

## Liquid Storage Tank Conditioners

**Keep your liquid storage tanks safe by using systems combining germicidal ultraviolet and filtration**

Because of their warm, moist environment, liquid sugar and syrup storage tanks are breeding grounds for bacteria, mold and yeast. American Air & Water offers several types of germicidal ultraviolet (UVC) units to combat the problem. Our UVC fixtures are specifically designed for liquid storage tank applications. They "scramble" the DNA of mold spores, yeast and bacteria to render them sterile. UV is ideal for liquid storage applications because it has no effect on the taste, color or odor of the liquid. In fact, it neither adds nor removes anything from the liquid sugar, syrup or water. In combination fit one or two-stage filtration, these systems provide clean and disinfected air for the headspace of the tanks.



**SC-4AB/14 System**

## UV Disinfection / Filtration Liquid Tank Conditioners

Designed to filter and disinfect air in the headspace of liquid storage tanks, American Air & Water's Liquid Tank Conditioning units are well suited to liquid sugar and syrup applications, where warm, moist conditions encourage yeast and mold growth. These units can provide air 99.9% free of microorganisms, yeast and mold spores. They are mounted outside the tank, removing concern about broken lamps or electrical components being introduced into the product. An extensive array of options allows us to provide equipment that fits each customer's unique application, as well as stringent sterilization / disinfection requirements. If our standard products and options do not fulfill your needs, we will be happy to design a unit to your specifications.

## LTC - Liquid Tank Conditioners

### LTC-2AB Series

LTC-2AB Series Liquid Tank Conditioners mount on top of liquid storage tanks (as shown below) and provide unsurpassed air filtration and sterilization for tanks with dropout rates up to 200GPM. Using 304 stainless steel, two 10-micron pre-filters, one 0.3-micron Absolute HEPA filter, a 140CFM blower motor and two shatter-proof UVC germicidal lamps, the LTC units supply filtered and disinfected air for tank headspace. Positive pressure created by the blower forces clean, sterile air into the tank at all times. These units must be top-of-tank mounted and should not be considered where remote installation is needed.



### LTC-2AB Series Standard Features

- Liquid dropout rates up to 200GPM
- Two shatter-proof coated 36" germicidal UV lamps GML005T
- Two 10-micron pre-filters FLT025 (10" x 10" x 1")
- One 0.3-micron Absolute HEPA filter FLT035 (10" x 10" x 6")
- 140 CFM blower motor
- 304 stainless steel construction
- Designed to mount on top of tank (can not be mounted remotely)
- 3" PVC threaded female coupling or 3" Tri Clamp Ferrule
- Heater included with model LTC-2AB3AH-P0Z

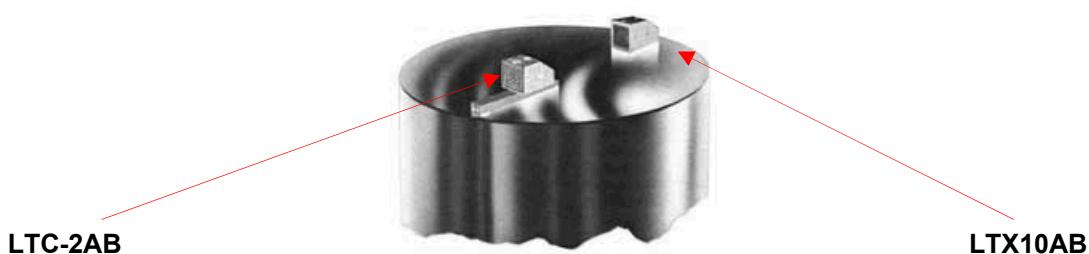
A Liquid Tank Vent (**LTX**) unit should be installed on the tank exhaust vent to prevent contaminated air from entering the tank if rapid product dropout creates reverse suction through the exhaust. The AB Series LTX Vent unit consists of two 10-micron (FLT025) pre-filters and one 0.3-micron Absolute HEPA (FLT035) filter housed in a 304 stainless steel enclosure.



### LTC-2P Series

One 10-micron filter, 140 CFM blower, two shatter-proof GML005T UV lamps  
**LTX10P SSF** - Vents with single 10-micron filter (FLT025)

Designed for applications that don't require the high level filtration of the AB Series, P Series conditioners and vents do not include the 0.3-micron Absolute HEPA filter and one of the 10-micron pre-filters featured in the AB Series. See price sheet for type and size fittings.



## Liquid Tank Blowers

**LTB10 AB SSF** Blower - two 10-micron filters FLT025 and one HEPA (FLT035), 100CFM blower

**LTB10 P SS** Blower – 10-micron filter (FLT025), 60 CFM blower



American Air & Water offers blower units - 304 stainless steel construction, 10" filters - without the UV sterilization chamber for applications that do not require disinfection. They are available in both AB and P configurations, depending on filtration requirements. See price sheet for type and size fittings.

## SC-4AB14 Liquid Tank Conditioners for Large Tanks



**SC-4AB/14** – Four-lamp Liquid Tank Conditioner (64" L x 27" H x 17.5" W) - floor mounted, with 14" filters - one HEPA (FLT060) & two 10-micron (FLT055) filters, 250CFM blower, four 36" (GML100) 4-pin Slimline lamps, Air Flow and Lamp-out indicators

With airflow and lamp on/off indicators on the enclosure panel, along with three additional relays as standard features, the SC-4AB/14 Liquid Tank Conditioner can be linked into the customer's control systems. This linkage provides a visual indication on the panel, as well as a switch closure to the control system to show that the lamps and fan are on.

Designed for large tanks, the SC-4 can be mounted on the floor next to the tank for easier lamp and filter changes that do not require climbing on top of the tank.

## SC-4 Standard Features

- 250CFM blower at 5" static pressure
- 304 stainless steel construction
- Four 36" germicidal UV lamps GML100
- Two 14" x 14" x 1" 10-micron pre-filters FLT055 per unit
- One 14" x 14" x 6" Absolute HEPA filter FLT060 per unit
- Remote NEMA 4 electrical enclosure (conditioner unit only)
- Available in multiple voltages at 50Hz or 60Hz \*

\* See price sheet for complete options selector.

**STX14ABSSTRI4** - Tank vent for SC-4AB14

304 stainless steel construction, 14" filters - HEPA absolute (FLT060) and two 10-micron filters (FLT055)

For large tanks.

## Options & Accessories For Liquid Tank Conditioning Units

### Tri-Clamp & Flange Connections

We can provide units to customer specifications. If a fitting other than the standard 3" PVC female threaded coupling or 3" tri clamp is required, we will be happy to provide the connection size and type needed.

### Food-Grade Welds

Food-grade welding is optional on our units.

### Air-Flow Indication

Provides visual indication of reduced airflow resulting from clogged filters or blower failure.

### Lamp-Out Indication

Provides visual indication of UV lamp operational status.

### Fluoro Ethylene Polymer Coating

All lamps used in the LTC and BT units are shatter-proof coated - Fluoro Ethylene Polymer sleeve is shrunk onto each lamp, preventing any quartz fragments from entering the tank in the unlikely event of lamp breakage. The shatter-proof coating is optional for the lamps used in the SC-4 units.

### Sun Screen

Provides additional protection for the filter media against sun and moisture. Ideal for outdoor applications.

### Alternative Materials

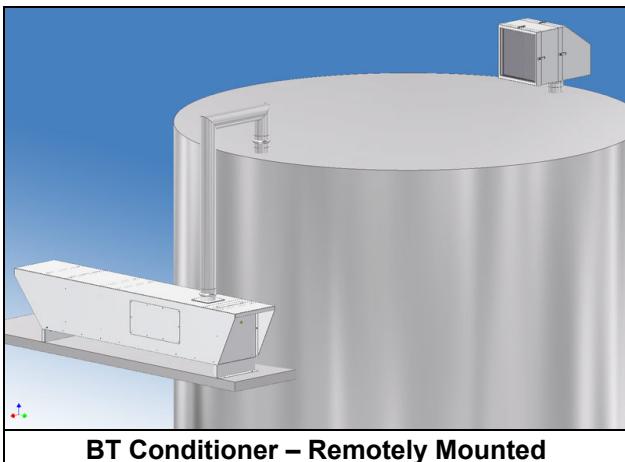
Units can be fabricated from 316 stainless steel or other materials and subjected to a variety of treatments per customer request.

### Interfacing With Process Control Equipment

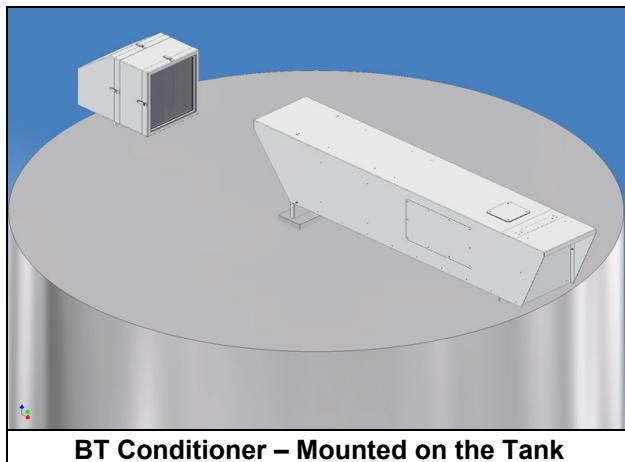
Our equipment can be customized to provide information to customer's monitoring equipment and fully integrate with existing systems.

## BT Liquid Tank Conditioners

BT Tank Conditioners are made of 430 stainless steel with one 14"x14"x1" 10-micron pre-filter and one 14"x14"x6" HEPA filter, 120V/60Hz.



**BT Conditioner – Remotely Mounted**



**BT Conditioner – Mounted on the Tank**

The BT conditioners can be mounted directly to the tank or remotely up to 25' away and provide a UVC dose of more than 30,000 $\mu$ Ws/cm<sup>2</sup> using high output, shatterproof lamps. The systems include airflow and LED lamp-on indication and standard 4" Tri Clamp connection.

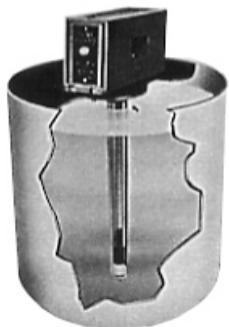


BT-4-120 is a 4-lamp conditioner for up to 750GPM dropout rate when tank mounted and up to 400GPM when remotely mounted.

BT-6-120 is a 6-lamp conditioner for up to 900GPM dropout rate when tank mounted and 400 to 800GPM when remotely mounted.

BT-8-120 is an 8-lamp conditioner for up to 1,500GPM dropout rate when tank mounted and 750 to 1,200GPM when remotely mounted.

## TTG Series Immersion Units



The TTG Series is designed to sterilize tank headspace and partially disinfect liquid in the tank. The lamp is housed in a quartz sleeve for protection, as the lamp is partially submerged, suspended in the tank by a double-grooved gasket. The stainless steel electrical enclosure (which also holds the lamp in place) fits on top of the tank and features a Tube Guard to indicate that the lamp is operating properly. These fixtures are offered in 18" (GML350 lamp), 28" (GML355 lamp), 36" (GML100 lamp), and 64" (GML270 lamp) insertion depths to fit a variety of tank sizes.

When liquid tank conditioners are used with in-line liquid disinfection systems, the product (water or liquid sugar) will be over 99% free of microorganisms.

## STG Internal Fixtures

The STG Series is designed to mount inside storage tanks, which allow this type of access, to control yeast, mold and bacterial growth. Each fixture is equipped with an externally mounted Tube Guard to indicate whether lamps are operating properly. The STG Series is available in a 17" x 3" x 2" fixture with a single Slimline GML060 lamp or as a 37" x 3" x 2" fixture with the option of one or two Slimline GML005 lamps. The lamps can be shatterproof coated.



**STG-10-SL** - 17" fixture with one Slimline GML060 lamp & tube guard

**STG-36** - One lamp 37" fixture with a Slimline GML005 lamp and tube guard

**STG-36-2** - Two lamp 37" fixture with Slimline GML005 lamps and two tube guards

\* These fixtures are also available with cold cathode lamps and without tube guard.

## In-Line Systems for Liquid Sugar or Water Disinfection

American Air & Water offers a full range of in-line UV systems for various liquid disinfection applications, including water and liquid sugar. In-line systems can be sized to introduce ultraviolet dose of 40,000 $\mu$ Ws/cm<sup>2</sup> or any other UV dose per customers' specifications. Please consult American Air & Water for proper sizing.

