

CYCLESORB® and CYCLESORB® HP Installation Instructions

Description

CYCLESORB® and CYCLESORB® HP are designed as down-flow adsorbers for flows up to 60 gpm, and contain up to 2,000 pounds of Granular Activated Carbon (GAC). The CYCLESORB® and CYCLESORB® HP are rated for 15 or 75 psig maximum pressure, respectively, and are protected against over-pressurization by a graphite rupture disk. All other wetted parts are type 316 stainless steel with EPDM gaskets.

Installation Instructions

The CYCLESORB® and CYCLESORB® HP units can be moved via forklift, and are to be positioned on a flat level surface capable of supporting 7,400 lbs. to 8,365 lbs. operating weight, respectively.



Typical Preparation for Start-Up

Wetting & Deaerating Granular Activated Carbon (GAC)

1. Remove caps from the three 2" connections: process inlet (cap 1), process vent (cap 2), and process outlet (cap 3). Do not remove cap 4 or open valve 4 on GAC outlet exiting at the bottom of the cone.
2. Connect clean water source to process outlet (valve 2) and fill CYCLESORB® and CYCLESORB® HP from the bottom upwards, not exceeding 25 gpm, until water overflows out the top of the unit. *Note: if you are using a lower density carbon such as the wood based Acticarbon® BGX or subbituminous HPC, do not exceed 5 gpm, and rates of 2 gpm are recommended. If you see carbon granules floating up and out of the unit, stop the flow immediately and adjust it downwards to prevent loss of carbon.* Close process outlet (valve 2) and disconnect clean water source.
3. Ensure that process outlet (valve 2) is closed and disconnect temporary clean water source. (If GAC has been pre-wetted, proceed to start-up).
4. Allow system to soak for a minimum of 24 hours using water at ambient temperatures (up to 72 hours is preferred for complete wetting).
5. Drain through valve 2 and repeat step 2. Continue water flow until the overflow becomes clear. CYCLESORB® and CYCLESORB® HP are now full of clean water and ready for start-up.

Typical Start-Up

1. Connect process vent (cap 2) to a valved vent line and close valve or reattach cap to seal the vent.
2. Connect process inlet, in place of cap 1, and process outlet to valve 2.
Caution: If discharge line does not provide adequate backpressure, provide an anti-siphon loop, or throttle outlet valve. CYCLESORB® and CYCLESORB® HP **must remain full of water** for effective operation.
3. Initiate flow and open process outlet valve 2. Do not exceed 15 psig on the influent line for CYCLESORB® or 75 psig for CYCLESORB® HP or rupture disk may burst (recommended operating pressures are 85% of rupture disk ratings). Do not exceed temperature of 150F. Do not use for vacuum service. Do not disable rupture disk.

Safety Message

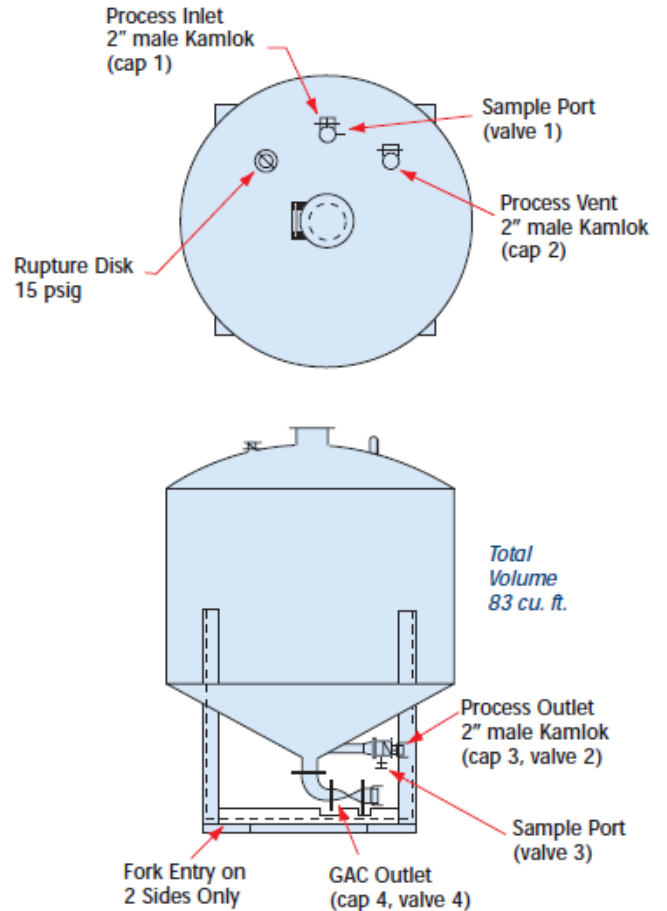
Wet activated carbon can deplete oxygen from air in enclosed spaces. If use in an enclosed space is required, procedures for work in an oxygen deficient environment should be followed.

Typical Operation

1. Periodically check influent pressure. Pressure build-up may indicate filtration of solids (pre-filter may be required). Low pressure may indicate drained bed.
2. Check process vent occasionally to ensure CYCLESORB® and CYCLESORB® HP are full of water and no gas is trapped in the unit. If process vent is capped, close outlet, interrupt source, and open influent sample port.
3. Sample ports are provided on inlet and outlet (valves 1 and 3).
4. If the unit is provided with a Carbon Acceptance Canister, follow instructions provided for use and spent carbon acceptability testing. A sample of representative spent carbon and completion of an Adsorbate Profile document is required to obtain Carbon Acceptance approval prior to the return of used carbon.

Typical Shutdown

1. When the carbon is spent or treatment is complete (determined by effluent testing) stop influent, close outlet, open vent, and disconnect hoses.
2. Drain all water from CYCLESORB® and CYCLESORB® HP units using process outlet (valve 2). Do not open GAC outlet (valve 4). If the pH of the drained liquid is < 2 or > 12, then rinsing or neutralization will be required prior to returning the spent carbon to Calgon Carbon. Contact your Technical Service Representative or Regional Applications Engineer to discuss the pre-treatment requirements.
3. After draining, close process outlet (valve 2) and replace caps on all outlets. The unit is now ready for shipment.
4. CAUTION: Pressure relief device must not be plugged-off or restricted due to potential for over-pressurization and catastrophic failure of the vessel.



Safety Message

Wet activated carbon can deplete oxygen from air in enclosed spaces. If use in an enclosed space is required, procedures for work in an oxygen deficient environment should be followed.

1.800.4CARBON calgoncarbon.com

© Copyright 2020 Calgon Carbon Corporation, All Rights Reserved