



The water treatment specialist

ultraviolet triogen® CF-TSO

The **triogen® CF-TSO** offers a high performance UV system for **commercial pools, spas and water features** with a range of options to meet operator budget, capabilities and needs. These systems provide advanced lamp and vessel efficiency with automatic and energy saving features for disinfection and improved water quality.

applications

- Commercial pools
- Hotel and club pool
- Water parks

benefits +

- Safely lower free chlorine residual with effective disinfection including chlorine resistant micro-organisms
- Chloramine destruction reducing "red eye" and irritation of skin and respiratory system
- Significant improvement in water clarity and air quality
- Helps to inhibit the growth of algae
- Savings in water, energy and chemical consumption
- Low capital and installation costs, with minimal service and plant room space required

main features

- Polychromatic 10,000 hour medium pressure UV lamp system
- Systems can be sized for UV dose and UVT combinations to suit customer requirements
- Advanced lamp efficiency and automatic low power setting
- Automatic "Smartdrive" wiper system and UV monitor
- Quick release powerhead for easy lamp replacement
- Wall mounted touchscreen microprocessor control panel



UV technology

- Medium pressure polychromatic ultraviolet (UV) light is a highly effective means to inactivate bacteria and viruses, and will oxidise organic species in water.
- UV disinfection consists of a physical, chemical-free process, directly attacking the vital DNA of bacteria and micro organisms.
- Chlorine-resistant pathogens such as Cryptosporidium and Giardia are inactivated by UV light.
- UV reduces Chloramines by a variety of mechanisms.
- UV technology will easily enhance the disinfection and oxidation of all types of pools and water features.

technical data

Model	Flow Rates ⁽¹⁾		Flow Rates ⁽²⁾		Lamp Power	Supply Rating ^(*)	Inlet/outlet Connections ^(**)	Reactor dimensions	Control Panel dimensions
	m³/h	US gpm	m³/h	US gpm					
triogen® CF-TSO 20	20	88	30	132	1 x 1.0	220-240 / PH+N/ 50-60	DN80 / 3"	250 x 608 x 270	600 x 320 x 650
triogen® CF-TSO 70	70	308	105	462	1 x 1.5		DN100 / 4"	740 x 668 x 394	600 x 320 x 650
triogen® CF-TSO 145	145	638	217	955	1 x 2.5		DN150 / 6"	900 x 768 x 501	650 x 320 x 650
triogen® CF-TSO 170	170	748	255	1122	1 x 3.0		DN200 / 8"	900 x 868 x 502	650 x 320 x 650
triogen® CF-TSO 300	300	1320	450	1981	2 x 2.5	380-415 / 3 PH+N/ 50-60	DN200 / 8"	820 x 877 x 511	650 x 420 x 850
triogen® CF-TSO 415	415	1827	622	2740	2 x 3.5		DN250 / 10"	890 x 977 x 609	650 x 420 x 850
triogen® CF-TSO 620	620	2730	930	4095	3 x 3.5		DN300	970 x 977 x 609	650 x 420 x 850
triogen® CF-TSO 830	830	3654	1245	5481	4 x 3.0		DN350	870 x 977 x 602	850 x 420 x 1050
triogen® CF-TSO 1000	1000	4402	1500	6604	5 x 3.5		DN400	870 x 977 x 627	1050 x 320 x 1050

(1) flow rates based on a dose of 60mJ/cm² at 95% UVT end of lamp life 10,000 hours based on max 3 on/off cycles per day

(2) flow rates based on a dose of 40mJ/cm² at 95% UVT end of lamp life 10,000 hours based on max 3 on/off cycles per day

* Electrical supply must be confirmed at time of order

** BS EN1092 PN10 and ANSI 150 flanges, except CT-TSO 620, 830, 1000 : BS EN1092 PN10 only.

quality standard

- CE Approved

materials

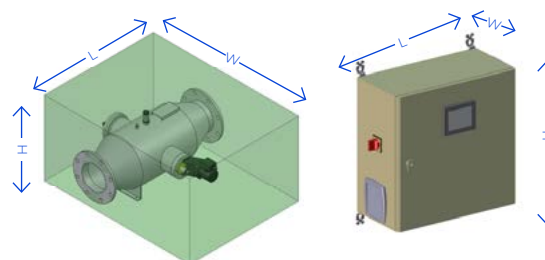
- Reactor Vessel: Electropolished 316L stainless steel, rated to 10 Bar(g)
- Flanges: COMBI or BS EN1092 PN10
- Lamp: high purity quartz
- Lamp(s) covers safety
- Thimble: high purity quartz
- Panel: Painted steel, IP54 protection

options

- 316L stainless steel ancillaries
- Systems can be sized for other UV dose and UVT combinations upon request

controls and outputs

- BMS, Modbus and Ethernet
- Local and remote:
 - Lamp on / off / low power control
 - Lamp on / off indication
 - Fault alarms
 - Lamp hours
 - Lamp change required
 - UV intensity
- Local:
 - UV intensity in W/m², mJ/cm² or % requires a 4-20 mA signal from a water flowrate for mJ/cm² display
 - Languages options (English, French, Spanish, German)
 - Reactor temperature (°C or °F)
 - Panel temperature (°C or °F)
 - Real time clock with date
 - Data logging trends (lamp current, temperature, UV Intensity)
- Contacts outputs :
 - ON/OFF
 - General
 - Alarm, Alarm 1, Alarm 2
 - Warning



contact

triogen® by BIO-UV Group
export@bio-uv.com
www.bio-uv.com