failure with respect to an agreement concluded with the Buyer will be restricted to the provisions laid down in article 6.3.
- 7.2 VGE will assume no liability with respect to damage as a consequence of or related to any errors or omissions in advice rendered by it, nor will it assume any liability with respect to damage as a consequence of or related to errors or omissions in the processing instructions recommended by it.
- 7.3 Without prejudice to article 7.1, VGE will not—irrespective of the legal basis of the Buyer's claim—be liable for any consequential damages, including but not limited to losses due to delays or loss of data, lost profits and penalties forfeited by the Buyer.
- 7.4 The above-mentioned restrictions with respect to liability will not apply in the event that the damage is the consequence of gross negligence or willful misconduct on the part of VGE's executive management.
- 7.5 The Buyer will indemnify VGE against any damage resulting from claims by third parties in connection with goods supplied by VGE.

## 8. Force majeure

- 8.1 If VGE fails in the performance of its obligations due to an event of force majeure, it will not be liable. To the extent that the circumstance making performance impossible is not of a permanent nature, VGE's obligations will be suspended. In the event that the period during which performance is not possible due to force majeure exceeds 2 months or is expected exceed 2 months, both parties will be entitled to cancel the agreement, without any obligation to pay the damages that may arise as a result.
- 8.2 In the event that VGE has already partially fulfilled its obligations upon the occurrence of the situation of force majeure, or is only able to fulfill its obligations in part, it will be entitled to separately invoice the part already supplied or the part that can still be supplied and the Buyer will be obliged to pay that invoice as if it pertained to a separate agreement.
- 8.3 A situation of force majeure affecting VGE within the meaning of this article will be deemed to have occurred in the event of, inter alia, strikes, a shortage of raw materials, delay, transport problems, war or threat of war, full or partial mobilization, riots, sabotage, floods, fire or other forms of destruction within VGE's company, lockouts and industrial actions, breakdowns of machines or tools or other breakdowns within VGE's company. A situation of force majeure must also be deemed to have occurred on the part of VGE in the event that one or more of the above-mentioned circumstances occurs within the companies of VGE's suppliers and as a consequence VGE cannot or could not perform its obligations, or cannot or could not perform such in good time.

## 9. Suspension and dissolution

Without prejudice to VGE's rights under these terms and conditions or under the law, VGE will at any event be entitled to suspend (further) performance or to dissolve any agreement concluded with the Buyer, in whole or in part, if (i) any goods made available by VGE to the Buyer become subject to attachment, (ii) the Buyer is granted a suspension of payments or is declared bankrupt, (iii) any permits or licenses required for the performance of the agreement are withdrawn, (iv) the Buyer fails to fulfill one or more of its obligations ensuing from any agreement with VGE, (v) VGE has sound reasons to believe that the Buyer is or will be unable to fulfill its obligations under any agreement, or (vi) the Buyer ceases its business or if a change occurs in the control of that business. Any right of the Buyer to suspend performance is hereby excluded.

## 10. Applicable law and dispute resolution

- 10.1 These terms and conditions and all quotations from and agreements with VGE will be governed by Dutch law. The UN Convention on Contracts for the International Sale of Goods ("CISG") does not apply.
  - 10.2 In the event that the Buyer is domiciled in a Member State of the European Union or in Norway, Switzerland or Iceland at the time that proceedings are commenced, any and all disputes relating to these terms and conditions and/or any quotations or agreements to which these terms and conditions are applicable will exclusively be settled by the competent court in Amsterdam, the Netherlands. The above will not affect VGE's right to submit a dispute to the court that would be competent in the absence of this provision.
- In the event that the Buyer is not domiciled in a Member State of the European Union or in Norway, Switzerland or Iceland upon the commencement of proceedings, any and all disputes relating to these terms and conditions and/or any quotations or agreements to which these terms and conditions are applicable will exclusively be settled in accordance with the rules of the Netherlands Arbitration Institute [Nederlands Arbitrage Instituut, or NAI]. Arbitration will take place in Amsterdam, the Netherlands. The case will be submitted to three arbitrators and the arbitration proceedings will be conducted in Dutch.



