

MicroDynamics®

Series OCS 660

Open Channel Wastewater Microwave UV Technology

Severn Trent Services offers the patented, MicroDynamics® microwave UV technology Series OCS 660 open channel wastewater system to meet wastewater disinfection needs in municipal and industrial applications. All dose, log reduction and water quality requirements can be met by the MicroDynamics systems.

Microwave UV technology provides operational and technical advantages over traditional UV disinfection systems

- Three year lamp warranty
- No electrodes used in the lamps
- No electrical connections in the water
- No electrical connections required between microwave generator and lamp assembly
- Quartz sleeve remains the same temperature of the water, leading to less fouling
- Unlimited on/off capability

The MicroDynamics systems are unique in that they use microwaves to energize low pressure high-output electrodeless lamps to maximize a UVC output at 254 nm. The absence of an electrode means that the MicroDynamics lamp has no inherent failure mechanism, assuring long life. Additionally, no electrodes means the lamps do not exhibit fade over time, providing consistent and uniform UV disinfection over the life of the lamp.

The microwaves are contained by a waveguide that surrounds the lamps. Lamps light quickly providing full disinfection and are unlimited in the amount of times they can be switched on and off.



Advantages of MicroDynamics include:

- ◆ Increased safety
- ◆ Reduced operational costs
- ◆ Consistent disinfection
- ◆ Flow pacing
- ◆ Chemical free
- ◆ Lower whole life costs



The MicroPace™ flow pace technology is used with MicroDynamics® systems to match UV dose to operating conditions in real time, resulting in energy savings and efficient system use. MicroPace enables the lamps to be turned down or off so the system maintains a constant dose and is only using the power needed to disinfect and meet site specific needs, ensuring the most efficient and effective use of the system design. The secondary benefit of MicroPace is a conservation of energy which reduces costs.

In the event of a power outage the systems will self-recover without detrimental effect or requirement for operator input. In fact, MicroDynamics electrodeless lamps can re-strike immediately in the event of a power outage since they do not require a cool down period and they are powered by a magnetron and not a traditional ballast power supply.

MicroDynamics systems can operate in a dry or partially-filled channel. The systems employ an automatic, chemical free cleaning system. Further, their vertical configuration and increased reliability of the systems reduces stand-by requirements to less than 25%.

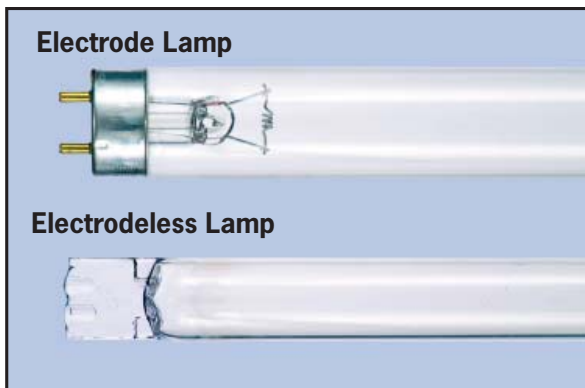
MicroDynamics UV disinfection is a proven, cost-effective, reliable and safe disinfection treatment method.



No electrical contacts means that lamps can be removed from above the water line.



The power control center monitors and controls all operational functions, including MicroPace™ technology.



MicroDynamics® Lamps are Reliable. There are no electrodes to corrode or fail.



The MicroDynamics® automatic wiper system is chemical-free and uses a motor driven stainless steel assembly.

MicroDynamics® OCS 660 System Specifications

System Characteristics		MicroDynamics® OCS 660
Typical Applications	<ul style="list-style-type: none"> • Wastewater- secondary and tertiary effluent • Beneficial reuse 	
Lamp Type	Low-pressure, high-output electrodeless lamp	
Input Power Per Lamp Assembly	1.3 kW maximum	
Lamp Configuration	Vertical	
Module Configuration	4 Lamp assemblies per module	
Level Control Device Options	Automatic level control, fixed weir or motorized weir gate	
Flow Sensor	1 Electrode low water level sensor per channel	
Module Characteristics		
Material of Construction	316L Stainless steel	
Cleaning System	Electronic motor driven chemical-free wiper system	
Cooling Method	Forced air cooling system	
Dimensions	<ul style="list-style-type: none"> • Height: 100 in (2523 mm) • Width: 25.2 in (640 mm) excluding cover 36 in (912 mm) without control panel • Depth: 15 in (380 mm) excluding cover 21.7 in (550 mm) with cover • Typical water height: 47.2 in (1200 mm) 	
System Controls		
Controller	PLC Based	
Analog Inputs (typical)	Flow (4-20mA) and UVT (4-20mA)	
UVC Intensity Monitor	Recommended one per channel	
UVT Monitor	Optional	

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475.0001.2 MAR/09