



DEL MDV FOR DEL OZONE INSTALLATION INSTRUCTIONS & PRODUCT MANUAL

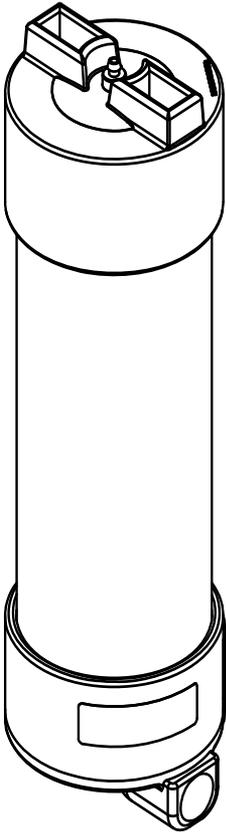


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SECTION 1 & 2 | General Information & Installation

1A. General Information

The DEL MDV (Mixing Degas Vessel) system:

- Prevents virtually all ozone bubbles from returning to the pool, eliminating bubble noise and visibility.
- Allows application of higher ozone concentrations.
- Protects pool components such as covers, fittings and surfaces.
- Prevents bubbles from gathering under the cover or inside plumbing.
- Utilizes a Granulated Activated Carbon (GAC) destruct cartridge to destroy excess ozone gas removed by the MDV.

2A. Installation (refer to *Figure 1*)

NOTE: The MDV will not be as effective in systems with back pressures in excess of 10 psi. Oversized pumps and small returns should be avoided.

1. Follow ozone generator mounting and electrical connection instructions in Ozone 25/50/100 manual.
2. Mount the MDV vertically, as shown in **Figure 1**, to a solid surface (i.e. fence, wall, post) using the (2) cable ties, (4) cable tie mounts, and (4) screws included. Use a pair of pliers to tighten and secure the cable tie. If trimming away excess, fold tab over to avoid the sharp edge. To avoid discoloration, mount in an area out of direct sunlight.
3. Mount the (GAC) Cartridge vertically to a flat surface using (2) #6 screws.

NOTE: Mount the cartridge close enough to the MDV so that the tubing can be connected from the cartridge to the top of the MDV.

4. Install By-pass plumbing as shown in **Figure 1**. Use the appropriate By-pass Valve based on your pump type:
 - a. For Single Speed pumps, install the adjustable 2-Way Valve.
 - b. For Two-Speed or Variable Speed pumps, install a DEL Check valve.

SECTION 2 Installation

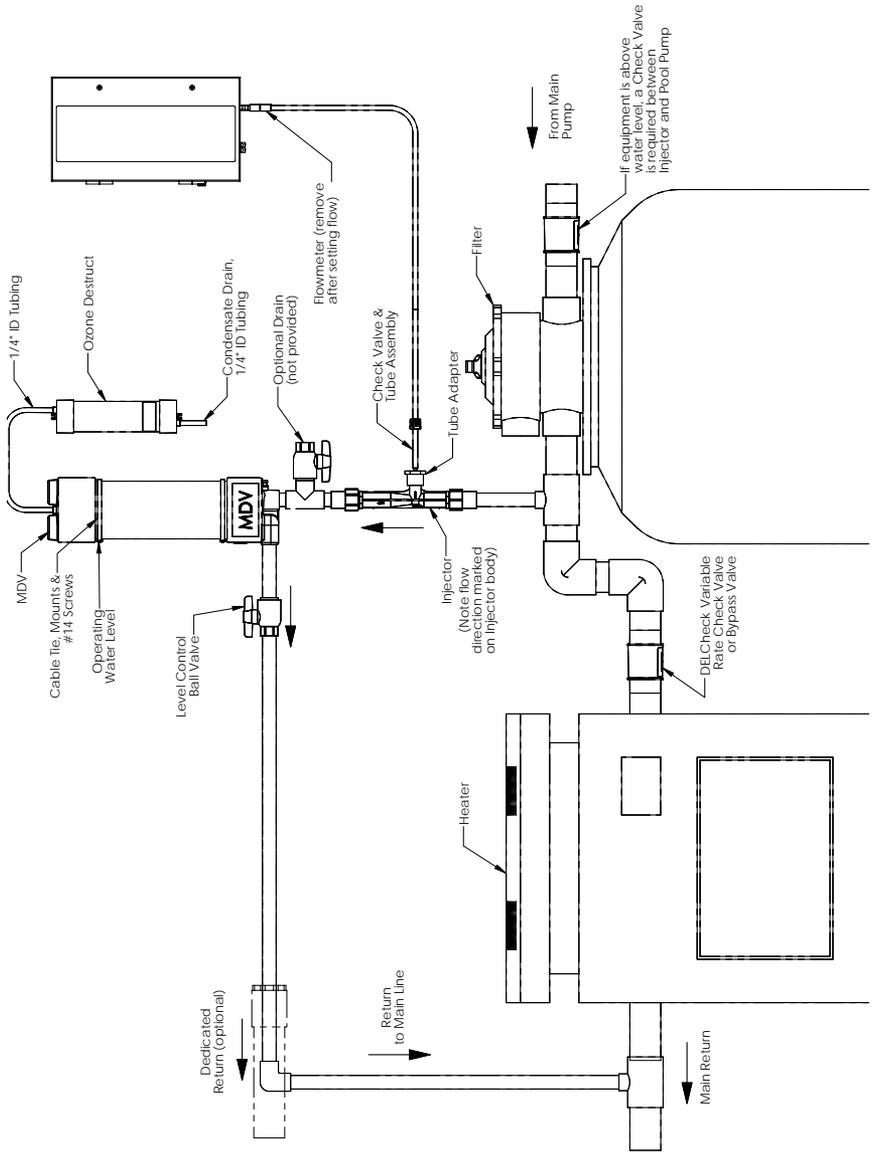


Figure 1: MDV and DEL Ozone Series Installation

SECTION 2 & 3 | Installation & Operation

5. The recommended return configuration is a dedicated line from the MDV to the pool. If a dedicated return is not available, a return to the main line may be used.
6. An additional valve may be installed either before or after the MDV to act as a drain for winterizing or maintenance.
7. Screw the Tube Adapter onto the injector using thread sealant if needed. Do not use thread tape.
8. Connect the Ozone Tube Assembly to the Tube Adapter on the Injector. Be sure that the end with the check valve installed is connected to the Injector.
9. Attach the other end of the check valve and tubing assembly to the ozone outlet on the Ozone unit. Be sure the flow direction is away from the unit itself.
10. The drain at the base of the Destruct cartridge will release small amounts of condensation and carbon under normal operation. To avoid water or carbon stains, connect tubing to the bottom of the Destruct and divert the condensation to a suitable location.
11. Allow all PVC glue to dry completely per manufacturer's instructions before running water through MDV.

3A. Operation

1. The gas flow must now be optimized. Refer to **SECTION 2** of your Ozone 25/50/100 manual for instructions on adjusting water flow to achieve proper gas flow.
2. The water level inside the MDV should be near the bottom edge of the MDV Top Endcap. Use the Level Control Ball Valve installed at the MDV outlet to adjust the water level (see **SECTION 4A Troubleshooting**).

NOTE: For Variable Speed pumps, the water level in the MDV may drop completely at low speeds. The Level Control Ball Valve may be closed slightly to raise the level. However, this may impair injector performance at higher speeds. Verify proper operation under all conditions.

3. Streams of gas bubbles should be rising to the top of the MDV, and the water returning to the pool should be virtually bubble free.

SECTION 4 & 5 | Troubleshooting & Maintenance

4. If the pool equipment is mounted above water level, it is normal for water to drain from the MDV when the main circulation pump turns off. The MDV should return to normal operation shortly after the system comes back on.

4A. Troubleshooting

Symptom: The water level in the tower is only around half full, or steadily dropping.

1. There is not enough backpressure downstream of the MDV to maintain water level in the tower. — Plumb in a small ball valve downstream of the MDV. Close it off to the point where the proper water level in the tower is maintained.

Symptom: Large bubbles are visible at the bottom of the tower, and are at the pool return.

1. The gas flow rate is too high — Reduce the gas flow through the injector, by slowly turning the handle on the Bypass Valve towards the open position. Ensure that the flow-meter ball is still bouncing in the flow meter.

5A. Maintenance

1. The MDV itself is maintenance free. The destruct cartridge must be replaced every 12 months of operation. A new cartridge can be ordered from your dealer/distributor using DEL part number 9-0620.
2. Winterizing, if necessary, can be done by draining water from MDV.

5B. Replacement Parts

- Hose Clamp for 1/4" ID tubing2-0078
- Check Valve and Tubing Assembly.....9-0770-01
- Cable Tie (for mounting MDV) 8-0668
- Destruct Cartridge..... 9-0620



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