



**TRIOGEN**

UV and Ozone

For over 25 years, Triogen has been a world leader in the design and manufacture of specialist Ozone, UV and Advanced Oxidation Process (AOP) water treatment solutions.

A complete range of systems are available for domestic and commercial swimming pools and spas.

## Ozone

Triogen ozone generators are based on negative pressure operation for safety when operated within public buildings. Systems are available to suit everything from a small private installation to the largest Olympic Pool.

## Ultra Violet

A range of small, low-pressure UV systems are available for use with private pools and spas together with larger, medium pressure systems for hotels, public pools and water park applications.

## Combined Ozone and Ultra Violet

Using an Advanced Oxidisation Process (AOP) water is treated by the formation of Hydroxyl radicals, a very powerful oxidant many times more powerful than ozone or UV alone. AOP systems are suitable for use on medium sized public pools.





## Triogen UV Ultra

Designed to provide residential pools, spas, ponds and water features with a cost effective UV system for disinfection and improved water quality.

## Product Information

Suitable for indoor and outdoor pools, one to three high output, low pressure UV lamps can be incorporated within the unit.

## Features

- Low pressure UV system.
- 13,000 hours operational lamp life.
- 100% corrosion resistant UV inhibited polymeric reactor vessel.
- Selectable inlet and outlet positions for easy installation.
- Centre ring to view lamp operation.
- Easy UV lamp replacement and thimble cleaning.
- Automatic pre-set pressure switch.
- 2 year warranty.
- CE certified, manufactured to ISO 9001:2008.

## Applications

- Private pools.
- Water features.
- Ponds.

## Benefits

- Safely lower free chlorine residual with effective disinfection including chlorine resistant micro-organisms.
- Reduction in skin, eye and respiratory irritation.
- Improves algae control.
- Suitable for indoor and outdoor applications.
- Simple to install and operate with minimal plant room space requirement.
- Long term compatibility with saltwater/salt chlorinator pools.
- Systems can be upgraded to treat additional flow capacity.

## UV technology

Low pressure ultraviolet light (UV) is highly effective at inactivating bacteria and viruses, as well as enhanced algae control.

Ultraviolet disinfection consists of a physical, chemical-free process, attacking the vital DNA of the bacteria and micro organisms directly, including examples such as parasites, Cryptosporidium or Giardia, which are extremely resistant to chemical disinfectants.

UV is recommended as a complementary protection against chlorine resistant organisms, therefore for applications such as pools, a small background level of disinfectant should always be maintained. UV treatment is compatible with all other sanitisers, including chlorine, bromine, active oxygen, peroxide and copper based compounds, and allows for the levels of these to be significantly reduced.

## Materials

- UV reactor body: ..... UV inhibited polymer
- Inlet/outlet: ..... uPVC unions

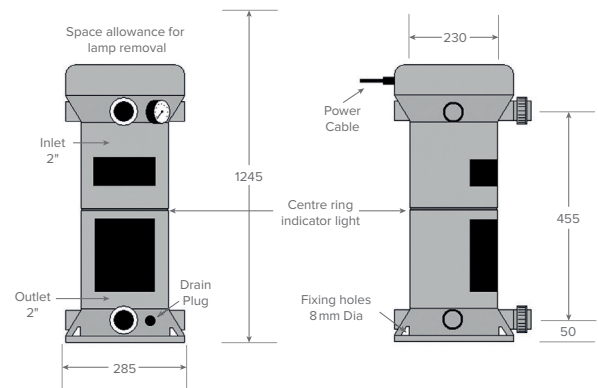
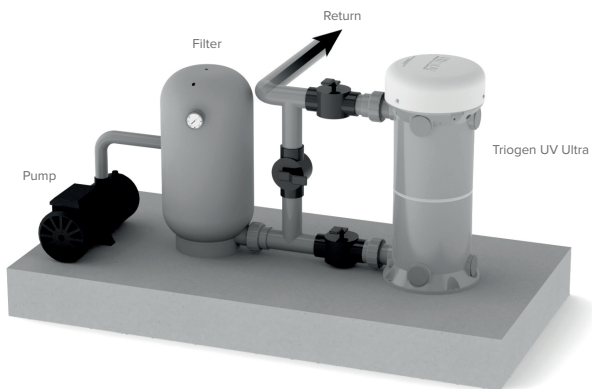
## Quality standards

- ISO 9001:2008
- CE approved

# Technical Specifications and Dimensions

	Ultra-1	Ultra-2	Ultra-3
Number of lamps	1	2	3
Wattage	58 W	116 W	174 W
Flow rate (max)	11 m <sup>3</sup> /hr	22 m <sup>3</sup> /hr	32 m <sup>3</sup> /hr
Flow rate (min)	2.4 m <sup>3</sup> /hr	4.8 m <sup>3</sup> /hr	7.2 m <sup>3</sup> /hr
Supply voltage	230 V, 1 ph, 50–60 Hz	230 V, 1 ph, 50–60 Hz	230 V, 1 ph, 50–60 Hz
Current	0.24 A	0.48 A	0.73 A
Empty weight	8.2 kg	8.2 kg	8.2 kg
Operating weight	21.3 kg	21.3 kg	21.3 kg
Shipping weight	11.3 kg	11.3 kg	11.3 kg
Code	21 93 676 210	21 93 676 220	21 93 676 230

The above flow rate is based on a UV dose of 30 mJ/cm<sup>2</sup> at end of lamp life at 95% UVT.





## Triogen O<sub>3</sub> XS

Designed for disinfection of private swimming pools and aquatic applications.

## Product Information

Ozone provides exceptional disinfection with effective treatment against chlorine resistant micro-organisms, oxidation of various organic matters and flocculation of colloidal particles, which significantly improves water quality.

The range incorporates one or two high intensity UV lamps which are used for 0.25–0.5g/hr ozone production.

## Features

- Compact wall mounted ozone generator.
- Ongoing EU ozone biocide regulation compliant.
- Ozone safely generated and injected under vacuum.
- 8,000 hours operational lamp life.
- Easy lamp replacement.
- Supplied with full range of manufacturer ancillaries.
- Experienced UK manufacturer.
- CE certified, manufactured to ISO 9001:2008.

## Applications

- Private pools.
- Water features.
- Ponds.

## Benefits

- Safely lower free chlorine residual with effective disinfection including chlorine resistant micro-organisms.
- Chloramine destruction reducing skin, eye and respiratory irritation.
- Significant improvement in water clarity and air quality.
- Improves algae control.
- Reduced THM levels.
- Savings in water, energy and chemical consumption.
- Designed for maximum operator and bather safety.

## O<sub>3</sub> technology

Ozone is produced when ambient air passes over one or two high intensity UV lamps which are used for ozone production.

Triogen O<sub>3</sub> XS systems produces up to 0.5g/hr. The system operates under vacuum conditions created by a water driven venturi ensuring maximum safety in operation.

Designed for long term and easy operation, the units incorporate an ozone resistant gas tight compartment which the UV lamps are located and a full range of accessories are available including degassing units, injectors and pumps.

## Materials

- Enclosures: ..... mild steel, epoxy coated
- Contact tank: .....reinforced epoxy

## Quality standards

- ISO 9001:2008
- CE approved

## Remote controls and signals

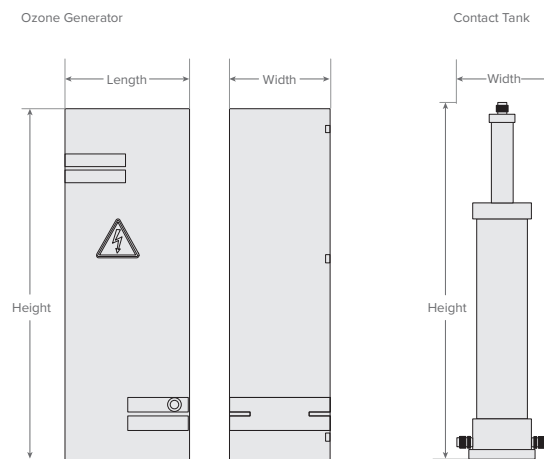
- Power on: ..... red illuminator switch

## Options

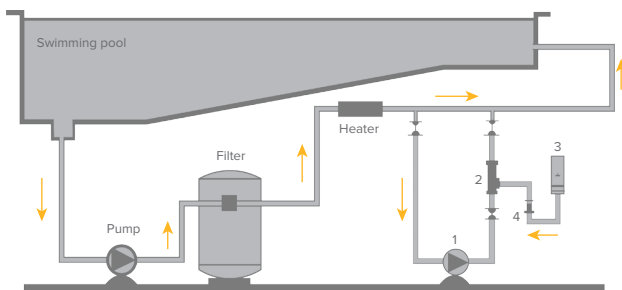
- Booster pump
- Contact tank

# Technical Specifications and Dimensions

	XS 250	XS 500	Contact tank
Ozone output	0.25 g/hr	0.50 g/hr	N/A
Lamp power	21 W	40 W	N/A
Supply rating	220 V, 1 ph, 50 hz	220 V, 1 ph, 50 hz	N/A
Maximum pool volume	70 m <sup>3</sup>	140 m <sup>3</sup>	N/A
Dimensions (L x H x W)	115 x 440 x 110 mm	115 x 440 x 110 mm	1210 x 397 mm
Weight	3.5 kg	3.8 kg	16.5 kg (Dry) / 42 kg (Wet)
Code	21 93 676 125	21 93 676 150	N/A

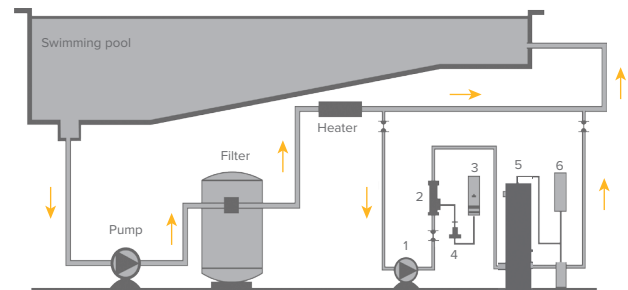


Recommended installation without contact/degasser system



- 1 – Booster Pump
- 2 – Ozone Injector
- 3 – Ozone Generator
- 4 – Non-Return Valve

Recommended installation with contact/degasser system



- 1 – Booster Pump
- 2 – Ozone Injector
- 3 – Ozone Generator
- 4 – Non-Return Valve
- 5 – Contact Tank
- 6 – Vent Destructor



## Triogen O<sub>3</sub> S

Designed for water treatment of private and hotel size swimming pools and aquatic applications.

## Product Information

Designed for water treatment of private and hotel size swimming pools and aquatic applications. Ozone provides exceptional disinfection with effective treatment against chlorine resistant micro-organisms, oxidation of various organic matters and flocculation of colloidal particles, which significantly improves water quality.

The range consists of a corona discharge ozone generator and automatically regenerated air dryer unit which can be used in combination to give ozone outputs from 2–8 g/hr.

## Features

- Compact wall mounted ozone generator.
- Corona discharge modules designed for 10+ years operation.
- Ongoing EU ozone biocide regulation compliant.
- Ozone safely generated and injected under vacuum.
- Air cooled system with high humidity durability.
- Thermostatic system protection.
- Power and operation indicators.
- Supplied with full range of manufacturer ancillaries.
- CE certified, manufactured to ISO 9001:2008.

## Applications

- Private pools.
- Hotel/club pools.
- Aquariums.

## Materials

- Enclosure: ..... mild steel, epoxy coated, enclosure
- Module: ..... 316 stainless steel electrode assembly inside a ceramic dielectric tube
- Air dryer: ..... mild steel, epoxy coated, enclosure
- Air dryer: ..... twin dessiccant column
- Contact tank: ..... reinforced epoxy fibre with vinylester coating

## Benefits

- Safely lower free chlorine residual with effective disinfection including chlorine resistant micro-organisms.
- Chloramine destruction reducing skin, eye and respiratory irritation.
- Significant improvement in water clarity and air quality.
- Improves algae control.
- Reduced THM levels.
- Savings in water, energy and chemical consumption.
- Designed for maximum operator and bather safety.

## O<sub>3</sub> technology

Ozone is produced when air is passed over a ceramic dielectric ozone generating module containing a stainless steel electrode. The module is powered by a high voltage/ high frequency power board. The system operates under vacuum conditions created by a water driven venturi which ensures maximum safety against ozone gas leakage.

The air dryer unit contains twin dessiccant dryer columns which are automatically heat regenerated controlled by a programmable relay system. When the air dryer system is used the normal output of the generators is doubled and full range of accessories are available including degassing units, injectors and pumps.

## Quality standards

- ISO 9001:2008
- CE approved

## Remote controls and signals

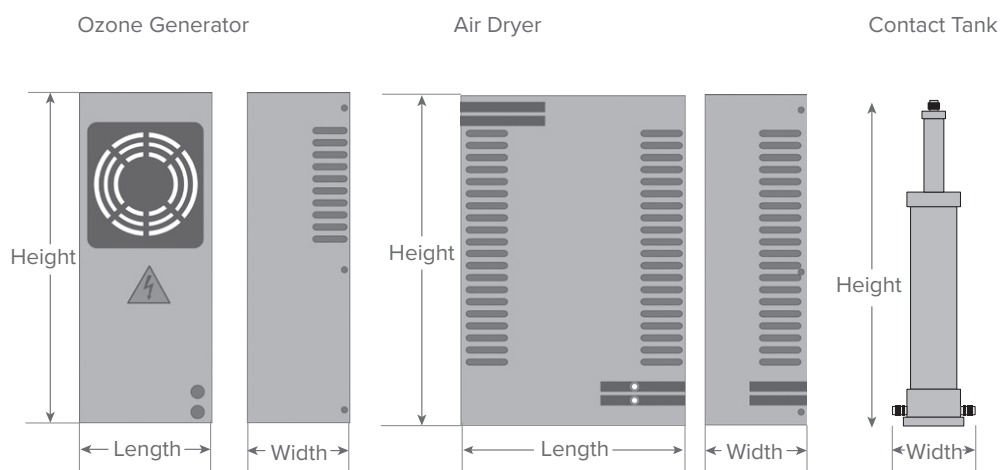
- Ozone on: ..... red illuminator switch
- Air flow: ..... externally fitted air flow meter 0–25 L/m
- Power on: ..... illuminator switch



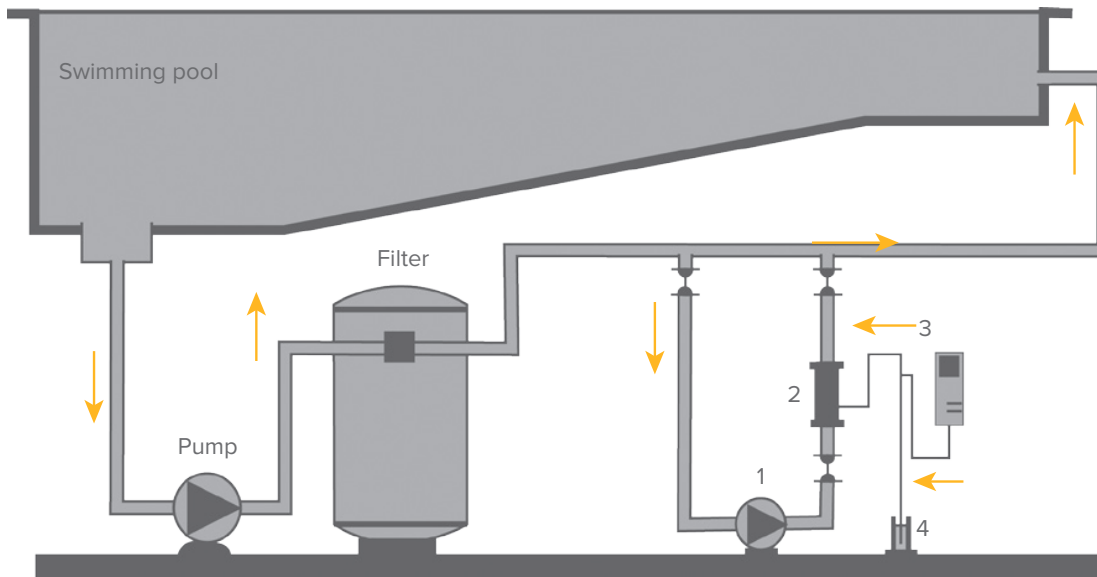
# Technical Specifications and Dimensions

	S2 (Ozone generator)	S4 (Ozone generator and air dryer)	S8 (Ozone generator X2 and air dryer)
Ozone output	2 g/hr	4 g/hr	8 g/hr
Air flow	10L/m	10L/m	20L/m
Supply rating	220V, 1 ph, 50Hz (standard) or 110V, 1 ph, 60Hz (option)	220V, 1 ph, 50Hz (standard) or 110V, 1 ph, 60Hz (option)	220V, 1 ph, 50Hz (standard) or 110V, 1 ph, 60Hz (option)
Maximum pool volume (Private)	180m <sup>3</sup>	400m <sup>3</sup>	800m <sup>3</sup>
Maximum pool volume (Hotel)	90m <sup>3</sup>	200m <sup>3</sup>	400m <sup>3</sup>
Code	21 93 999 020	21 93 999 040	21 93 999 080
Kit contents	1 x TOG B2 injector flow meter water trap	1 x TOG B2 air dryer injector flow meter water trap	2 x TOG B2 air dryer injector flow meter water trap
Code (with degasser)	21 93 999 120	21 93 999 140	21 93 999 180
Kit contents (with degasser)	1 x TOG B2 contact tank degasser injector flow meter water trap	1 x TOG B2 air dryer contact tank degasser injector flow meter water trap	2 x TOG B2 air dryer contact tank degasser injector flow meter water trap

	Ozone generator	Air dryer	Contact tank
Dimensions (L x W x H)	115 x 440 x 110 mm	305 x 440 x 110 mm	1210 x 397 mm
Weight	4.4 kg	10 kg	16.5 kg (Dry) / 42kg (Wet)



## Typical installation of ozone generator without contact/degasser system



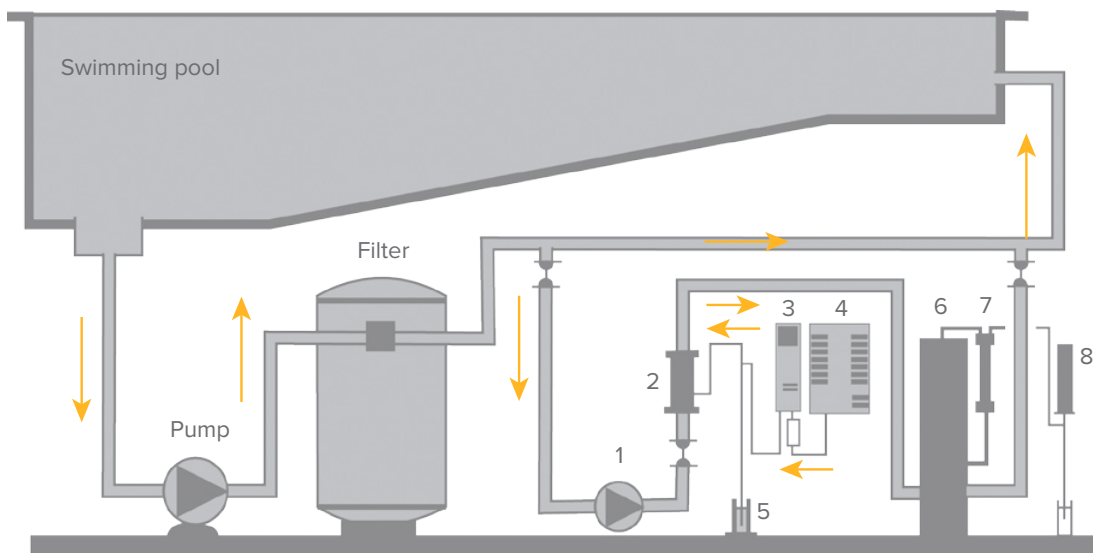
1 – Booster Pump

3 – Ozone Generator

2 – Ozone Injector

4 – Water Trap and Pot

## Typical installation of ozone generator with air dryer and contact/degasser system



1 – Booster Pump

4 – Air Dryer

7 – Automatic Vent Valve

2 – Ozone Injector

5 – Water Trap and Pot

8 – Vent Gas Destructor and Pot

3 – Ozone Generator

6 – Contact

## Warranty

A two year warranty applies to the Triogen UV Ultra Disinfection Unit. Should anything not function as intended, simply contact us at Golden Coast. We will be happy to help you.

## Further Information

To find out more or for advice on the range of Triogen water treatment products available from Golden Coast, including systems for commercial pools, please contact us on 01271 378 100 or email [swimmer@goldenc.com](mailto:swimmer@goldenc.com).



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