

ALC Water Filtration

The importance of Activated carbon for water filtration is growing as industries seek inexpensive and effective solutions to comply with environmental Legislation, which demand cleaner discharges from factories. Our ALC water canisters are prefabricated, ready to use, self-contained water purification units.

The system can remove hazardous or toxic dissolved organics from wastewater streams, hazardous waste lagoons, hydrocarbons, Chlorine, chlorine dioxide, phenols, organic solvents, pesticides, surfactants, and colour from effluent streams, making the water suitable for discharge or in some cases for re-use. A single unit should not exceed 25 litres per minute, the treated water flow can be increased by placing the canisters in a series of two or more. The unique systems designed and developed by the company are effective, efficient, and environmentally friendly.





Specifications

- Outside Diameter 24"
- Outside Height 35"
- Inlet fittings 40mm tank outlet
- Outlet fittings 40mm tank inlet
- Carbon (water) 75KG per canister
- Flow Rate max 25 Lpm
- Maximum Pressure 10 psig
- Maximum design Temp 140
- Flow Direction Upflow/downflow
- Drum liners available

General information:

The ALC water series is prefabricated, low cost, self-contained water purification units that can treat water flows at 25 litres per minute. The treated water flow can be increased by placing the canisters in a series of two or more. The ALC water canister is built around a 205Ltr open head drum, the inside is coated with a heat cured epoxy for corrosion resistance, it also has a no leak polyethylene liner eliminating pin hole leaks. Each canister contains high quality activated carbon Blended to suit the application. Also available in 220Ltr open head Polyethylene canisters and 205Ltr open head Stainless steel.

Coatings:

ALC water filters are coated on the inside with heat cured epoxy. The outside is industrial enamel (Blue). A polyethylene liner is available for extra corrosion resistance.

How it works:

In the adsorption process, molecules of a contaminated water are attracted to and accumulate on the surface of the activated carbon. The length of time in which the contaminant is in contact with the carbon also influences the adsorption process – the longer the length for contact, the greater number of contaminants that will be removed. Activated carbon 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.



Installation & start up:

The canister is shipped filled with dry activated carbon that must be properly wetted and deaerated prior to use. The ALC water 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.

Maintenance:

The only maintenance the ALC requires is testing for contaminants at the effluent water outlet 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.

Spare Parts

ALC water filters 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 ALC series please contact our office.

Caution!

Wet activated carbon removes oxygen from the air causing a severe hazard to workers. Confined space/low oxygen procedures should be put in place before any entry is made.