

CTC Bag-in/Bag-out (BIBO) Filter System Installation Guide

Bulletin #180-3-17



STORAGE:

General Equipment Storage

Contamination Technology Corporation (CTC) recommends installation of the equipment immediately. Storing the equipment may permit particulate into the system such as gravel or sand that may prevent gaskets from obtaining a proper seal. If you must store the equipment, leave it wrapped in the shrink wrap applied at the factory. If this has already been removed, we recommend reapplying wrap or wrapping in a painter's tarp and taping it closed tightly. Ensure no particulate can enter under the wrap or through the seams. After storing, lightly wipe out the interior of the system with a rag. Wipe clean all inner surfaces paying close attention to the areas where gaskets seal for any debris. Outdoor storage is not permitted. All equipment must be stored in a clean dry place.

For loose dampers and systems with dampers already installed, it is imperative to keep these securely wrapped. The gaskets have a light coating of silicone grease applied and any particulate will stick to it. Thoroughly inspect these gaskets prior to installation. Wipe down and reapply silicone grease to any gaskets with visible debris.

Filter media supplied with equipment must be carefully handled and stored. Moisture can damage or destroy the filter media. All filters should be stored in their oriented positions, as they will be installed in the housing. For HEPA filters, the filter pleats will be vertical when installed. For carbon adsorbers, the bed will be in the horizontal position.

Extract taken from CTC O&M Manual, page4

INSTALLATION BASIC DO'S & DON'T:

- 1. DO keep the filter system covered, clean and dry until ready to install.**
- 2. DON'T drill-into or weld-onto any component of the BIBO filter system.**
- 3. DO install the system a minimum of 4" above floor/ground level.**
- 4. DO install the system such that filters are slid horizontally into the housing (NEVER orient the housing such that filters are dropped-down or pushed-up into the housing)**
- 5. DO ensure there is absolute minimum 36" clearance on the filter access door side of the system, spanning from end-to-end of the system.**



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Installation Guidelines & Recommendations:

Step 1) RIGGING:

When ready to rig units, use lifting-lugs (or top-mounted eye-bolts) when provided on the housings. If lugs or eye-bolts are not provided then lift using straps placed under the damper barrel; dampers are heavier gage and more structurally sound than transitional sections. (NOTE: Never lift the housing by the door knobs or any ports/valves.)

Step 2) MOUNTING:

FLOOR MOUNT UNITS:

- 2a. Units should be mounted on concrete or similar pad or metal base; we recommend a minimum 4" off the floor. Never place housings directly on the floor or ground or anywhere where water could infiltrate the housing and damage the filter(s).
- 2b. Housings must be lagged into the base structure; all filter housings have (4) 3/8" holes at each corner for lagging purposes. Ensure lag screws do not obstruct door removal. (NOTE: Do NOT overtighten screws or bolts or permit excessive pressure on the housing flanges which could result in damage to a seam weld.)

HUNG UNITS:

- 2c. Units can be hung but it is the contractor's responsibility to ensure that the hung unit is thoroughly supported (including the filter weights) and that there is minimal sway. (Keep in mind that 50-lb filters need to be installed and removed thru a bag; the housing must be extremely sturdy to ensure there is no sway during the filter installation or removal procedure.)
- 2d. The preferred method for ceiling hanging is to place slotted unistrut underneath the housing and brace the unistrut to the housing using the (4) corner bolt-holes in the bottom of the housing.
- 2e. Rod (or other) hangers must be positioned to not interfere with filter door access and filter installation/removal. Likewise, hangers and unistrut MUST NOT interfere with damper actuator access, or access to any housing mounted ports/valves/hatch.

Step 3) DAMPERS

- 3a. If the BIBO system includes opposed bubble-tight dampers (BTD's), then follow these instructions for attaching mating ductwork to CTC BTD's. Dampers have standard ANSI hole pattern with 3/8" bolt holes; use 5/16" X 1" bolts to attach CTC dampers to mating flange.
- 3b. Before bolting mating flange to the CTC damper, apply self-adhering closed-cell PVC or neoprene rubber gasket.
- 3c. If gasket does not meet ductwork specifications, then apply a thin coat of mastic or similar approved sealant to the mating flange. Ensure the damper is fully closed before bolting the mating flange to the damper flange.



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3d. Ensure duct sealant (if used) is fully cured and set before attempting to open the damper. (If uncured sealant gets onto the damper seals then use rubbing alcohol to carefully remove the sealant from the damper gasket/seals.)

3e. Once the sealant is fully cured, open each damper 90° to ensure free and clear operation of each damper. Check the damper seal for cleanliness and air-tight seal when fully closed.

Step 4) INSPECT & CLEAN

4a. Before installing any filters (*refer to BIBO Filter Installation Guide, IAS Bulletin #183-11-16*), check all valves, ports and dampers for proper and unrestricted operation.

4b. Check differential-pressure gage and piping.

4c. Wipe down interior of housing, transitions and dampers. Open dampers (one-at-a-time only) and wipe down both sides of the damper blade and seals to remove all dirt and grit. Close damper and check for air-tight seal and smooth operation.

4d. Wipe door and hatch (if provided) seals with damp cloth to remove dust and grit.

4e. Once clean, replace door(s) and hatch(es) and hand-tighten to maintain interior cleanliness until ready for filter installation and commissioning.

The above steps are guidelines and recommendations only for installation and cleaning of BIBO filter equipment. Please contact IAS with any questions or to discuss any site-specific or project-specific requirements for installation or cleaning.