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## Installation & Maintenance Procedures: Pneu-Con Bottom-Load Filter Cartridge with Cup *(Ref: BL-SB Polyester & Cup)*

### Introduction

Pneu-Con Bottom-Load style Pleated Filter Cartridges feature the latest technological advances in filter design and materials. The aerodynamic design of the Filter-Mounting Cup (acting as cartridge intake orifice) produces efficient cleaning energy (air-flow in rush). Bottom-Load Filter, with Cup, fit on Pneu-Con Standard-sized Tubesheet plates having Ø3.50" thru holes and a thickness of 1/8" to 1/4" range.

- a. Standard Filter Media: 8-oz/yd<sup>2</sup> (260g/m<sup>2</sup>) weight Spun bond Polyester (SBPE) cloth exhibiting a filtration efficiency of 99.9% for particle sizes ranging from 0.2µ to 2.0µ - holding a BGIA Dust Class "M" rating. Air permeability is 15-30acfm @ 0.5"Hg dP (Frazier method test). Mullen burst strength is at 350psi.
  - b. Optional PTFE Filter Media: Same media as described above, except with the addition of a PTFE membrane coating. This option affords optimal self-cleaning efficiency increasing its' ability to "shed" product during automatic Vibra-Pulse™ cleaning, minimizing material "Blinding" of the cartridge. Also eases manual-cleaning effort (when cleaning out of the housing). Use extreme care when handling & cleaning PTFE coated filters.
1. For Filter cleaning procedures and tips please refer to "Important Filter Service Information" pages located at the back of your Operation & Maintenance Manual (OMM).
  2. The following steps to be adhered during installation, removal and/or maintenance of Pneu-Con BottomLoad style Filter Cartridges. It is assumed the Filter-Mounting Cup(s) is securely fastened to Tubesheet.
  3. Cartridge Removal (In-Place):
    - a. Gain access to the Cartridges by opening the Receiver's Filter Access Door. Loosen Handles (on Left or Right hand side of door) just enough to allow the Handle/Bolt Assembly to swing away. It may be necessary to completely remove Handle from Bolt – should this be the case, use caution, so as not to drop the hardware into or onto equipment below.
    - b. Working from nearest Cartridge(s) adjacent to Door, loosen Band Clamp enough to slide away from Tubesheet, allowing Upper Boot of Filter to slide off Cup. Carefully lower Filter downward until Boot clears Cup and then maneuver Cartridge out through Receiver opening. Work from nearest Filter(s) to those furthest away, repeat until all Filters have been removed.

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- i. Filters with the PTFE coated media require extra care in handling and staging. Use pieces of smooth material (i.e. cardboard) to protect pleats from sharp/hard edges in and around work area and when installing Filters back into Tubesheet. PTFE coating is very thin and fragile, use care when handling, stacking or storing cartridges to prevent damage.
  - ii. If required clean Filter-Mounting Cups for corrosion or material build-up, using wire brush or scouring pad. Electrically-conductive applications require special attention, ensuring surfaces of Cup is free from corrosion, paint, insulating coating or other material affect continuity, as this is the electrical grounding area/pathway. To ease cleaning, the Tubesheet/Cups Assembly can be removed from the Receiver.
- c. Clean Filters as specified in the “Important Filter Service Information” pages at back of OMM.

#### 4. Cartridge Installation (In-Place):

- a. Working from furthest Cup location, carefully maneuver Cartridge in through Receiver opening, position Filter at desired Cup, raising upward until Boot is completely engaged (there may be a faint “pop” sensation as the Filter Boot finds ridge of Cup). Position and tighten Band Clamp onto Upper Boot securing to Cup. Apply slight downward tug on Cartridge Upper Boot to check if secure. Working from Filter(s) furthest from door to the nearest, repeat until all Filters have been installed.
- b. When all Cartridges have been installed, close Filter Access Door of Receiver. Replace and/or tighten Handles, previously loosened and/or removed. DO NOT over-tighten. It may be necessary to adjust the rear “Stop” (jam) nut on Hinge Bolt – ensure all stop nuts are aligned to ensure proper sealing of Door gasket, yet not allow warping door/straps.
- c. Return Receiver to operating status, check for signs of leakage at Door. Remedy as required.

Reverse above procedures to remove Cartridge from Tubesheet/Cups.

Note: It may take moderate to considerable force applied upon the Filter Boot to obtain a full seat into Cup, especially when reaching Cartridges furthest from the door.

The following method requires removal of the Tubesheet/Cartridge Assembly from Receiver. Disengage Cover Latches to allow removal of Receiver Cover, set Cover aside. Mark orientation of Tubesheet relative to Receiver Body for proper realignment during installation. Lift out Tubesheet/Cartridge Assembly from Receiver. Remove to work area taking proper care of Filters as outlined above.

#### 5. Cartridge Removal (Bench-top):

- a. With Tubesheet/Cartridge Assembly inverted, loosen clamps as described in Step 3b above. Note orientation of Clamps relative to witness mark applied

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- previously. Clamp orientation/access (should be facing same direction) critical when future In-Place maintenance desired.
- b. Pull on Boot until completely disengaged (there may be a faint “pop” sensation as the Filter Boot bypasses ridge of Cup). Loosen Band Clamp and slide away from Tubesheet/Cup. Repeat until all Filters have been removed.
  - c. If required clean Filter-Mounting Cups of corrosion or material build-up, as described in Step 3b, ii above.
6. Cartridge Installation (Bench-top):
- a. Working in reverse order from Step 5, position Cartridge at desired Cup, then apply gentle yet firm downward pressure until Boot is completely engaged (there may be a faint “pop” sensation as the Filter Boot finds ridge of Cup). Position Clamp in original orientation (relative to witness mark) tightening Band Clamp onto Upper Boot securing to Cup. Apply slight upward tug on each Cartridge Upper Boot to check if securely fastened.
  - b. Once all Cartridges have been installed, invert Tubesheet/Filter Assembly to normal upright position.
  - c. Return to Receiver Body, noting orientation with respect to witness marks applied previously.
  - d. Replace Cover Assembly onto Receiver, secure in place with Latches.
  - e. Ensure Access Door is closed.
  - f. Your Receiver, with Bottom-Load Filters is now ready for operation.