

# Bio-Logic®

GERMICIDAL ULTRAVIOLET WATER PURIFIERS

*Available with Pure Water Pack™*



**Model BIO-3.0  
3.0 GPM**



**Model BIO-1.5  
1.5 GPM**



**Model BIO-1.5  
1.5 GPM with  
Pure Water Pack™**



SINCE 1963

**ATLANTIC  
ULTRAVIOLET  
CORPORATION®**

## ABOUT US



**Since 1963**, we've been engineering and manufacturing germicidal ultraviolet equipment to prevent disease caused by contaminants in water, in air, and on surfaces. Our engineers bring each concept to a finished model, implementing stringent quality control procedures. Each product is manufactured with stainless steel and the highest quality materials to ensure the safety of personnel and room occupants. We stock an extensive inventory in our 37,500 square foot facility and ship throughout the world. Our knowledgeable team of UV-C specialists will provide effective and cost-conscious solutions for your home, business, industry, or institution.



**Model BIO-1.5**  
1.5 GPM



**Model BIO-1.5 PWP**  
1.5 GPM



**Model BIO-3.0**  
3.0 GPM

## GERMICIDAL ULTRAVIOLET

Germicidal Ultraviolet water purification is a unique and rapid method of water disinfection without the use of heat or chemicals.

**Bio-Logic® Germicidal Ultraviolet** Water Purifiers utilize UV-C lamps producing ultraviolet wavelengths at 254 nanometers (nm)—a level that is lethal to bacteria, viruses, and other microorganisms present in water.

Through the years, ultraviolet technology has become well established as a method of choice for effective and economical water disinfection.

**Bio-Logic® Germicidal Ultraviolet** Water Purifiers are the ideal solution for an ever growing range of water treatment applications.

# PRINCIPLE OF OPERATION

## ADVANTAGES

### Effective

Virtually all microorganisms are susceptible to **Bio-Logic®** ultraviolet disinfection.

### Economical

Hundreds of gallons are purified for each penny of operating cost.

### Safe

No danger of overdosing; no addition of 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

Provides continuous disinfection without special attention or measurement.

### Chemical Free

No chlorine taste or corrosion problems.

### Versatile

Capacities available from 1.5 to 3 gallons per minute (GPM).

The **Bio-Logic®** has been carefully conceived to provide adequate germicidal dosage throughout the disinfection chamber.



**Model BIO-1.5**  
**1.5 GPM**

1. Water enters the ultraviolet purifier and flows into the annular space between the quartz sleeve and the chamber wall.
2. Suspended microorganisms are exposed to the ultraviolet rays emitted by the germicidal lamp.
3. The LED indicator light, located on the ballast, provides visual indication of germicidal lamp operation.
4. Water leaving the purifier is ready for use, no further contact time is required.

The **Bio-Logic® Pure Water Pack™** has been designed to provide adequate filtering and germicidal ultraviolet dosage.

1. Water enters the sediment filter and traps the particulates, rust, scale and residue that affect the taste and appearance of water supply.
2. Water continues into the carbon filter and reduces chlorine, unpleasant tastes, odors and other organic chemicals and turbidity.
3. Filtered water enters the ultraviolet purifier and flows into the annular space between the quartz sleeve and the chamber wall.
4. Suspended microorganisms are exposed to the ultraviolet rays emitted by the germicidal lamp.
5. Water leaving the purifier is ready for use, no further contact time is required.



**Model BIO-1.5 PWP**  
**1.5 GPM**

## SPECIAL FEATURES

### Models BIO-1.5, BIO-1.5 PWP and BIO-3.0

- **Construction:** Bio-Logic® chamber is constructed of type 316 stainless steel and is electropolished and passivated for an attractive finish and dependable service.
- **Quick Lamp Change:** Exclusive EASY-OFF™ End Cap enables effortless lamp replacement without shut down of water pressure or drainage of tank. No tools required.
- **Dual Heads:** Constructed of type 316 stainless steel, heads may be removed and rotated and individually oriented for versatility during installation.
- **CRYSTAL CLEAR™ Quartz Sleeve:** Ensures optimum lamp output at normal potable water temperature.
- **Mounting Brackets:** allow for easier install to secure surface.
- **Surelite™ Ballast:** Electronic, plug-through style complete with red and green LED indicators and alarm that sounds if lamp is not working.

### Model BIO-1.5 PWP

- **Dual Filter Housing:** Sturdy, 5 micron sediment filter cartridge removes dirt, rust, scale, silt, sand and other water suspended particles while the 2 micron or 5 micron carbon filter removes chlorine, THM's, pesticides and other related volatile organic hydrocarbons.
- **Installation Kit:** Includes everything necessary to hook up entire system—tubing, saddle valve (saddle valve fits feed pipes between 3/8" to 1/2") and long reach faucet.
- **Mounting Bracket:** Stainless steel bracket with all system components factory installed. Unit is ready for hook up under the sink as soon as it's removed from carton.



Model BIO-1.5  
1.5 GPM



Model BIO-1.5 PWP  
1.5 GPM

## INSTALLATION & MAINTENANCE

The purifier is installed horizontally as close as possible to the point of use. Connection of the inlet and outlet to water supply and insertion of power plug into 3-wire grounded GFCI outlet is all that is required.

Ordinary maintenance consists of routine cleaning the quartz sleeve (once monthly or more or less frequently where conditions dictate). Lamp replacement is recommended every 10,000 hours of operation (approximately 12 months of continuous service).

Typical filter cartridge replacement is recommended every 12 months.

PWP (Pure Water Pack™) version requires install of long reach faucet (included) and connection to sink or ice maker.

## OPTIONAL ACCESSORIES and MONITORING OPTIONS



The **SENTRY™** Safety Sensor provides constant monitoring of the water purifier's ballast and germicidal lamp operation to give an indication of ballast and germicidal lamp status. The **SENTRY™** Safety Sensor is capable of operating an optional audio alarm and/or solenoid valve.

- Easy installation
- Plug **SENTRY™** into an electrical outlet, then plug water purifier into **SENTRY™**
- Operates optional Solenoid Valve and/or Audio Alarm
- Easily adaptable for use with other water purifier brands
- Warns of lamp failure
- Available for 120v 50/60Hz or 220v 50/60Hz water purifiers operating with electronic ballasts
- Available for use with most **Bio-Logic®**, **MINIPURE®**, **MIGHTY PURE®** and **SANITRON®** models



**Promate™ Audio Alarm**  
Activated by the **SENTRY™** and alerts user to any malfunction detected.



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



**SureFLO™ Flow Control Valve**  
Limits water flow to rated capacities. Available in PVC and stainless steel.



**Promate™ Safety Glasses**  
Safety eyewear should be used as general-purpose safety protection and for additional shielding from UV-C rays.



**Promate™ Face Shield**  
Lightweight visor with adjustable headgear provides eye and face protection from germicidal UV rays.

Options may be obtained along with **Bio-Logic®** unit or added at a later date. For further details, visit [AtlanticUltraviolet.com](http://AtlanticUltraviolet.com).

## GERMICIDAL ULTRAVIOLET DOSAGE

Germicidal lamps provide effective protection against microorganisms. A small cross-section is shown below.

ORGANISM	ALTERNATE NAME	TYPE	DISEASE	DOSE*
<i>Bacillus subtilis</i> spores	<i>B. subtilis</i>	Bacterium		22.0
<i>Bacteriophage</i>	Phage	Virus		6.60
<i>Coxsackie A2</i>		Virus	Intestinal Infection	6.30
<i>Shigella dysenteriae</i>		Bacterium	Bacterial Dysentery	4.20
<i>Escherichia coli</i>	<i>E. coli</i>	Bacterium	Food Poisoning	6.60
<i>Fecal coliform</i>		Bacterium	Intestinal Infection	6.60
<i>Hepatitis A</i>	Infectious Hepatitis virus	Virus	Hepatitis of the Liver	8.0
<i>Influenza</i>	Flu virus	Virus	Influenza	3.40
<i>Legionella pneumophila</i>		Bacterium	Legionnaires' Disease	12.30
<i>Salmonella typhi</i>		Bacterium	Typhoid Fever	7.0
<i>Staphylococcus aureus</i>	Staph	Bacterium	Food Poisoning, Toxic Shock Syndrome, etc.	6.60
<i>Streptococcus pyogenes</i>	Strep	Bacterium	Strep Throat	.80

When used as directed to disinfect clear water, **Bio-Logic®** Water Purifiers provide a UV-C dose in excess of 30.0 millijoules per square centimeter (mJ/cm<sup>2</sup>).

\* Nominal Ultraviolet dosage (mJ/cm<sup>2</sup>) necessary to inactivate better than 99% of specific microorganism. Visit [Ultraviolet.com/microorganisms-inactivated](http://Ultraviolet.com/microorganisms-inactivated) for complete listing.

## STANDARD MODELS

## WATER QUALITY RECOMMENDATIONS



**Model BIO-1.5 PWP  
1.5 GPM**



**Model BIO-1.5  
1.5 GPM**

### Maximum Concentration Levels Before Ultraviolet

Turbidity	5 NTU
Suspended Solids	10 mg/L
Color	None
Iron	0.3 mg/L
Manganese	0.05 mg/L
pH	6.5–9.5
Hardness	6 gpg

Effectively treating water with higher concentration levels than listed above can be accomplished, but may require added measures to improve water quality to treatable levels.

Model	Gallons Per Minute	Gallons Per Hour	Inlet and Outlet ①	Replacement Lamps	Power Consumption ②	Dimensions (Inches)			Shipping Data (lbs.)	
						Length	Width	Height	Gross Wt.	Net Wt.
BIO-1.5	1.5	90	3/8" NPT	05-1366-R	16.5 Watts	14-1/2	3-1/16	3-3/8	8	5
BIO-1.5 PWP	1.5	90	3/8" NPT	05-1366-R	16.5 Watts	15	5-5/8	17-1/2	18	12
BIO-3	3.0	180	3/8" NPT	05-1370-R	25 Watts	20-1/8	3-1/16	3-7/8	9	6

① All inlets and outlets are female pipe threads.

② Total power consumption including ballast loss.

- Maximum recommended operating pressure for all purifiers is 100 psi.
- Pressure drop at maximum recommended flow rate is less than 5 psi.
- Flow rates are based on Maximum Concentration Levels.
- 120 Volt and 220 Volt models are standard, 12 and 24 Volt models are also available.
- **Bio-Logic**® is available for operation on public power supplied throughout the world.
- Consult factory with specific power requirements.

## GERMICIDAL LAMP DATA

Lamp Number	Purifier Model No.	Nominal Lamp Length	Power Consumption ①	Ultraviolet Output ②	Rated Effective Life
05-1366-R	BIO-1.5	11-19/64" (287mm)	14 Watts	4.0 Watts	10,000 Hrs.
05-1366-R	BIO-1.5 PWP	11-19/64" (287mm)	14 Watts	4.0 Watts	10,000 Hrs.
05-1370-R	BIO-3.0	17-5/32" (436mm)	21 Watts	7.3 Watts	10,000 Hrs.

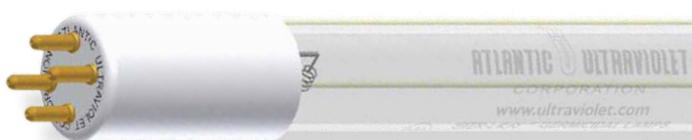
① Wattage is lamp watts only and does not include ballast loss (approximate).

② Maximum rated output at 254 nanometers.

The lamps listed above have been especially developed and are recommended for use with **Bio-Logic**® Water Purifiers.

All **STER-L-RAY**® lamps used in **Bio-Logic**® Water Purifiers are low pressure type which afford the maximum efficiency in producing the required germicidal rays. In addition has advantage of high efficiency and low power requirements.

Approximately 95% of the ultraviolet energy emitted from **STER-L-RAY**® germicidal lamps is at 254 nanometers, the region of germicidal effectiveness most destructive to bacteria, mold and virus.



**CAUTION:** Exposure to direct or reflected germicidal ultraviolet rays will cause painful eye irritation and reddening of the skin. Persons subject to such exposure must wear suitable face shield, gloves and protective clothing.

Hg – LAMP CONTAINS MERCURY, manage in accord with disposal laws, see: [LampRecycle.org](http://LampRecycle.org).

# COMPARISON OF ATLANTIC ULTRAVIOLET UV-C WATER PURIFIERS

FEATURES [S] - Standard [O] - Optional [✓] - Yes	Bio-Logic® Pure Water Pack™ 1.5 GPM	MINIPURE® 1 to 9 GPM	Ultimate® 4 to 9 GPM	MIGHTY★PURE® 3 to 20 GPM	SANITRON® 3 to 416 GPM	MEGATRON® 90 to 450 GPM
Chamber Material (Stainless Steel Type)	316	304	304	316	316	316
<b>STER-L-RAY®</b> Germicidal Ultraviolet Lamp	S	S	S	S	S	S
<b>EASY-OFF™</b> End Cap	S	S	-	S	S	S
<b>CRYSTAL CLEAR™</b> Quartz Sleeve	S	S	S	S	S	S
Lamp Indicator Light(s)	S	S	-	-	-	S
Sight Port to View Lamp Operation	-	S	S	S	S	S
HMI Touchscreen	-	-	-	-	-	R Series Models
Drain Fitting	-	-	-	S	S	S
Dual Action Wiper Mechanism	-	-	-	-	Manual	Manual or Automatic
Suggested Mount Installation	Horizontal	Horizontal	Vertical	Horizontal	Horizontal	Horizontal
Removable or Rotatable Heads	S	-	-	-	S	S
Alternate Inlet/Outlet Fittings	-	-	-	-	O	O
Sediment and Carbon Filter	S	-	-	-	-	-
<b>Promate™</b> Mounting Kit / Bracket	S	S	S	O	O ①	-
<b>GUARDIAN™</b> Germicidal UV Monitor	-	-	-	O	O	S
<b>GUARDIAN™ ASSIST</b> UV Monitor Extension	-	-	-	O	O	-
<b>SENTRY™</b> Safety Sensor	O	O	-	O	O	-
<b>Promate™</b> Audio Alarm	S	S	S	O	O	-
<b>Promate™</b> Solenoid Valve	-	O ②	-	O	O	-
<b>SureFLO™</b> Flow Control Valve	O	O	S	O	O	-
<b>Promate™</b> Elapsed Time Indicator	O	O	-	O	O	S
<b>Promate™</b> Time Delay Mechanism	-	O	-	-	-	-
Residential Use	✓	✓	✓	✓	✓	-
Commercial Use	-	-	-	✓	✓	✓
Industrial Use	-	-	-	-	✓	✓
<b>NSF</b> Certified Models	-	-	-	-	✓ ③	-

① SANITRON® Model S10,000C through S25,000C come equipped with mounting rack.

② Available for MINIPURE® Models MIN-3, MIN-6, and MIN-9 only.

③ SANITRON® Models S37C, S50C, and S2400C are certified to NSF®/ANSI/CAN 61 & NSF®/ANSI 372. Model S2400C is used in modular form to build larger models.

• When used as directed to disinfect clear water, Atlantic Ultraviolet Corporation® water purifiers provide an ultraviolet dosage in excess of 30.0 millijoules per square centimeter (mJ/cm<sup>2</sup>).

• This list depicts options for 120v 50/60Hz operation. Consult factory for options with other power requirements.



SINCE 1963  
**ATLANTIC**  
ULTRAVIOLET  
CORPORATION®



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**GERMICIDAL ULTRAVIOLET EQUIPMENT & LAMPS • MANUFACTURERS / ENGINEERS / SALES / SERVICE**

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