

PureAir Gas and Vapour



Specifications

- Outside Diameter 610mm
- Outside Height 1100mm
- Inlet fittings 100mm DWV
- Outlet fittings 100mm DWV
- Drain Plug 15mm WH
- Carbon Kg 75Kg
- Max Flow Rate,CFM 400
- Maximum Pressure 10 psig
- Maximum design Temp 140
- Flow Direction Downflow



### General information:

Activated Carbon Canisters have a broad range of industrial applications which include

- Removal of noxious gases from entering the workplace
- Purification of chemically contaminated water
- Air purification, removal of noxious odours
- The filtration of gases from vapor streams
- Removal of VOCs from treatment plants
- Vapours Emanating from storage tanks
- Removal of Dissolved Organic Matter
- Dioxin Removal, Hydrogen Sulfide Removal
- Gasoline Vapour Absorption
- Incinerator flue Gas filtration

The unique systems designed and developed by the company are effective, efficient, and environmentally friendly. The principal use of activated carbon in the environmental field is for the removal of volatile organic compounds such as hydrocarbons, toxic gases, and organic based odours. In addition, chemically impregnated activated carbons can be used to control certain inorganic pollutants such as hydrogen sulphide, mercury, or radon. When properly applied, the adsorption process will remove pollutants for which it is designed, to virtually non-detectable levels. In the industrial area, the most common applications of activated carbon are for process off-gases, Tank vent emission, work area air purification and odour control, either within the plant or related to plant exhausts. Additionally, activated carbon is used in the hazardous waste remediation area to treat off-gases from air stripping and from soil vapour extraction remediation projects.

### Activated Carbon:

The Pureair vapour adsorbers are filled with virgin activated carbon. other virgin coal, coconut shell, reactivated or impregnated carbons are available as well.

### How it works:

In the adsorption process, molecules of a contaminated gas are attracted to and accumulate on the surface of the activated carbon. It can be made from a variety of base materials including coal, wood, and coconut shells, and is manufactured or activated in a high temperature-controlled oxidation process. A pound of highly activated carbon has a surface area approaching 140 acres.



### Introduction:

The PureAir is prefabricated, low cost, self-contained vapour purification unit that can treat air flows of up to 400CFM each. The treated air flow can be increased by placing the canisters in a series or parallel of two or more and adding a fan to the system, (if required) The PureAir 100 canister is built around a 205L open head drum, the inside is coated with a heat cured epoxy for corrosion resistance. The outside coating is industrial enamel. (Blue) Each canister contains high quality activated granular carbon, blended to suit the application. Canisters use an air chamber to insure even distribution of air flow through the carbon bed. The carbon is supported by a high efficiency filter to remove any dust particles that may be present in the Air stream. A polyethylene liner is available for extra corrosion resistance. Inlet and outlet connections are 100NB PVC pipe, or 50NB BSP pipe or custom-made combinations to match your project requirements. All canisters can be fitted with our automatic heat sensing and water quenching system which protects the activated carbon bed. A typical installation has multiple units connected in series.

### Installation & start up:

The PureAir Canister must be located on a flat dry base, or alternatively a skid mounted canister can be supplied by C.F.S. The unit should be as close as possible to the emission source. This unit requires no special procedure for start-up. Remove the shipping plugs from the inlet and outlet; then make the proper connections to your system. The unit is now ready for service and can be started up. Unions or quick connect fittings are recommended if the unit will be disconnected frequently. Multiple units are usually connected in series with testing advised between the units to determine when the first unit needs to be changed out.

### Flow Distributors:

The Pureair canister uses an air chamber to insure even distribution of the air flow through the carbon

### Maintenance:

When in use, the only maintenance the PureAir requires is testing for contaminants at the effluent air stream and checking the operating pressure of the system. Monitoring the contaminant concentration level into the last unit in a series arrangement is the recommended safeguard against breakthrough in the final outflow. When the concentration of contaminants in the flow coming out of the lead unit equals the concentration of the flow into the unit, the unit has reached its removal capacity and should be removed from service. The working life of each canister is dependent upon the type of contaminant in the air as well as its concentration and the air flow rate. A pressure relief device is advised to prevent damage to the canister in the event of excessive pressure build-up. A drain plug is installed at the base of the canister to allow any condensed liquid to drain away, replace when complete.



### Spare Parts:

**PureAir canisters are required to be replaced periodically.** Once the carbon has reached its pollutant removal capacity, the unit should be removed and replaced with a fresh one. To purchase replacements of the PureAir please contact our office.

### Disposal:

Dispose of spent carbon canisters in accordance with Federal, State, and local regulations.

### Available Options:

Carbon Filtration Solutions can arrange the installation of all canisters supplied. Special Application Carbons, Custom Inlet/Outlet Sizes, Corrosion Resistant FRP Fans. Heat sensing and water quenching system. A range of canister sizes are available on request for specific requirements. Skid mounted Canisters can be supplied with weather protection.

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