ULTRAVIOLET WATER PURIFIERS

Model S14
(120 g.p.h.)

Model S17
(180 g.p.h.)

Model S23
(360 g.p.h.)

Model S37B
(720 g.p.h.)

Model S50B
(1,200 g.p.h.)
For over 30 years, Atlantic Ultraviolet Corporation has been a recognized leader in the ultraviolet water disinfection technology. During this time ultraviolet has become increasingly popular as an exceptional water disinfection alternative.

Sanitron™ Ultraviolet Purifiers utilize germicidal ultraviolet lamps that produce short wave radiation lethal to bacteria, viruses and other microorganisms present in water.

Economical and safe, Sanitron™ Ultraviolet Purifiers offer rapid water treatment without the use of heat or dangerous chemicals - often for the lowest cost available by any means.

An ever-growing range of industries and consumer applications have found ultraviolet be the ideal solution for their water treatment requirements.

ADVANTAGES OF THE SANITRON™ SYSTEM

• EFFECTIVE - Virtually all microorganisms are susceptible to Sanitron™ disinfection.
• ECONOMICAL - Hundreds of gallons can be purified for each penny operating cost.
• SAFE - No danger of overdosing, no addition of dangerous chemicals.
• FAST - Water is ready for use as soon as it leaves the purifier - no further contact time required.
• EASY - Simple installation and maintenance. Compact units require minimum space.
• AUTOMATIC - Continuous or intermittent disinfection without special attention or measurement.
• NO CHEMICALS - No chlorine taste or corrosion problems.
• VERSATILE - Capacities available from two to thousands of gallons per minute (g.p.m.).
**PRINCIPLE OF OPERATION**

1. The water enters the purifier and flows into the annular space between the quartz sleeve and the outside chamber wall.
2. The wiper segments induce turbulence in the flowing liquid to assure uniform exposure of suspended microorganisms to the lethal ultraviolet rays.
3. Translucent sight port provides positive indication of germicidal lamp operation.
4. The wiper assembly facilitates periodic cleaning of the quartz sleeve without any disassembly or interruption of purifier operation.
5. Water leaving the purifier is instantly ready for use.

**INSTALLATION AND MAINTENANCE**

The purifier is installed as close as possible to the point of use. Connection of the inlet and outlet to water supply and plug into ordinary electrical outlet is all that is required.

Ordinary maintenance consists of cleaning the quartz sleeve with the manual wiper once monthly or more frequently where conditions dictate. Lamp replacement is recommended every 10,000 hours of operation (approximately 14 months of continuous service).
GERMICIDAL LAMP DATA

Technical Specifications

<table>
<thead>
<tr>
<th>LAMP NUMBER</th>
<th>PURIFIER MODEL NO.</th>
<th>NOMINAL LAMP LENGTH</th>
<th>POWER CONSUMPTION</th>
<th>ULTRAVIOLET OUTPUT</th>
<th>RATED EFFECTIVE LIFE</th>
</tr>
</thead>
<tbody>
<tr>
<td>05-1400</td>
<td>S14</td>
<td>8-15/16&quot; (227mm)</td>
<td>10 Watts</td>
<td>2.3 Watts</td>
<td>10,000 Hrs.</td>
</tr>
<tr>
<td>05-1098</td>
<td>S17</td>
<td>11-7/8&quot; (302mm)</td>
<td>14 Watts</td>
<td>3.7 Watts</td>
<td>10,000 Hrs.</td>
</tr>
<tr>
<td>05-1097</td>
<td>S23</td>
<td>17-3/4&quot; (451mm)</td>
<td>20 Watts</td>
<td>6.4 Watts</td>
<td>10,000 Hrs.</td>
</tr>
<tr>
<td>05-1343</td>
<td>S37B</td>
<td>33-7/8&quot; (860mm)</td>
<td>39 Watts</td>
<td>13.8 Watts</td>
<td>10,000 Hrs.</td>
</tr>
<tr>
<td>05-1334</td>
<td>S50B</td>
<td>45-7/8&quot; (1165mm)</td>
<td>50 Watts</td>
<td>19.3 Watts</td>
<td>10,000 Hrs.</td>
</tr>
<tr>
<td>05-1311</td>
<td>S2400B</td>
<td>46-1/4&quot; (1175mm)</td>
<td>110 Watts</td>
<td>42 Watts</td>
<td>10,000 Hrs.</td>
</tr>
</tbody>
</table>

The lamps listed above have been especially developed and are recommended for use with Sanitron™ Water Purifiers.

All Ster-L-Ray™ lamps used in Sanitron™ units are low pressure type, which afford the maximum efficiency in producing the required germicidal rays. In addition to the obvious advantages of high efficiency and low power requirements, there is no possibility of the unit overheating (as is the case with some other lamp types). Consequently, the need for additional equipment to combat overheating is eliminated.

GENUINE STER-L-RAY™ GERMICIDAL LAMPS

Ster-L-Ray™ germicidal lamps are shortwave, low pressure mercury vapor discharge tubes that produce ultraviolet wavelengths lethal to microorganisms.

Call for our Ster-L-Ray™ Germicidal Lamp Catalog

Ster-L-Ray™ germicidal lamps are manufactured by the Atlantic Ultraviolet Corporation. Ster-L-Ray™ and the Ster-L-Ray™ logo are trademarks of the Atlantic Ultraviolet Corporation.

CAUTION: Overexposure to direct or reflected germicidal ultraviolet rays will cause painful eye irritation and reddening of the skin. Personnel subject to such exposure must wear suitable face shield, gloves and protective clothing.
Germicidal lamps provide effective protection against microorganisms. A small cross-section is shown below.

<table>
<thead>
<tr>
<th>ORGANISM</th>
<th>ALTERNATE NAME</th>
<th>TYPE</th>
<th>DISEASE</th>
<th>µWSec/cm²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bacillus subtilis spores</td>
<td>B. subtilis</td>
<td>Bacteria</td>
<td></td>
<td>22,000</td>
</tr>
<tr>
<td>Bacteriophage</td>
<td>Phage</td>
<td>Virus</td>
<td></td>
<td>6,600</td>
</tr>
<tr>
<td>Coxsackie virus</td>
<td></td>
<td>Virus</td>
<td>Intestinal infection</td>
<td>6,300</td>
</tr>
<tr>
<td>Shigella spores</td>
<td></td>
<td>Bacteria</td>
<td>Bacterial Dysentery</td>
<td>4,200</td>
</tr>
<tr>
<td>Escherichia coli</td>
<td>E. coli</td>
<td>Bacteria</td>
<td>Food poisoning</td>
<td>6,600</td>
</tr>
<tr>
<td>Fecal coliform</td>
<td></td>
<td>Bacteria</td>
<td>Intestinal infection</td>
<td>6,600</td>
</tr>
<tr>
<td>Hepatitis A virus</td>
<td>Infectious Hepatitis virus</td>
<td>Virus</td>
<td>Hepatitis of the liver</td>
<td>8,000</td>
</tr>
<tr>
<td>Influenza virus</td>
<td>Flu virus</td>
<td>Virus</td>
<td>Influenza</td>
<td>6,600</td>
</tr>
<tr>
<td>Legionella pneumophila</td>
<td></td>
<td>Bacteria</td>
<td>Legionnaires' Disease</td>
<td>12,300</td>
</tr>
<tr>
<td>Salmonella typhi</td>
<td></td>
<td>Bacteria</td>
<td>Typhoid Fever</td>
<td>7,000</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>Staph</td>
<td>Bacteria</td>
<td>Food poisoning, Toxic Shock Syndrome, etc.</td>
<td>6,600</td>
</tr>
<tr>
<td>Streptococcus spores</td>
<td>Strep</td>
<td>Bacteria</td>
<td>Strep throat</td>
<td>3,800</td>
</tr>
</tbody>
</table>

The dosage necessary to inactivate a microorganism is a product of time and intensity.

When used as directed to disinfect clear water, Sanitron™ Water Purifiers provide an ultraviolet dosage in excess of 30,000 microwatt seconds per square centimeter (µWSec/cm²).

**OPERATING CHARACTERISTICS**

![Relative Spectral Energy Distribution (Typical)](image1)

![Germicidal Effectiveness As Related to Wavelength](image2)

Approximately 95% of the ultraviolet energy emitted from Ster-L-Ray™ germicidal lamps is at the mercury resonance line of 254 nanometers, the region of germicidal effectiveness most destructive to bacteria, mold and virus.
### COMMERCIAL & INDUSTRIAL SYSTEMS

Sanitron™ systems of 5,000 g.p.h. and higher utilize interchangeable single lamp chambers. This modular configuration offers advantages found only in Sanitron™ high-capacity systems.

- **Flexibility**
  System components are readily reconfigured to meet changing flow and process requirements.

- **Independent Monitoring**
  Single lamp chamber design enables separate output monitoring of each ultraviolet lamp.

- **Standby Capacity**
  Reserve chambers permit shutdown or replacement of individual components without interruption of service.

- **Special Options**
  Protective Coating - for seawater & corrosive environments. Type 316 Stainless Steel - to satisfy special requirements.
  Sanitary & Custom Fittings - for system compatibility.
  Special Configurations - for TOC and ozone reduction.

Consult factory for more information or with custom requirements.
SPECIAL FEATURES OF SANITRON™ WATER PURIFIERS

STAINLESS STEEL CONSTRUCTION
Chamber, head and clamp are electropolished and passivated stainless steel for an attractive finish and dependable service.

QUICK LAMP CHANGE
Exclusive Easy-Off Retainer Cap™ enables effortless lamp replacement without shutting down of water pressure or drainage of tank. No tools required.

PATENTED DUAL ACTION WIPER MECHANISM

DRAIN PLUG
Convenient, in-place drainage of purifier chamber.

WIPER LOCK
Locks wiper mechanism in retracted position.

REMOVABLE FLANGED HEAD
Units disassemble completely and easily in the event that repairs are necessary. No special tools or fixtures required.

SIGHT PORT PLUG
Visible glow provides positive indication of germicidal lamp operation. (Unit shown with optional Guardian™ Ultraviolet Monitor in sight port).

FUSED QUARTZ SLEEVE
Insures optimum lamp output at normal potable water temperatures. (See interior detail page 3).

OPTIONAL ACCESSORIES

Monitoring Options
(Select Guardian™ or Sentry™)

*Guardian™ Ultraviolet Monitor
Analog meter indication of germicidal lamp energy within the disinfection chamber. Controls Solenoid Valve and Audio Alarm.

Sentry™ Safety Sensor
Basic monitoring of electrical operation. Indicates alarm condition and operates Solenoid Valve and Audio Alarm.

*Audio Alarm
Activated by the Guardian™ or Sentry™ alerts user to any malfunction detected.

Elapsed Time Indicator
Real-time, non-resettable display of accumulated operating hours.

*Solenoid Valves
Operates with the Guardian™ or Sentry™ and prevents flow during detected malfunctions. Available in nylon or brass.

*Time Delay Mechanism
Provides a 2-minute warm-up period for lamp to achieve full germicidal output.

*Flow Control Valves
Limits water flow to rated capacities. Available in brass, PVC and stainless steel.

Wall Mounting Kit
Stainless steel, quick, easy and professional finish. Pre-drilled and ready to assemble. Optimizes free air circulation to cool ballast housing.

These options may be obtained at purchase time or added at a later date. For further details, refer to Atlantic Ultraviolet’s Optional Accessories sheet, Document Number 98-1057 or visit our website at www.atlanticuv.com.

* Use of this option is recommended by U.S. Public Health Service “Criteria for Acceptability of an Ultraviolet Disinfection Unit.” Originally issued April, 1966.