



**ZERO AIR GENERATOR MODEL 7000
INSTRUCTION MANUAL**

UNPACKING

Connect the intake filter to the Air In port as shown below. Use Teflon tape on filter thread if not supplied on the fitting.



POWER

The ZAG is electrically configured for one voltage and frequency. These electrical parameters are specified by the user when ordering the model 7000. Connect the system to 110-120 60 Hz, 220-240 VAC 50 Hz or 60 Hz, depending upon the electrical configuration of the system.

OPERATION

Power the system on, adjust the pressure to 25-30 PSIG (or lower) and regulate the output flow for approximately 5-15 LPM. The pressure will take approximately one minute to reach the regulated pressure after the power switch is activated. The system must burn in for approximately 24 hours to produce dry gas. When operating the 7000 under normal conditions, the system will produce up to 20 LPM flow at 25 PSI, 15 LPM for 220 VAC systems. The ATM dew point of the gas will be as high as -10°C at 20 LPM flow. Connect a line to the drain port and route to a water collection container. Depending upon ambient humidity, water will exit this port via the coalescing filter.

IMPORTANT: during installation, do not block the cooling vents on the top front of the cover. These vents exhaust the heat dissipated by the internal components.

NOTE: The first stage output regulator is set for 35 PSIG. This regulator is mounted internally behind the front panel. Do not exceed a setting of 30 PSIG on the front panel mounted regulator for normal operation.

ADJUSTING THE OPTIONAL CATALYTIC CONVERTER TEMPERATURE

The system is shipped with a setting of 300°C. The converter can be adjusted as high as 550°C (482°C for 240 VAC systems) for improved efficiency.

1. Press and hold the PUSH TO SET button on the front panel temperature controller.
2. Turn the knob clockwise to increase the temperature setting.



DEW POINT INDICATOR

A color change dew point indicator is now standard on all Environics ZAGs. This indicator enables the user to determine the dryness of the air. The dew point indicator is located in the upper right corner of the front panel. When the pneumatic toggle switch is on, less than 1 LPM of air, from the ZAG, flows through the indicator, exiting from a small hole in the front. The color of the indicator is light green when the air is driest. It turns from light green to light yellow when the dew point rises above approximately -10°C. At higher dew points, the color changes to white at its wettest. When the ZAG is not being used, switch the pneumatic switch off. This will prevent a flow draw on the ZAG which will result in the ZAG pump turning on and off to replenish what is lost through the dew point indicator. Once the significant color change has occurred and a problem has been diagnosed and fixed, it will take approximately 1 hour for the color to change back to green.



INTERNAL ZAG COMPONENTS

1. Cooling fan
2. Pressure relief valve (100 PSIG)
3. Coalescing filter
4. Final particle filter (5 micron)
5. Compressor cooling coil
6. Drain valve for coalescing filter (timed interval 80 seconds off 1 second on)
7. PSA heatless dryer (molecular sieve, Zeolite, vents approximately 6 LPM air)
8. Catalytic converter cooling coil
9. Compressor
10. Pressure switch
11. Catalytic converter relay (solid state)
12. Controller
13. Power distribution terminal block
14. Compressor relay (solid state)
15. Pressure vessel (accumulator)
16. Catalytic converter (THC & Co) (optional)
17. Secondary pollutant scrubber (activated carbon, charcoal)
18. Pollutant scrubber/converter (active ingredient Potassium Permanganate)
19. Catalytic converter temperature controller
20. Pressure gauge
21. Pressure regulators (2)
22. Illuminated power switch
23. Pneumatic switch for dew point indicator
24. Dew point indicator

Reference the following page for the internal diagram.



