LIGHTWISE - PRO10, PRO20, & PRO30

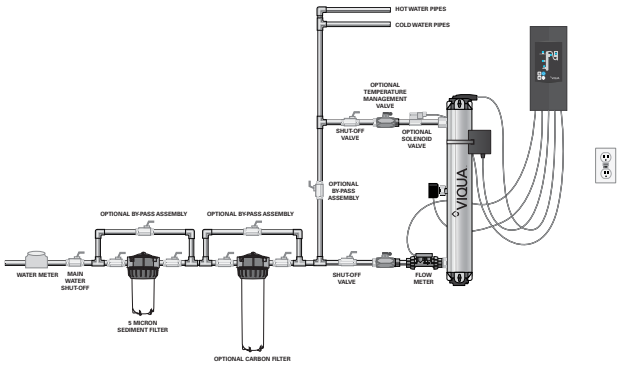
Ultraviolet Water Disinfection Systems from VIQUA

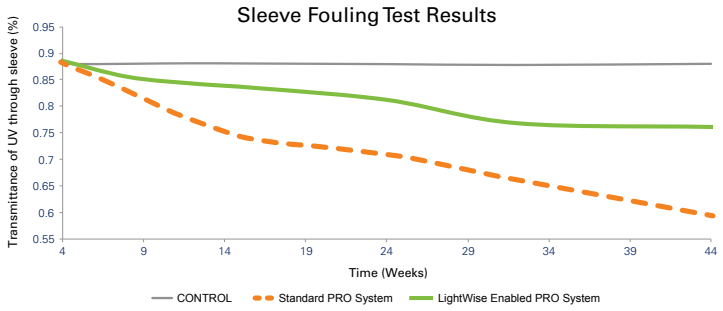
In many situations, the most common problem affecting ultraviolet (UV) water disinfection is the fouling of the quartz sleeve which surrounds the UV lamp. The rate of sleeve fouling is influenced by water temperature, water flow, and water quality – specifically the concentrations of calcium, magnesium, and iron in the water, which are the most common constituents that lead to sleeve fouling.

Under no-flow conditions through the UV chamber, the water temperature increases, which causes an accelerated rate of calcium, magnesium, and iron deposits precipitating onto the quartz sleeve. This decreases the level of UV transmittance and eventually requires the sleeve to be cleaned.

While actual water usage may vary significantly in a 24-hour period, conditions of no water flow typically account for as much as 60% of the day. During this time, the UV lamp heats the water, resulting in water temperatures as high as 55˚C (131˚F) in the chamber and significantly increasing the rate of sleeve fouling.

VIQUA's new LightWise technology allows the controller to reduce lamp power during periods of no water flow, leading to estimated energy savings of 30%. By adjusting the lamp power, water temperature is maintained below 40˚C (104˚F), and the rate of sleeve fouling is consequently reduced by as much as 60%. This can more than double the amount of time between sleeve cleaning cycles.





Features of VIQUA UV water disinfection systems

- LightWise Technology allows the controller to reduce lamp power during periods of no water flow. By adjusting the lamp power, water temperature is maintained below 40˚C (104˚F), the rate of sleeve fouling is consequently reduced by as much as 60%, resulting in estimated energy savings of 30%.
- The CoolTouch Fan significantly reduces water temperature and does not waste any water.
- For the sleeve bolts a quarter-twist to the positive stop and you're done. No tools, no risk of over-tightening.
- Like a standard plug - no more grounding wires!
- The optional plug-and-play solenoid valve stops water flow in the event that water treatment is compromised.
- Assembly is simplified by the use of an integral flow restrictor.
- Flexibility to connect to either 1¼" MNPT or 1" FNPT.
- New and improved sensor ensures safe UV levels are maintained.
- Our revolutionary amalgam lamps reduce maintenance requirements by lasting up to 2 years.
- Intuitive Interface - a picture is worth a thousand words.
- The VIQUA systems use a revolutionary lamp with twice the output of current high-output lamps, giving you compact single-lamp systems that are half the size of their predecessors.
- With plug-and-play colour coded connections, it's as easy as "connect the dots."
- The optional COMMcenter displays UV dose and can monitor up to 9 UV systems - that's up to 270 gpm!
- Flow sensor monitors flow to provide real time UV dose.
- Lower maintenance (Up to 60% less maintenance).
- Decrease conditions that contribute to fouling and corresponding maintenance.
- Increase time period between required maintenance.
- Eliminate the need for a complicated mechanical sleeve cleaning system.
- Estimated energy savings of 30% (Typical two unit [PRO20] installation uses 2800 kW/yr).
- Water temperature is maintained below 40˚Celsius (104˚F) in no-flow conditions.
- Eliminates the need for hot water purging in no-flow conditions.

Specifications

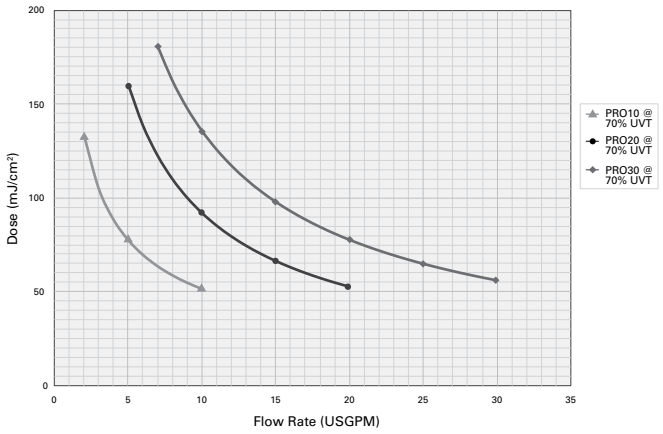


MODEL	PRO10	PRO20	PRO30
FLOW RATES (@ 70% UVT)			
NSF/EPA (40 mJ/cm²)	10 GPM (38 lpm) (2.3 m³/hr)	20 GPM (76 lpm) (4.5 m³/hr)	30 GPM (113 lpm) (6.8 m³/hr)
DIMENSIONS			
Chamber	22" x 4" (54 cm x 10 cm)	31" x 4" (78 cm x 10 cm)	41" x 4" (103 cm x 10 cm)
Controller	13" X 6.5" x 4.5" (33 cm x 16.5 cm x 11.5 cm)	13" X 6.5" x 4.5" (33 cm x 16.5 cm x 11.5 cm)	13" X 6.5" x 4.5" (33 cm x 16.5 cm x 11.5 cm)
Inlet/Outlet Port Size	1 1/4" MNPT / 1" FNPT COMBO	1 1/4" MNPT / 1" FNPT COMBO	1 1/4" MNPT / 1" FNPT COMBO
Shipping Weight	25 lbs (11.3 kg)	28 lbs (12.7 kg)	31 lbs (14 kg)
ELECTRICAL			
Voltage	100-240V / 50/60 Hz	100-240V / 50/60 Hz	100-240V / 50/60 Hz
Power Consumption	120 W	160 W	230 W
Maximum Operating Pressure	125 psi (8.62 bar)	125 psi (8.62 bar)	125 psi (8.62 bar)
Influent Water Temperature	2-40°C (36-104°F)	2-40°C (36-104°F)	2-40°C (36-104°F)
FEATURES			
Visual "Power On"	YES	YES	YES
Chamber Material	316L SS	316L SS	316L SS
Visual Lamp Life Remaining	YES	YES	YES
Audible Lamp Failure	YES	YES	YES
Audible Lamp Replacement Reminder	YES	YES	YES
UV Sensor	YES	YES	YES
Sensor Reading Output (4-20mA)	Optional	Optional	Optional
Flow Meter	YES	YES	YES
Cool Touch Fan	YES	YES	YES
Optional Solenoid Valve	YES (650627)	YES (650627)	YES (650627)

Replacement Parts

- **602854** – UV lamp for PRO10
- **602855** – UV lamp for PRO20
- **602856** – UV lamp for PRO30
- **602974** – quartz sleeve for PRO10
- **602975** – quartz sleeve for PRO20
- **602976** – quartz sleeve for PRO30
- **650709-003** – power supply for PRO10
- **650709-006** – power supply for PRO20
- **650709-009** – power supply for PRO30
- **650580** – sensor for PRO10, PRO20 & PRO30

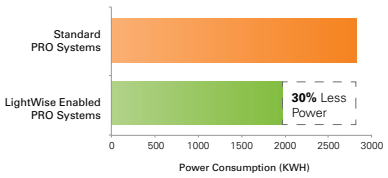
PRO10, PRO20, & PRO30 Dose Response Curves



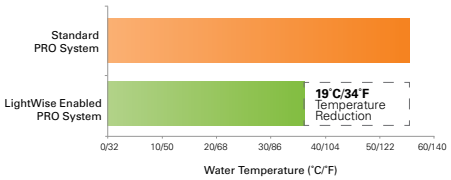
Water Quality Parameters

Hardness	Iron	Tannins
< 7 grains (120 mg/L)	< 0.3 mg/L	< 0.1 mg/L

Yearly Power Consumption - 2 x PRO20 Systems



Water Temperature After 6 Hours of No Flow



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