

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 AB Series

AB Series Liquid Tank Conditioners mount on top of liquid storage tanks (as shown below) and provide unsurpassed filtration and sterilization for tank dropout rates up to 200GPM. Using 304 stainless steel, two 10-micron electrostatic pre-filters, one 0.3-micron Absolute HEPA filter, a 140CFM blower motor and two UVC germicidal lamps, the LTC units will 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.



AB Series Standard Features

- **LTC-2AB SSF** – for up to 200GPM drop out rates - two 36" Slimline germicidal UV lamps GML005
- Two electrostatic 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" diameter PVC IPS threaded female coupling to tank (see price sheet for other type and size fittings)

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 electrostatic (FLT025) pre-filters and one 0.3 micron Absolute HEPA (FLT035) filter housed in a 304 stainless steel enclosure.

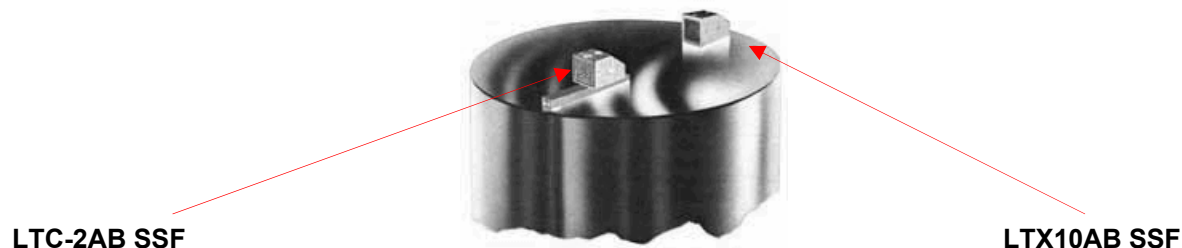


LTC P Series

LTC-2P SSF - Liquid Tank Conditioner - single electrostatic filter, 140 CFM blower, two GML005

LTX10P SSF - Vent - single electrostatic filter (FLT025)

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



Liquid Tank Blowers

LTB10 AB SSF Blower - HEPA (FLT035) & two electrostatic filters FLT025), 100CFM blower

LTB10 P SSF Blower - electrostatic 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 other type and size fittings.

SC-4AB14 Liquid Tank Conditioner For Tanks Over 20,000 Gallons



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 electrostatic (FLT055), 250CFM blower, four 36" (GML100) 4-pin Slimline lamps, Air Flow and Lamp-out indication

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 tanks holding 20,000 US gallons (75,710 liters/75.7m³) and more, 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" Slimline germicidal UV lamps GML100
- Two 14" x 14" x 1" electrostatic 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 electrostatic filters (FLT055)

Tanks of 20,000 gallons and up.

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 is required, we will be happy to provide the connection size and type needed. Options for P and AB series units include 3" and 4" tri-clamp fittings (see price sheet).

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 (Tube Guard)

Provides visual indication of UV lamp operational status.

Fluoro Ethylene Polymer Coating

A Fluoro Ethylene Polymer sleeve is shrunk onto each lamp, preventing any quartz fragments from entering the tank in the unlikely event of lamp breakage. This option slightly reduces lamp output, so we recommend using high-output lamps.

Sun Screen

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

High-Output UV Lamps

Recommended for very high purity applications or with Fluoro Ethylene Polymer lamp coating, these lamps provide roughly twice the UV intensity of the Slimline germicidal lamps.

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

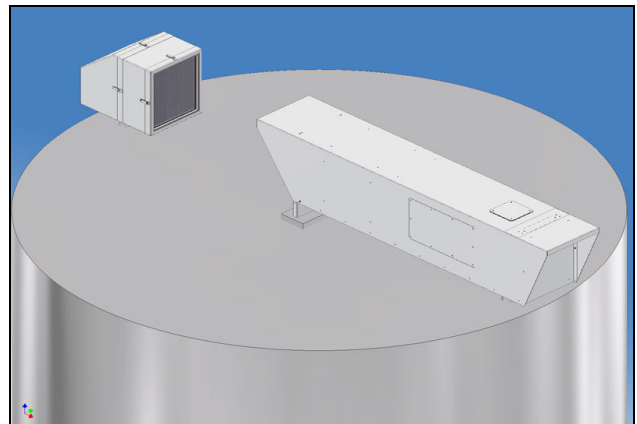
Our equipment can be configured to provide information to customer's monitoring equipment and fully integrate with existing systems.

BT-AB14 Liquid Tank Conditioners

BT Tank Conditioners are made of 430 stainless steel with one 14" x 14" Electrostatic pre-filter and one 14" x 14" HEPA filter, 120V/60Hz. The Vents for the BT systems are also made of 430 SS.



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 μ Ws/cm² 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 as well as the 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" (Slimline GML350 lamp), 28" (Slimline GML355 lamp), 36" (Slimline GML100 lamp), and 64" (Slimline GML270 lamp) insertion depths to fit a variety of tank sizes.

When used with in-line liquid disinfection, product will leave the tank 99% free of microorganisms.

STG Internal Fixtures

The STG Series is designed to mount inside storage tanks 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 Liquid Sugar And Water Disinfection Equipment

American Air & Water offers a full range of in-line UV disinfection systems for all liquid sterilization applications, including water and liquid sugar. In-line systems introduce, at minimum, the EPA-required dose of 40,000 μ Ws/cm². Please consult American Air & Water for proper sizing.

