

**PENTAIR
UV SYSTEMS**
RANGES AND TECHNICAL
SPECIFICATIONS



UV range 2-24 GPM @30 mj/cm2

| Flow rate (GPM) @30 mj/cm2 | Model | UV lamp | Dimension L*W*H (Inch) | Lamp QTY /PCS | Total Power | long life lamp hours | Outlet / Inlet Connections Inch |
|----------------------------|-------|---------|------------------------|---------------|-------------|----------------------|---------------------------------|
| 2 | UV2 | 14W | 15 *2*3 | 1 | 14W | 9000 | 3/8" BSPTF |
| 6 | UV6 | 21W | 21*3*3 | 1 | 21W | 9000 | 1/2" BSPTF |
| 12 | UV12 | 40W | 39*3*3 | 1 | 40W | 9000 | 1" BSPTF |
| 24 | UV24 | 80W | 40*3*4 | 1 | 80W | 9000 | 1-1/4" BSPTF |



UV range 30-75 GPM @30 mj/cm2

| Flow rate (GPM) @30 mj/cm2 | Model | UV lamp | Dimension L*W*H (Inch) | Lamp QTY /PCS | Total Power | long life lamp hours | Outlet / Inlet Connections Inch |
|----------------------------|-------|---------|------------------------|---------------|-------------|----------------------|---------------------------------|
| 30 | UV30 | 80W | 38*4*9 | 2 | 160W | 9000 | 1-1/4"BSPTF |
| 45 | UV45 | 80W | 38*6*12 | 3 | 240W | 9000 | 1-1/2"BSPTF |
| 60 | UV60 | 80W | 38*6*13 | 4 | 320W | 9000 | ASTM 2"(Flanged) |
| 75 | UV75 | 80W | 38*6*14 | 5 | 400W | 9000 | ASTM 2"(Flanged) |

**PENTAIR
UV SYSTEMS**
UV DOSES

Various microorganisms require different UV doses to inactivate them. Some of the common microorganisms and the UV doses required to inactivate and prevent them from reproducing are:

| Microorganism | Dose |
|------------------------------------|-----------|
| BACTERIA | |
| E. coli (Escherichia coli O157:H7) | 6 mJ/cm2 |
| Legionella pneumophila | 10 mJ/cm2 |
| Salmonella typhi | 9 mJ/cm2 |
| Shigelladysenteriae | 3 mJ/cm2 |
| Shigellasonnei | 9 mJ/cm2 |
| Vibrio cholerae (Cholera) | 3 mJ/cm2 |
| Salmonella enteritidis | 10 mJ/cm2 |

| Microorganism | Dose |
|--------------------------------------|--------------|
| PROTOZOA CYSTS | |
| Cryptosporidium parvumocysts | 8 mJ/cm2 |
| Giardia lambila cysts (Beaver fever) | <10 mJ/cm2 |
| VIRUSES | |
| Hepatitis A virus | 16-30 mJ/cm2 |
| Poliovirus Type 1 | 21-30 mJ/cm2 |
| Rotavirus SA11 | 31-36 mJ/cm2 |
| Coxsackie B5 virus | 30 mJ/cm2 |

- Note:
- UV energy shown in milli joules per square centimeter (mJ/cm2); 1 mj/cm2 = 1000 uWsec/cm2.
 - A 5 micron or smaller prefilter before the UV system is required for proper operation.
 - The quartz sleeve will need to be cleaned periodically, see owner's manual for more information.

- Note:
- Please note that flow rates are based on a standard dose of 30 mJ/cm2.
 - Flow rates would change based on the dosage required:
 - NSF/ EPA- 40 mJ/cm2 • Destruction of Ozone- 90 mJ/cm2 • US Public Health- 16 mJ/cm2

Pentair®: Inspired solutions for a changing world.™

Pentair is a diversified operating company headquartered in Minneapolis, Minnesota. We work around the globe to deliver industry leading products, services, and solutions for our customers' diverse needs in water & other fluids, thermal management and equipment protection. With annual revenue nearly \$8 billion, Pentair employs approximately 30,000 employees worldwide across 50 manufacturing facilities across 34 countries. we apply the inventive thinking and disciplined execution to push the boundaries of what's possible. We bring to bear our extensive expertise through deep collaborative efforts, looking ahead to ensure the future of the world's most essential resources, equipment and infrastructure.

Everything we do is driven by our passion to help people live better. By acting today for the benefit of tomorrow, we ensure that customers are able to respond effectively to quickly changing markets and environments. That is why Pentair is the company that businesses, communities and individuals turn to for the answers that fit their most vital everyday needs and their most visionary long-term goals.



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**ULTRA
VIOLET SYSTEMS**

FILTRATION AND PROCESS

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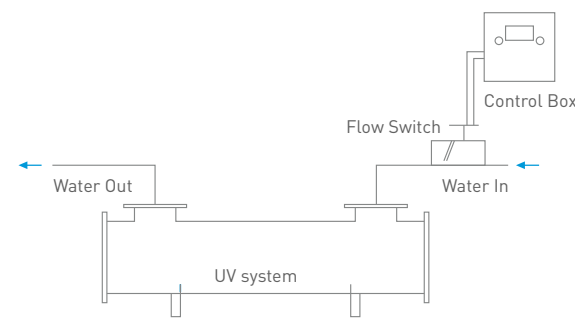


INDUSTRIES REQUIRE WATER THAT IS RELIABLE, ACCESSIBLE & OF ACCEPTABLE QUALITY.

Availability of fresh water and optimum use of this vital resource is becoming extremely crucial with each passing day. Industries world wide need a simple and cost-effective method of purifying water and UV system is the most preferred method of purifying water for industrial use.

HOW DOES UV WORK?

Water enters into the stainless steel purification chamber where it is exposed to UVC light. The UVC light penetrates the cell walls of bacteria, viruses and other microorganisms, impacts directly on their DNA, thereby destroying them.



WHY IS PENTAIR UV SYSTEMS THE BEST TREATMENT SOLUTION FOR WATER

- Enhances the life of submicron filters, carbon and resin beds.
- Kills bacteria and viruses as they are no longer able to replicate.
- Destroys 99.99% of harmful microorganisms without adding chemicals.
- Safe and cost-effective way to purify and eliminate harmful micro-organisms.
- Does not change the taste, odor or color of the water.

PENTAIR UV SYSTEMS DELIVER SAFE AND CLEAN WATER

Pentair's new Ultra Violet system has been designed and tested to ensure high quality, safe and clean water. Outstanding specifications and top-notch engineering ensures that Pentair UV systems deliver High Performance and Trouble free operation. Pentair UV systems are widely applicable in Residential, Commercial & Industrial purposes and are available in a wide range of models.



Precision engineering and attention to detail ensures that Pentair UV systems deliver consistent performance.

High performance

- ▶ Long life : Electro polished industrial grade SS 304 or SS 316 reactor chamber.
- ▶ Sturdy construction: Pressure testing done at: 7kg – 15kg/cm² pressure.
- ▶ Low operating cost
- ▶ ECO friendly.

Trouble free operation

- ▶ Easy to service
- ▶ Includes manual/automatic cleaning system
- ▶ Low maintenance cost.
- ▶ Comprehensive warranty for 3 years on Stainless Steel Reactor and One year warranty for other components.

UV Options Available in

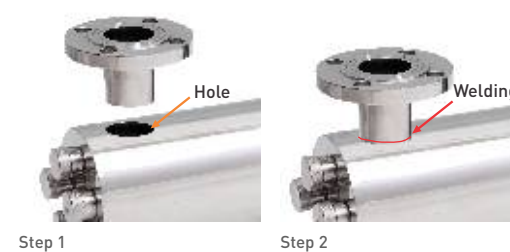
- ▶ Material of Construction: SS304 / SS316
- ▶ Inlet-Outlet Connections: BSPTF / NPTF / Flanged
- ▶ Voltage/Frequency: European 2 Pin plug 220VAc/50Hz-60Hz , U.K 3 Pin plug 110VAc/50Hz-60Hz
- ▶ Cleaning: Manual / Automatic
- ▶ Control: Control Box / Ballast / UV Monitor

*Please contact your Sales Manger for more information

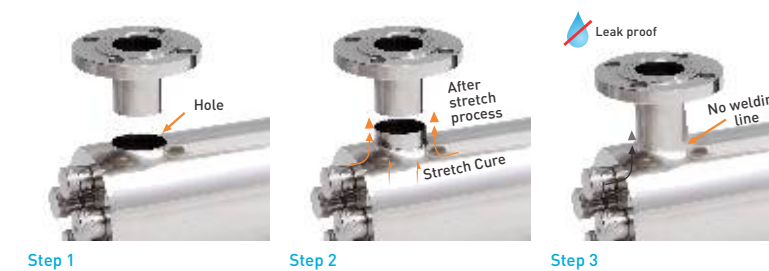
PENTAIR UV SYSTEMS ARE LEAK PROOF

Pentair UV systems use stretch processing as compared to the standard process for inlet and outlet pipes. In the standard process joints are welded. The welding line is the vulnerable spot from where 80% of problems related to leaking and rust starts. In the stretch process adopted by Pentair, joints are seamless thus guaranteeing that they are leak proof.

Standard Processing



Stretch Processing method adopted by Pentair



PENTAIR UV SYSTEMS USE HIGH QUALITY COMPONENTS



Pentair UV systems use Energy efficient low pressure lamps with high quality and long life of 9000-12000 hours



Pentair UV systems use highly efficient UL / CE certified Electronic Ballasts with CPU control designed to increase the life of lamp from 20% to 40%. These are equipped with visual and audio alarms for easy operation.



Pentair UV systems use Quartz Sleeves which have a high transmission rate (approximately 90%).



Flexible CPU programmed Control Box shows UV system operation status, audio & visual fault alarms alarm lamp life span accumulation.

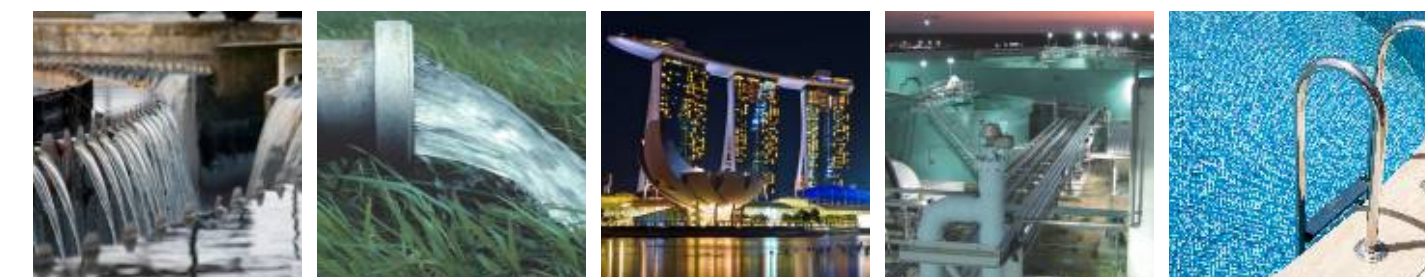
PENTAIR UV SYSTEMS CONTROLLING PARAMETERS

The following technical specifications are considered general for the whole range of our Pentair UV Systems:

| Technical specifications | | Water Quality | |
|------------------------------|-----------------|---------------|------------------------|
| Feed water temperature (C°) | 5-40 | Iron | < 0.3 ppm (0.3 mg/ L) |
| Feed water pressure (Psig) | 20-125 | Hardness* | < 120 ppm (120 mg/ L) |
| Ambient air temperature (C°) | 5-40 | Turbidity | < 1 NTU |
| Humidity | ≤ 93% (@ 25 C°) | Manganese | < 0.05 ppm (0.05 mg/L) |
| Lamp Life (hrs) | 9000 | Tannins | < 0.1 ppm (0.1 mg/L) |

- These UV System controlling parameters are considered general for the whole range of our UV system.
- *Where the total hardness is less than 120 ppm, the UV unit should operate efficiently provided the quartz sleeve and/or sensor probe is cleaned periodically.
- If total hardness is over 120 ppm, the water should be softened.

APPLICATION & USAGE



Municipal Drinking Water Aquaculture Hospitality- Hotels & Hospitals Industrial- Cooling Tower, Pharmaceutical Swimming Pools