

# FILTRATION GROUP

## UV BIO-WALL



- Patented Biowall design incorporates 5 lamps outwardly radiating parallel with ductwork
- Patent pending parabolic reflectors direct virtually all UV energy outward from center of duct
- Drastically improves indoor air quality
- Continuously treats the air travelling in the entire duct.
- Destroys up to 99.99% of biological contaminants on one pass
- Available in 18" to 60" lamp lengths



### DESCRIPTION

**T**he UV Bio-Wall provides a “barrier wall” of UV energy destroying biological contaminants passing through it.

Each Bio-Wall has 5 high intensity 19mm pure fused quartz lamps, which are mounted to aluminum anodized parabolic reflectors that reflect the full 360° of germicidal radiation. The Bio-Wall is mounted parallel to the airstream in order to maximize the contaminants’ contact time with the UV energy.

The Bio-Wall is equipped with a monitoring display built into the ballast box which includes a digital visual hour accumulator, monitoring LEDs and “lamp out” alarms.

The number and length (can be up to 60" long) of Bio-Walls will depend on the size of the duct, the velocity of the air moving within the duct, the specific contaminants to be treated and the desired kill percentage.

### FEATURES

- Significantly improves indoor air quality.
- Continuously treats the air travelling in the entire duct.
- Destroys up to 99.99% of biological contaminants on one pass.
- Available in 18" to 60" lamp lengths.
- 5 high-intensity pure fused 19mm quartz UVC lamps.

- 5 anodized aluminum parabolic reflectors maximizes 360° of UV energy.
- Protects plastics, rubber and occupants from UV exposure.
- Supports lamps that can be as long as 60", protecting them from breakage.
- Digital hour accumulator; LED and Audible alarm on ballast control panel.
- Standard with remote computer monitoring that can be tied into buildings automation.
- Tested by the EPA and The National Homeland Security Research Center achieving greater than 99.97% destruction on biological warfare agents on one pass.

### BENEFITS OF REFLECTION

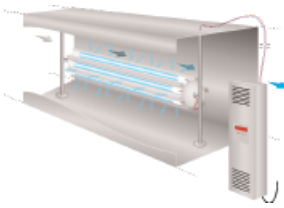
- Directs virtually all the lamp’s UV energy where needed most.
- Increases effective lamp life.
- Allows for the lamps to be self-cleaning by directing the UV back onto itself, reflecting off the sides of the duct, burning off bioaerosols that may adhere to the lamp’s glass surface.
- Maintains lamp temperature at a more constant level.
- The UV Bio-Wall uses five anodized aluminum parabolic reflectors to project the UV energy outward from the center of the duct.



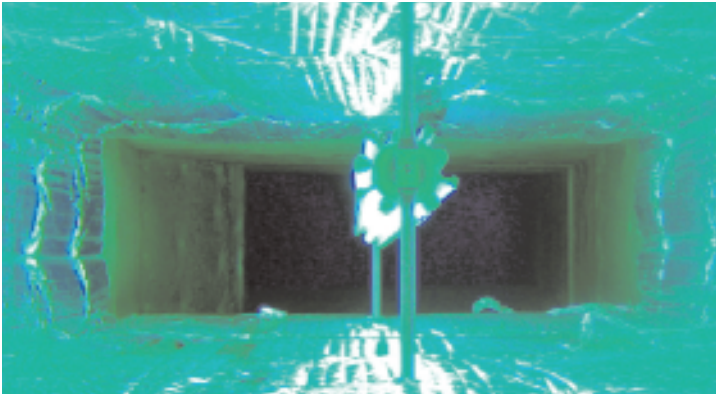
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### STANDARD INDOOR AIR QUALITY INSTALLATION



This installation uses the standard UV Bio-Wall. Designed for standard applications requiring biological contaminant control. The UV Bio-Wall produces a UVC germicidal wall destroying the biological contaminants passing through it. The UV Bio-Wall can be sized for any duct size at any velocity of air, for any desired kill percentage on any biological contaminant.



### TESTING

Tested by The Environmental Protection Agency (EPA) and The National Homeland Security Research Center (NHSRC) on biological warfare agents (BWAs).

A single UV Bio-Wall 50" (available up to 60" lamp lengths) showed greater than 99.97% destruction on one pass of airborne bacteria, 99% on viral and 93% on spore.

Testing under task order 1112 of the contract between EPA and Battelle Memorial Institute for implementation of the Technology Testing and Evaluation Program (TTEP was established by the NHSRC with the EPA's office of R&D).

### SPECIFICATIONS

Purifying Capacity:	Sized according to application
Dimensions (in):	Diameter 5.25". Overall length equals lamp length plus 6.5"
Weight (lbs):	Model dependent. Bio60 11 lbs
Power:	110, 220 or 277 v 50-60 Hz
Watts/Amperage total:	Model dependent. Up to 750 watts; 7.5 amps
Starting:	Hardwire to Air Handler
Line Cord:	No
UV Lamp type:	Proprietary high intensity; 19mm mercury vapor quartz
UV Wavelength (nanometers):	UVC 254nm / UVV 187nm
UV Lamp Configuration:	(5) x straight
UV lamp Length (in):	18", 24", 30", 40", 50" and 60" available
Internal lumina lamp coating to prevent solarization:	Yes
Reflector:	Anodized aluminum parabolic reflectors
Average microwatt intensity at 36":	Up to 3300µm depending on Bio-Wall purifier
Lamp change out time:	17000 hours
Lamp Warranty:	12000 hours
Purifier Warranty:	3 year ballast, 5 years other
Construction:	Aluminum / Steel
Options:	Zigby Protocol wireless communication for remote monitoring Ultra-high intensity Amalgam lamps

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