

Engineering Specification

Job Name _____
 Job Location _____
 Engineer _____
 Approval _____

Contractor _____
 Approval _____
 Contractor's P.O. No. _____
 Representative _____

UV-COM

Effective and Eco-Friendly UV Water Disinfection System

Watts® UV-COM is a state-of-the-art commercial UV water disinfection system for potable water applications. All models are certified by WQA to NSF/ANSI/CAN 61 and 372 and certain models are certified to NSF/ANSI 55-Class A standards.

The proprietary reactor design, built-in automatic self-cleaning wipers, and easily replaceable lamps set Watts UV-COM systems apart in terms of both disinfection performance and ease of maintenance. A 360-degree UV light emission provided by Crossfire® Technology and a two-lamp design prevents fouling of the quartz sleeve by mineral scaling and biofilm.

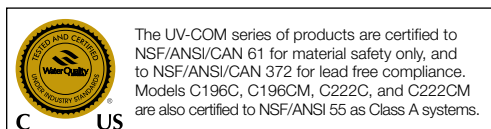
The advanced design of the Watts UV-COM enables the effective disinfection of legionella contaminated waters with hardness levels as high as 50 grains per gallon and iron levels up to 3 mg/L without pre-treatment in order to maintain water clarity and mitigate scale buildup.

Advanced Features for Superior Performance

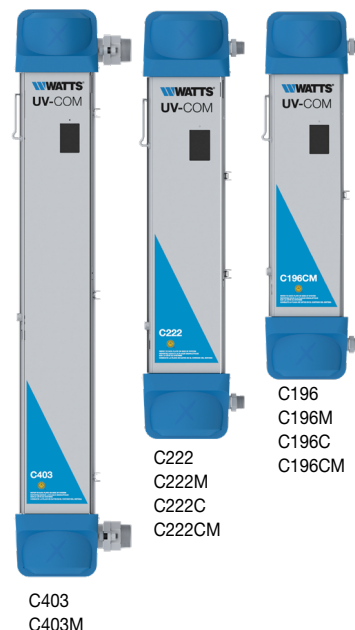
- Stainless steel manifold, easily accessible UV chamber with safety interlock, quartz sleeve(s), UV lamp(s), and full-color touchscreen controls with BAS integration through Modbus protocol (Modbus function available for specified models only)
- Dual air-mounted lamps with forced air cooling for optimal UV chamber temperature control help to eliminate false lamp alarms
- Dual UV sensor array provides real-time monitoring of UV lamp intensity, UV dose, and net UVT while enabling superior on-board diagnostics for troubleshooting

Greater Safety, Reliability, and Longevity

- Mitigates health concerns by being highly effective against Legionella bacteria*
- Increases overall equipment performance and decreases water heating costs



*Minimum of 99.9999% (6-log) inactivation



Simplified Installation and Maintenance

- UV lamps in the front cabinet make replacement simple and eliminate the need for maintenance clearance at the top or sides of the system
- Automatic self-cleaning wipers and built-in purging prevents fouling of the quartz sleeve by mineral scaling and biofilm
- Available at up to 100 GPM to simplify installation, maintenance, and repair in high-flow applications

Warranty

- 3-year limited warranty on electrical components and quartz sleeves
- 5-year limited warranty for structural, hardware and mechanical components
- 12-month limited warranty on lamps used in models C196, C196M, C196C, C196CM, C222, C222M, C222C and C222CM
- 16-month limited warranty on lamps used in models C403 and C403M
- 12-month limited warranty on sensor probes

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.



Technical Specifications

Call customer service if you need assistance with technical details.

MODEL	C196 AND C196M	C196C AND C196CM	C222 AND C222M	C222C AND C222CM	C403 AND C403M
Certification/Validation	NSF/ANSI/CAN 61 and NSF/ANSI/CAN 372				
	–	NSF/ANSI 55 Class A	–	NSF/ANSI 55 Class A	–
Flow (single unit)	37 GPM	16.5 GPM	40 GPM	27.4 GPM	100 GPM
UV dose (mJ/cm²)	40 (minimum)				
UV transmittance	95% ¹	Min. 75%	95% ¹	Min. 75%	95% ¹
Maximum Water Hardness	50 gpg				
Maximum Iron (in water)	3 ppm				
Air temperature	34 - 104°F				
Water temperature	34 - 131°F ²				
Water pressure	5 - 100 psig				
Relative humidity (air)	Max 70%				
Max pressure drop	10 psi	22.7 psi ³	13 psi	22.7 psi ³	5 psi

¹ Min. water UV Transmittance for 40 mJ/cm² dose.
² The default setting for water temperature range is 34-104°F except for model C403, which has a default range of 34–95°F. For hot water applications, refer to IOM to change the purging, hot water alarm, and wiper cycle time settings.
³ Values presented are at 75% of maximum flow capacity. Higher pressure drop due to flow restrictor installed for NSF/ANSI 55 Class A certified systems.

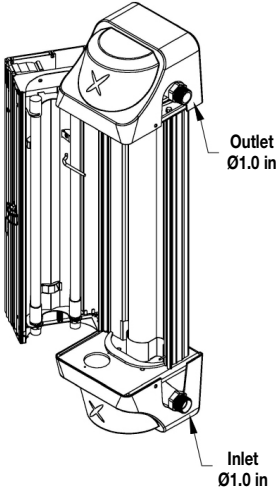
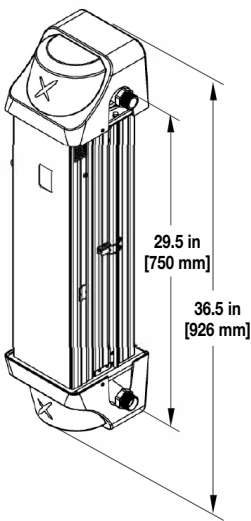
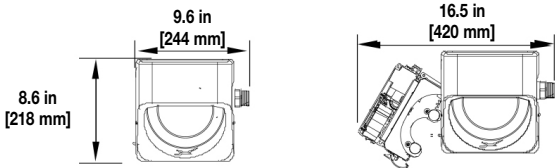
MODEL	C196 AND C196M	C196C AND C196CM	C222 AND C222M	C222C AND C222CM	C403 AND C403M
Voltage	120 VAC/60 Hz				
Power Consumption	196W	196W	222W	222W	403W
Certifications	UL 979				
UV Lamps	Dual (air mounted)				
Typical Lamp Life	9,000 hrs. / 12 months				12,000 hrs. / 16 months
Lamp Cycles	Maximum of 12 per 24 hours				
Sensors ⁴	Dual UV				Quad UV
Dry Contacts (built-in)	2 (warning and alarm)				
Interface	Color LCD resistive touchscreen display				
Alarming	Indicator light and audible alarms				
Remote Start/Stop	Built-in				
Onboard Diagnostics	Built-in				
Signals and Communication	4-20mA output/input and modbus (optional)				

⁴ Calibrated to NIST standards.

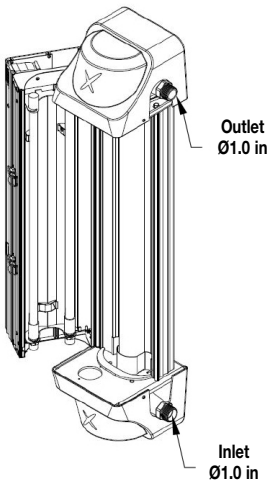
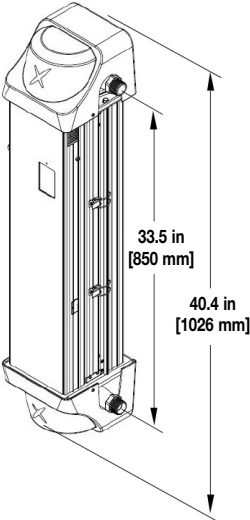
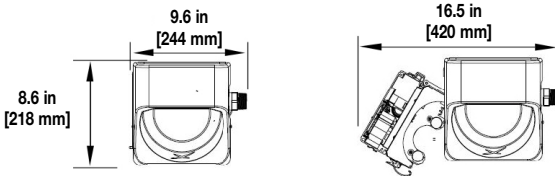
MODEL	C196 AND C196M	C196C AND C196CM	C222 AND C222M	C222C AND C222CM	C403 AND C403M
Dimensions (H x W x D)	36.5 x 9.6 x 8.6 in		40.4 x 9.6 x 8.6 in		55.8 x 11.5 x 8.6 in
Weight (dry)	32 lb.		34 lb.		52 lb.
Weight (wet)	36 lb.		38 lb.		58.3 lb.
Body materials	Anodized aluminum and 316 Stainless Steel				
Body configuration	Double door with side hinges				
Inlet/outlet ports	1" MNPT				2" MNPT
Ingress protection rtg.	IP 51				

Dimensions

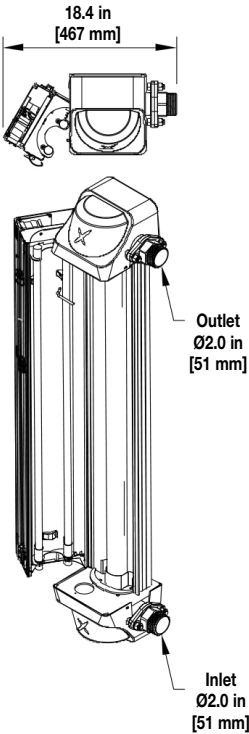
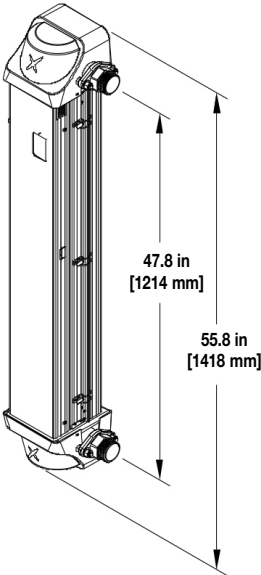
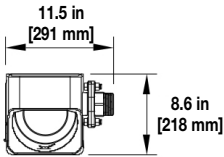
Watts UV-COM C196, C196M, C196C, and C196CM



Watts UV-COM C222, C222M, C222C, and C222CM



Watts UV-COM C403 and C403M



NSF/ANSI 55 Class A certification for Watts UV-COM C196C, C196CM, C222C and C222CM systems:

The Watts UV-COM C196C, C196CM, C222C, and C222CM are installed indoors on a wall in a dry location. The units should be plumbed in downstream of any pretreatment devices but upstream of distribution plumbing. The Watts UV-COM C196C, C196CM, C222C, and C222CM plug into a 120VAC ground-fault circuit-interrupter (GFCI). The Watts UV-COM C196C, C196CM, C222C, and C222CM incorporate both audible and visual alarms to indicate system status and an optional normally closed auto shutoff valve is available to shut off the water supply in the event of a system fault.

The automatic quartz cleaning feature is engineered to eliminate the periodic maintenance required by conventional UV systems. For Watts UV-COM C196C, and C196CM, the UV lamps pair P/N 68111138 (single lamp P/N 68111137) and for Watts UV-COM C222C and C222CM, the UV lamps pair P/N 68111140 (single lamp Pair P/N 68111139) require replacement after 12 months of operation.

The Watts UV-COM systems C196C, C196CM, C222C, and C222CM are certified by WQA against NSF/ANSI Standard 55 for Disinfection Performance, Class A.

This Class A system conforms to NSF/ANSI 55: Ultraviolet Microbiological Water Treatment Systems for the disinfection of microbiologically contaminated water that meets all other public health standards. The system is not intended to convert wastewater or raw sewage to drinking water. The system is intended to be installed on visually clear water.

NSF/ANSI 55: Ultraviolet Microbiological Water Treatment Systems defines wastewater to include human or animal body waste, toilet paper, and any other material intended to be deposited in a receptacle designed to receive urine and feces (blackwaste); and other waste materials deposited in plumbing fixtures (greywaste).

If these systems are used for the treatment of untreated surface waters or groundwater under the direct influence of surface water, a device found to be in conformance for cyst reduction under the appropriate NSF/ANSI Standard shall be installed upstream of these systems.

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Available replacement parts may be purchased through Watts.

