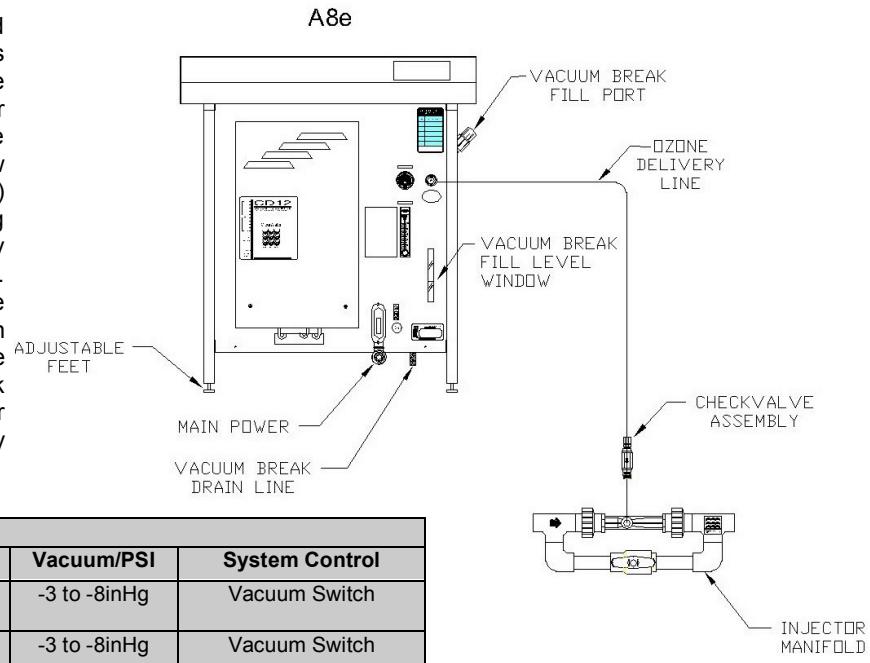


Apex e-Series Quick Installation Guide

Product Description

The ClearWater Tech. Ae systems are complete and fully integrated for easy installation. These systems employ a variable output Ozone Generator, Pressure Swing Adsorption (PSA) Oxygen Concentrator for maximum ozone output efficiency, a positive atmospheric Vacuum Break for water back flow prevention, a SCFH (standard cubic feet per hour) flow meter and vacuum or PSI gauge for setting operating parameters. The A4e and A8e are easily energized via a normally open Vacuum Switch. Whereas the A15e can be energized with the Remote Shut Down Loop, through any normally open contact. **Note:** Not included in the Ae packages are externally mounted Injector Manifolds and Check Valve Assemblies required for efficient mass-transfer of ozone. A booster pump and contact vessel may also be required.



Specification Chart

System	Ozone Generator	Ozone Output	Vacuum/PSI	System Control
A4e	CD10	4.0 g/h @ 4 SCFH, 3% by weight	-3 to -8inHg	Vacuum Switch
A8e	CD12	8.0 g/h @ 8 SCFH, 3% by weight	-3 to -8inHg	Vacuum Switch
A15e	CD1500P	15.0 g/h @ 6 S CFH (4 CFH) 6% by weight	9 to 12 PSI	120 VAC Remote Shut Down Loop

Dimensions: 28" w X 22" D X 32.5" H (height adjust. +1", -1/2")

Quick Install

- Step 1:** Unpack and placement (adjust feet as required)
- Step 2:** Wire power to the Ae system (a conduit has been provided on the front of each system). For the A4e and A8e this will be the only wiring required to the system. **NOTE: A main power service disconnect is suggested.**
- Step 3:** The A15e is equipped with a 120VAC Remote Shut Down Loop (220VAC International). The loop, two Blue 18 AWG wires with wire nuts are located in the condelet. **IMPORTANT: This loop requires continuity for the system to operate, whether through N.O. contact or simply for the two wires to be connected.** It is suggested that this loop be interfaced with the vacuum draw from the injector, so that, when the vacuum is present the ozone begins production. **CAUTION: Once the contact is made to this loop ozone will be produced.**
- Step 4:** Install the side stream booster pump, if required. The booster pump will require separate dedicated power.
- Step 5:** Install the Injector Manifold and thread the Check Valve Assembly into the Venturi. To prepare for start-up close the by-pass valve half way. This will create vacuum at the injector as soon as water is flowing through the injector manifold.
- Step 6:** Install the contact vessel and off-gas vent (if so equipped).
- Step 7:** Remove fill port cap. Fill Vacuum Break with water through fill port (on the right hand side of Ae) until water is 1/2 to 3/4 visible in the Vacuum Break Fill Level Window. Replace fill port cap.
- Step 8:** Connect the Teflon ozone delivery line, from the Ae system to the injector manifold.
- Step 9:** An external 4-20mA control signal may be used to control ozone output. According to the 4-20mA control device I/O Manual, wire in the Orange (+) and Purple (-) leads (located under the ozone generator) to the 4-20mA controller. **NOTES: The 4-20mA signal will over-ride the Manual Ozone Output Control setting.**
- Step 10:** Apply main power to the Ae system
- Step 11:** Apply main power to the booster pump and/or side stream booster pump to initiate water flow.
- Step 12:** **A4e and A8e systems only** - To achieve the correct SCFH and Vacuum, make adjustments with the "needle valve" on the SCFH flow meter and the "by-pass valve" on the injector manifold.
NOTE: -5 in.Hg. is optimum (middle of the green zone).
- Step 13:** **A15e system only** - Close the injector manifold "by-pass valve" half way. **NOTE: At this time the Remote Shut Down Loop should have continuity.** The system will have main power, however due to an internal PSI switch, the ozone will *not* begin production until the PSI gauge (in the ozone generator) reaches 9 PSI. The "PSI needle valve" (located on the front panel of the A15e) is factory set to 10 PSI. If 10 PSI is *not* achieved, adjust the PSI with the "PSI needle valve". Once the adjustment of the PSI is complete the CFH flow meter in the ozone generator should read 3 to 5 CFH. **Note: 10 PSI and 4 CFH are optimum.**



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