

ULTRAVIOLET WATER PURIFIERS

Available with *Pure Water Pack™*



Model 1.5 GPM



Model
1.5 GPM with
Pure Water Pack™

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 (g.p.m.)

PRINCIPLE OF OPERATION

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

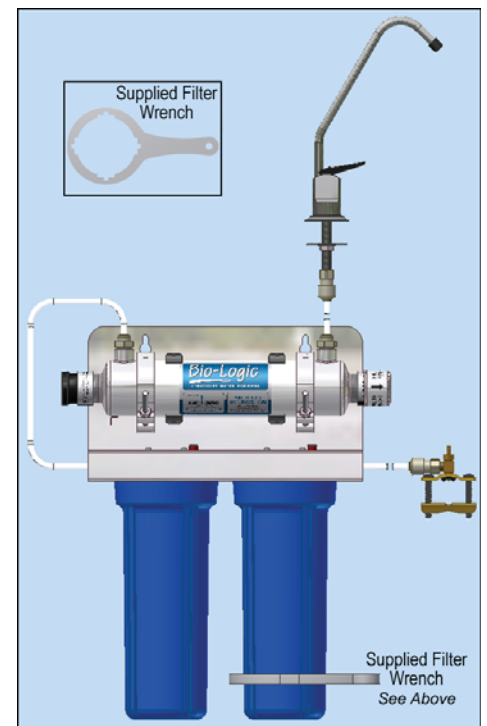
1. Water enters the ultraviolet purifier and flows into the annular space between the quartz sleeve and the chamber wall.
2. Suspended microorganisms are exposed to the ultraviolet rays emitted by the germicidal lamp.
3. The LED indicator light, located on the ballast, provides visual indication of germicidal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



Model 1.5 GPM

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.



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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™ Retainer 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.
- **Fused Quartz Sleeve** - Insures optimum lamp output at normal potable water temperature.
- **Mounting Brackets** - allow for easier install to secure surface.

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 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.



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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 14 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 models



Audio Alarm

Activated by the Sentry™ - alerts user to any malfunction detected



Elapsed Time Indicator

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



Solenoid Valves

Operates in conjunction with **SENTRY™** and prevents flow during detected malfunctions. Available in nylon or brass.



Time Delay Mechanism

Operates with **SENTRY™** and solenoid valve to provide a 2-minute warm-up period for lamp to achieve full germicidal output.



Flow Control Valves

Limits water flow to rated capacities. Available in PVC and stainless steel.

Options may be obtained along with **Bio-Logic®** unit or added at a later date.

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>	Bacteria	_____	22,000
Bacteriophage	Phage	Virus	_____	6,600
Coxsackie virus	_____	Virus	Intestinal infection	6,300
<i>Shigella</i> spores	_____	Bacteria	Bacterial Dysentery	4,200
<i>Escherichia coli</i>	<i>E. coli</i>	Bacteria	Food poisoning	6,600
Fecal coliform	_____	Bacteria	Intestinal infection	6,600
Hepatitis A virus	Infectious Hepatitis virus	Virus	Hepatitis of the liver	8,000
Influenza virus	Flu virus	Virus	Influenza	6,600
<i>Legionella pneumophila</i>	_____	Bacteria	Legionnaires' Disease	12,300
<i>Salmonella typhi</i>	_____	Bacteria	Typhoid Fever	7,000
<i>Staphylococcus aureus</i>	Staph	Bacteria	Food poisoning, Toxic Shock Syndrome, etc.	6,600
<i>Streptococcus</i> spores	Strep	Bacteria	Strep throat	3,800

When used as directed to disinfect clear water, **Bio-Logic®** Water Purifiers provide an ultraviolet dosage in excess of 30,000 microwatt seconds per square centimeter ($\mu\text{WSec}/\text{cm}^2$).

* Nominal Ultraviolet dosage ($\mu\text{WSec}/\text{cm}^2$) necessary to inactivate better than 99% of specific microorganism. Consult factory for more 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

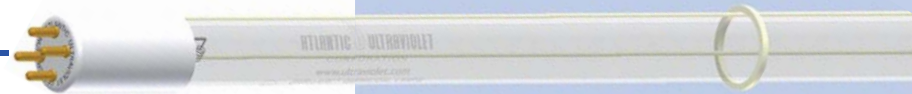
Effectively treating water with higher concentration levels than listed above can be accomplished, but may require added measures to improve water quality to treatable levels.

Model	Gallons per Minute	Gallons per Hour	Inlet and Outlet ^①	Replacement Lamps	Power Consumption ^②	Unit 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 / ₄	3- ¹¹ / 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- ¹¹ / ₁₆	3- ³ / 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 units are standard, 12 and 24 Volt units 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**® units 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.