

## Section Three UV Equipment



### Applications:

- Fish Culture
- Live Seafood Holding Systems
- Aquarium/Exhibits
- Mammal/Reptile/Avian Bathing Pools
- Water Features

### Function:

- Clarification (Waterborne Algae Control)
- Harmful Pathogen Disinfectant
- Ozone Destruction

# SMARTUV<sup>®</sup> Performance

## Pond, Aquarium, Exhibit, Research & Aquaculture

### SMART UV...The Professional's Choice!

More animal husbandry and aquatic professionals choose SMART UVs over competing UV brands because of our substantiated performance information, effective product design and overall quality. With over thirty models to choose from, Emperor Aquatics, Inc. has the right SMART UV to fit your application.

### Optimum UV-C Performance

**Size** – Our SMART UV design always **considers the lamp's UV-C output and length**, while most competitors ignore these critical performance factors. This explains why, in most cases, our equipment is physically larger.



### Advantages:

- ☛ UV Power Assembly – Each SMART UV features an easy-to-remove UV Lamp/Quartz Sleeve Power Assembly which allows for the lamp to be removed without disrupting the water flow. This design also allows for the entire power assembly to be removed for easy cleaning of the glass and exposure chamber interior.
- ☛ Remote Power Supply – Positions the power supply away from the UV exposure chamber, increasing overall safety.
- ☛ SMART Ballast – Available w/ SMART UV Sterilizers (18 watt through 130 watt models). Delivers the precise electrical requirements to the lamp, which maximizes UV-C output and lamp life. SMART Ballasts are potted/sealed against water intrusion, and feature a 19.5-foot power cord.
- ☛ Watertight – All SMART UVs are watertight.
- ☛ Heavy-wall UV Resistant Construction – SMART UVs feature a heavy-wall **UV resistant** plastic housing offering increased equipment operating life (UV Housing Lifetime Warranty\*).
- ☛ Clear Viewing Ports – Clear viewing ports are positioned on both ends of each SMART UV enabling safe internal inspection during use.
- ☛ Optional Quartz Sleeve Wipers – All SMART UV styles are available with quartz sleeve “cleaning” wiper modules that remove soft waste deposits without interrupting UV operation. NOTE: Wipers are not recommended for saltwater applications.

\* Warranted against manufacturer defects and UV degradation of the plastic filter housing.



Models shown with optional mounting clamps



**Lamp Position** – Our lamps are always positioned entirely between the inlet and outlet water ports, utilizing the lamp's full arc length to its maximum potential.

**Lamp Life** – Long-Lasting GPH/T5 (Low-Pressure/Standard-Output) & T5 (Low Pressure/High-Output) UV lamps offer 9,000 hours of continual operation equals >80% efficiency at end of lamp life. These lamps use a specially coated "L" type hard quartz glass that extends the life of the lamp while preventing the build-up of nitrogen by-products (scaling) on the lamp's outer surface (Scaling diminishes UV-C transmittance). These nitrogen by-products are a problem commonly associated with ozone producing "VH" type glass UV lamps.

**Water Flow Rates** – SMART UV flow rates represent the equipment's true capacity, which considers the lamp's *UV-C output, lamp length, exposure chamber's inside diameter, and UV transmissibility* for specified UV dosages as per our specification charts.

Section Three

**SMARTUV**Lite

2" Diameter UV Housing, Watertight & UL Listed

Models for Small Ponds, Aquariums, and Research Applications



| Model No. /Watts | Maximum Pond Size | Maximum Aquarium Size | No. Lamps /Watt | Water Flow Rate   |  | Input Watts | UV-C         |               | Dim. (Inches) | Inlet /Outlet  | Input Voltage |
|------------------|-------------------|-----------------------|-----------------|---|--|-------------|--------------|---------------|---------------|----------------|---------------|
|                  |                   |                       |                 | Algae & Bacteria 30,000 µWs/cm <sup>2</sup> Suggested/Maximum | Protozoa 180,000 µWs/cm <sup>2</sup> Suggested/Maximum |             | Output Watts | Watts         |               |                |               |
| * 02218/18       | 1,100 Gal.        | 60 Gal.               | 1/18            | 219 GPH/356 GPH   | 37 GPH/60 GPH  | 18          | 5            | 21.75" x 2.5" | 1.5" Union    | 120VAC 50/60Hz |               |
| * 02225/25       | 1,700 Gal.        | 90 Gal.               | 1/25            | 332 GPH/554 GPH   | 55 GPH/92 GPH  | 25          | 8            | 29.75" x 2.5" | 1.5" Union    | 120VAC 50/60Hz |               |
| 02240/40         | 2,900 Gal.        | 160 Gal.              | 1/40            | 589 GPH/983 GPH   | 98 GPH/164 GPH   | 40          | 14           | 44.75" x 2.5" | 1.5" Union    | 120VAC 50/60Hz |               |
| 02280/80         | 5,900 Gal.        | 330 Gal.              | 2/40            | 1,178 GPH/1,967 GPH   | 196 GPH/328 GPH  | 80          | 28           | 44.75" x 14"  | 1.5" Union    | 120VAC 50/60Hz |               |

\* Indicates popular models      Also Available with Quartz Sleeve Wipers      Adapter Fittings are not included

**SMARTUV**Sterilizer

3" Diameter UV Housing, Watertight & UL Listed

Models for Moderately Sized Ponds, Aquariums, and Exhibit/Research Applications



| Model No. /Watts | Maximum Pond Size | Maximum Aquarium Size | No. Lamps /Watt | Water Flow Rate   |  | Input Watts | UV-C         |               | Dim. (Inches) | Inlet /Outlet  | Input Voltage |
|------------------|-------------------|-----------------------|-----------------|---|--|-------------|--------------|---------------|---------------|----------------|---------------|
|                  |                   |                       |                 | Algae & Bacteria 30,000 µWs/cm <sup>2</sup> Suggested/Maximum | Protozoa 180,000 µWs/cm <sup>2</sup> Suggested/Maximum |             | Output Watts | Watts         |               |                |               |
| * 02025/25       | 2,400 Gal.        | 130 Gal.              | 1/25            | 472 GPH/788 GPH   | 79 GPH/131 GPH   | 25          | 8            | 29" x 3.5"    | 1.5" Union    | 120VAC 50/60Hz |               |
| * 02040/40       | 4,700 Gal.        | 260 Gal.              | 1/40            | 943 GPH/1,574 GPH   | 157 GPH/262 GPH  | 40          | 14           | 43.75" x 3.5" | 1.5" Union    | 120VAC 50/60Hz |               |
| * 02065/65       | 8,600 Gal.        | 480 Gal.              | 1/65            | 1,710 GPH/2,855 GPH   | 285 GPH/476 GPH  | 65          | 25           | 70.5" x 3.5"  | 1.5" Union    | 120VAC 50/60Hz |               |
| 02080/80         | 9,400 Gal.        | 530 Gal.              | 2/40            | 1,885 GPH/3,148 GPH   | 314 GPH/525 GPH  | 80          | 28           | 44.5" x 15.5" | 1.5" Union    | 120VAC 50/60Hz |               |
| 02130/130        | 17,100 Gal.       | 960 Gal.              | 2/65            | 3,420 GPH/5,711 GPH   | 570 GPH/952 GPH  | 130         | 50           | 71.5" x 15.5" | 1.5" Union    | 120VAC 50/60Hz |               |

\* Indicates popular models      Also Available with Quartz Sleeve Wipers      All models include Adapter Fittings

High Output  
**SMART HO UV** Sterilizer

5" Diameter UV Housing, Watertight & UL Listed

Models for Large Ornamental Ponds, Water Features, and Exhibit/Research/Aquaculture Applications



| Model No. /Watts | Maximum Pond Size | Maximum Aquarium Size | No. Lamps /Watt | Water Flow Rate   |  | Input Watts | UV-C         |             | Dim. (Inches) | Inlet /Outlet  | Input Voltage |
|------------------|-------------------|-----------------------|-----------------|---|--|-------------|--------------|-------------|---------------|----------------|---------------|
|                  |                   |                       |                 | Algae & Bacteria 30,000 µWs/cm <sup>2</sup> Suggested/Maximum | Protozoa 180,000 µWs/cm <sup>2</sup> Suggested/Maximum |             | Output Watts | Watts       |               |                |               |
| * 025050/50      | 5,900 Gal.        | 330 Gal.              | 1/50            | 1,560 GPH/1,980 GPH   | 260 GPH/330 GPH  | 50          | 16           | 28" x 5.75" | 2" Union      | 120VAC 50/60Hz |               |
| * 025080/80      | 10,800 Gal.       | 600 Gal.              | 1/80            | 2,700 GPH/3,600 GPH   | 450 GPH/600 GPH  | 80          | 26           | 43" x 5.75" | 2" Union      | 120VAC 50/60Hz |               |
| * 025120/120     | 13,800 Gal.       | 770 Gal.              | 1/120           | 3,840 GPH/4,600 GPH   | 640 GPH/767 GPH  | 120         | 36           | 56" x 5.75" | 2" Union      | 120VAC 50/60Hz |               |
| * 025150/150     | 19,100 Gal.       | 1,060 Gal.            | 1/150           | 5,040 GPH/6,360 GPH   | 840 GPH/1,060 GPH                                      | 150         | 47           | 70" x 5.75" | 2" Union      | 120VAC 50/60Hz |               |

\* Indicates popular models      Also Available with Quartz Sleeve Wipers      Adapter Fittings are not included

High Output Multi-Lamp  
**SMART HO ML UV** Sterilizer

6" Diameter UV Housing, Watertight & UL Listed

Models for Large Ornamental Ponds, Water Features, and Exhibit/Research/Aquaculture Applications



| Model No. /Watts | Maximum Pond Size | Maximum Aquarium Size | No. Lamps /Watt | Water Flow Rate   |  | Input Watts | UV-C         |           | Dim. (Inches) | Inlet /Outlet | Amps Max Load @ 120/230 VAC |
|------------------|-------------------|-----------------------|-----------------|---|--|-------------|--------------|-----------|---------------|---------------|-----------------------------|
|                  |                   |                       |                 | Algae & Bacteria 30,000 µWs/cm <sup>2</sup> Suggested/Maximum | Protozoa 180,000 µWs/cm <sup>2</sup> Suggested/Maximum |             | Output Watts | Watts     |               |               |                             |
| 0250100/100      | 7,700 Gal.        | 430 Gal.              | 2/50            | 2,040 GPH/2,580 GPH   | 340 GPH/430 GPH  | 100         | 26           | 37" x 11" | 3" Union      | 1.15/0.5      |                             |
| 0250160/160      | 16,200 Gal.       | 900 Gal.              | 2/80            | 4,320 GPH/5,400 GPH   | 720 GPH/900 GPH  | 160         | 52           | 54" x 11" | 3" Union      | 1.15/0.5      |                             |
| 0250240/240      | 21,800 Gal.       | 1,210 Gal.            | 2/120           | 5,820 GPH/7,260 GPH   | 970 GPH/1,210 GPH                                      | 240         | 70           | 66" x 11" | 3" Union      | 1.15/0.5      |                             |
| 0250300/300      | 36,000 Gal.       | 2,000 Gal.            | 2/150           | 9,600 GPH/12,000 GPH  | 1,600 GPH/2,000 GPH                                    | 300         | 110          | 80" x 11" | 3" Union      | 1.85/0.85     |                             |

Input Voltage on all models = 120/230VAC 50/60Hz

Water Flow Rates are based on: 90% UV Transmissibility

Suggested = UV Lamp @ 80% efficiency (after 9,000 hours of continuous operation)

Maximum = UV Lamp Power @ 100% efficiency (new condition)

Aquarium & Pond Sizing is based on:

Maximum Aquarium = single pass/1 hour @ "Maximum" flow rate for Protozoa

Maximum Pond = single pass/3 hours @ "Maximum" flow rate for Algae & Bacteria