

VAPOR-PAC® 10 SERVICE

Equipment for VOC Control



Description

The increasing emphasis on cleaner air presents the industry with new challenges to control and reduce toxic volatile organic compounds (VOCs) at air emission sources. To help facilities comply with current and future VOC regulations, Calgon Carbon offers the VAPOR-PAC® 10 Service which uses adsorption on granular activated carbon to remove VOCs from high volume air emissions. The service also minimizes capital expenditures and eliminates on-site spent carbon transfer and regeneration.

The VAPOR-PAC® 10 Service uses a transportable adsorber that contains approximately 12,500 pounds of granular activated carbon and can treat air flows up to 10,000 scfm. When the activated carbon's capacity to remove VOCs has been reached, the on-stream adsorber is removed and replaced with one containing fresh carbon. Use of the VAPOR-PAC® 10 Service minimizes capital expenditure because the only site facilities normally required are ductwork and a fan. Calgon Carbon provides the entire service for the adsorption process which includes spent carbon removal, transport, and reactivation or disposal. The VAPOR-PAC® 10 adsorbers are owned by Calgon Carbon, who maintains the units in operable condition.*

VAPOR-PAC® 10 units are ideally suited to remove low concentrations of VOCs from applications such as industrial plant emissions, soil remediation vents, and air stripper off-gases.

In order to handle a wide range of flows and VOC concentrations efficiently, the VAPOR-PAC® 10 unit can also be configured as two separate adsorber beds. Each bed contains approximately 6,250 pounds of activated carbon. Depending on the flow and VOC concentration, the beds can be used one at a time, operated in parallel, or in series. A three-foot deep carbon bed is provided in the VAPOR-PAC® 10 for effective removal of VOCs, even during periods of peak concentrations.

To determine carbon life in the VAPOR-PAC® 10, Calgon Carbon recommends monitoring the performance via the provided sample ports. Frequency of unit exchange will depend on the types and concentrations of VOCs being treated. Exchange should be scheduled before carbon breakthrough occurs. If the beds are used sequentially, the timing of the breakthrough from the second bed can be estimated by comparing it with the breakthrough time for the first bed (assuming that they operate under similar conditions).

When an exchange is required, Calgon Carbon delivers a replacement unit. Upon delivery of the replacement, the unit containing the spent carbon is removed from the process and the replacement unit is placed on-line to continue treatment. In many cases, the delivery trailer can manage both the setting of the new unit and pickup of the old, eliminating the need for a crane. The unit removed from the process is returned to our facility where it is emptied, inspected, refilled, and stored for the next exchange.

*Damage to VAPOR-PAC® 10 units caused by negligence or misapplication is the responsibility of the user.

Your Calgon Carbon Sales Representative can help evaluate the suitability of the VAPOR-PAC® 10 Service to satisfy your air treatment requirements. If required, evaluation studies to determine applicability and economics can be arranged. Calgon Carbon offers a wide range of adsorption equipment and activated carbon including permanent installations or smaller service equipment.

Benefits

- Removes toxic VOCs
- Eliminates on-site carbon handling
- Minimizes spent carbon disposal concerns
- No major capital investment required
- Wide variety of activated carbons
- No on-site equipment required for loading or offloading

Specifications

| | |
|-------------------------|--|
| Vessel Dimensions | 22' 4" x 8' 0" x 8' 4" |
| Inlet Duct Connections | 20" ID (4 total, 2 on each end) |
| Outlet Duct Connections | 20" ID (4 on top) |
| Carbon Volume | 425 ft ³ |
| Carbon Weight | Coal - 12,500 lbs. (approx.), Coconut - 12,000 lbs. (approx.) |
| Shipping Weight | Fresh - 27,500 lbs. (max), Spent - 35,000 lbs. (max) |
| Temperature Rating | 150° F (max) |
| Static Pressure Rating | 0.5 psig |
| Vacuum Pressure Rating | None |



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CALGON CARBON CORPORATION

Materials of Construction

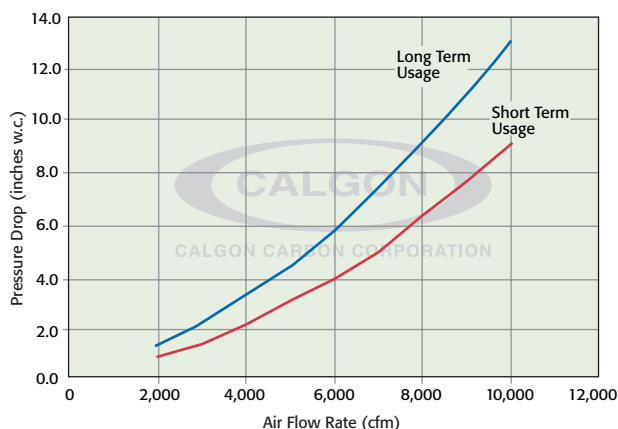
| | |
|--|---------------------------|
| Vessel | Epoxy Coated Carbon Steel |
| Internals | Epoxy Coated Carbon Steel |
| Internal Screen | Polypropylene |
| Carbon Acceptance Canister and Associated Fittings | PVC |

Safety Message

Wet activated carbon preferentially removes oxygen from air. In closed or partially closed containers and vessels, oxygen depletion may reach hazardous levels. If workers are to enter a vessel containing activated carbon, appropriate sampling and work procedures for potentially low oxygen spaces should be followed, including all applicable Federal and State requirements.

VAPOR-PAC® 10 Pressure Drop

Basis: AP4-60 Carbon



CALGON CARBON CORPORATION

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Making Water and Air Safer and Cleaner

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Your local representative

