

Ozone Systems

Installation & Owner's Manual

Vacuum Break



ClearWater Tech, LLC.

Integrated Ozone Systems

Product Description/Theory of Operation

The ClearWater Tech vacuum break was developed for use with the entire line of ClearWater Tech corona discharge ozone generators. It need not be utilized with ClearWater Tech ultraviolet ozone generators. This simple and effective device provides a positive atmospheric “break” between the ozone injector manifold and the ozone generator, preventing water from flowing back into the ozone generator should the venturi check valve fail.

Under normal operating conditions, the vacuum break’s flapper valve (see illustration) is closed, allowing the vacuum created by the venturi to draw the output gas from the ozone generator. If the check valve at the venturi begins to leak or fails completely, vacuum is interrupted and water will flow toward the ozone generator. With the vacuum break properly installed between the venturi and the ozone generator, the water will flow down the riser tube (away from the ozone generator) and out the drain port, protecting the ozone generator from potential water damage.

Installation Steps

1. Remove the vacuum break and associated parts from the shipping carton.
2. To mount the vacuum break, select a suitable vertical surface that is accessible and in close proximity to both the ozone generator and the ozone injector manifold.
3. Install the two Clic® mounting clamps provided onto the vertical surface so that the vacuum break is in a vertical position and the Drain Port is *below* the level of the ozone generator’s ozone outlet fitting(s). One clamp should be located so it fits around the Riser Tube Elbow, and the other so it fits around the bottom of the Lower Tee (see illustration).
4. Remove the Fill Port Cap located on top of the Riser Tube and fill the Riser Tube with clean water (no particulate matter) until water begins to flow out of the Drain Port.
5. Re-install the Fill Port Cap, using pliers or a wrench to tighten. Note: Do not over- tighten as damage to PVC fittings may occur.
6. Connect one end of a suitable length of Teflon® ozone delivery line to the ozone generator’s ozone outlet fitting. Attach the other end of the delivery line to the Kynar® fitting threaded into the Upper Tee. As an additional backflow prevention measure, loop this length of tubing as high as is practical between the two connection points.
7. Connect one end of a second length of Teflon® ozone delivery line to the Kynar® fitting threaded into the Lower Tee. Attach the other end of the delivery line to the Kynar® fitting located on top of the check valve assembly.
8. If necessary, attach one end of a suitable length of 3/4” braided vinyl tubing (not included) to the barbed fitting on the Drain Port. For safety considerations and/or to prevent potential damage to other equipment in the area, direct the other end of tubing to suitable waste.
9. Adjust the vacuum level and air flow rate according to the specifications outlined in the ozone generator’s Installation and Maintenance Manual.

NOTE:

Due to evaporation, the water level in the vacuum break may drop. If water is not pressing downward on the flapper valve, the valve will open, causing a loss of vacuum. This will prevent air from flowing through the ozone generator, which may in turn (and depending on the model) shut down the ozone generator. Make sure the water level never drops below the flapper valve.

Vacuum Break Detail

