

BACKWASH AND CONDITIONING

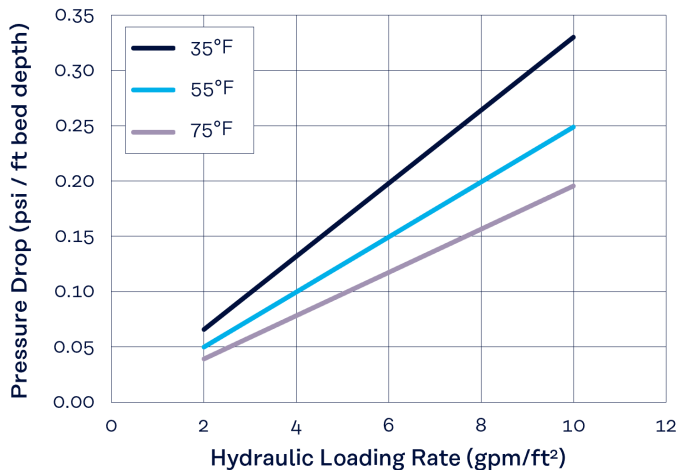
Prior to placing a recently filled granular activated carbon (GAC) vessel online, adequate media backwash and media conditioning are required. The following steps are intended to serve as guidelines to condition GAC media prior to placing the system in service. These steps may be able to be tailored to accommodate site specific constraints. For more information, please contact your Calgon Carbon sales or technical representative.

INITIAL BACKWASH

Following GAC media exchange, slowly fill the vessel with potable water in the up-flow direction until the vessel is full. Fill using flow rates that provide less than 5% bed expansion. Soak the new GAC media overnight (approx. 16 hours) to degas the media bed. Once the soaking period is complete, conduct a start-up backwash (up-flow operation) per the steps outlined below:

TYPICAL CLEAN-BED PRESSURE DROP

Based on a backwashed and segregated bed



TYPICAL BED EXPANSION DURING BACKWASH

Based on a backwashed and segregated bed

Startup Backwash

1. Flow @ 5% expansion for 2 minutes
2. Flow @ 10% expansion for 2 minutes
3. Flow @ 15% expansion for 2 minutes
4. Flow @ 30% expansion for 30 minutes
5. Flow @ 15% expansion for 2 minutes
6. Flow @ 10% expansion for 2 minutes
7. Flow @ 5% expansion for 2 minutes

Refer to the bed expansion curve to determine the flowrates needed at each step. Please note, an identical backwash procedure is recommended when a media vessel is restarted after an extended shutdown or restarted after the bed has been drained.

DESIGN CONSIDERATIONS

FILTRASORB 400 activated carbon is typically applied in down-flow packed-bed operations using either pressure or gravity systems. Design considerations for a treatment system is based on the user's operating conditions, the treatment objectives desired, and the chemical nature of the compound(s) being adsorbed.

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.