

Over-the-Top Bag Filter System

Installation and Operating Instructions

Models: PBH-410/PBH-420
PBH-410 BT/PBH-420 BT

Specifications

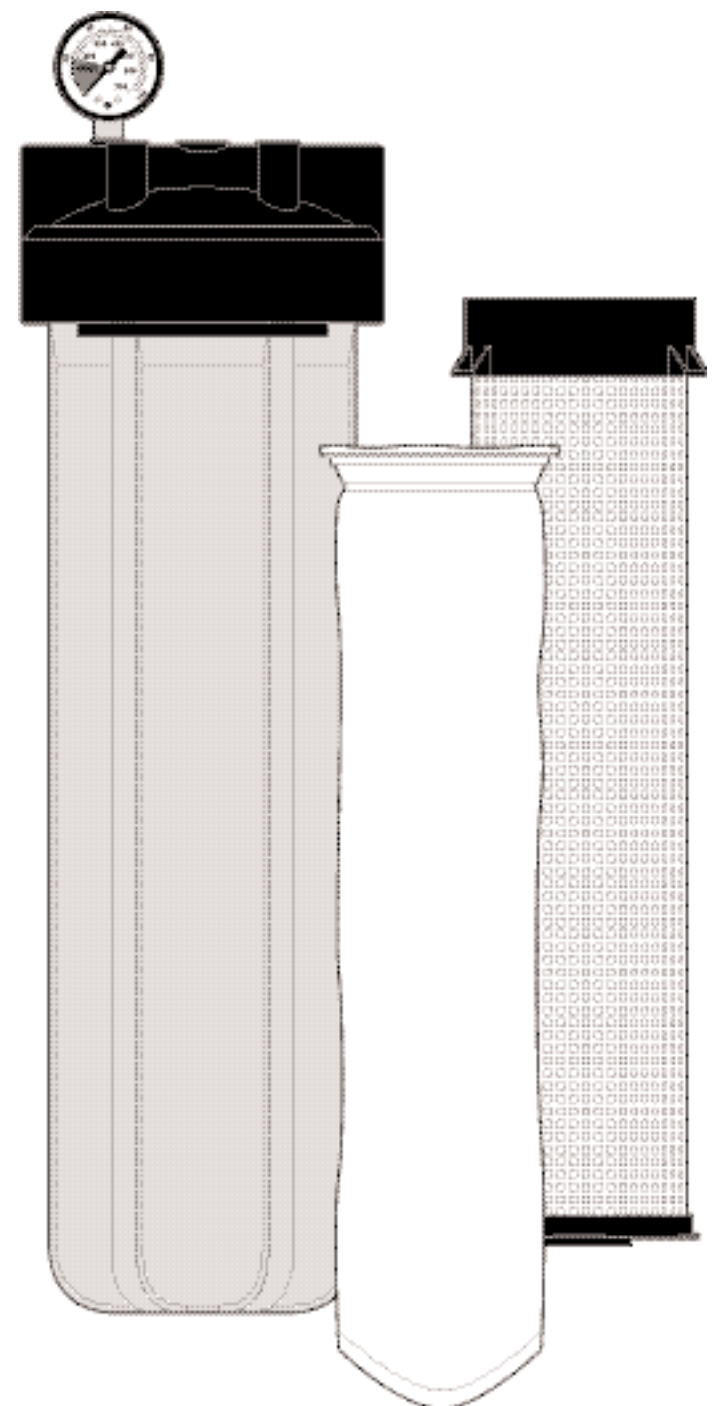
Maximum Pressure:	PBH-410/PBH-410 BT 100 psi (6.89 bar)
	PBH-420/PBH-420 BT 90 psi (6.2 bar)
Maximum Temperature:	100° F (37.8° C)
Recommended Service Flow Rate:	3 psid @ 35 gpm (132 Lpm)
Maximum Service Flow Rate:	3 psid @ 50 gpm (189 Lpm)

Materials of Construction

Filter cap	Polypropylene
Filter sump 10-inch	Polypropylene
Filter sump 20-inch	Polypropylene
Basket 10-inch	Polypropylene
Basket 20-inch	Polypropylene
Basket Gasket	Buna-N
O-ring (Sump)	Buna-N
Vent plug	Polypropylene
Drain plug	Polyethylene
Drain valve	PVC
Gauge	Brass & Bronze
Spanner wrench	Polypropylene

Dimensions

10-Inch Bag Filter System	7 1/4 inch Diameter x 13 1/2 inch Height
20-Inch Bag Filter System	7 1/4 inch Diameter x 23 1/2 inch Height



PENTEK LIMITED WARRANTY

Bag Filter Systems

Pentek warrants to the original owner (under normal use): Bag Filter Housings to be free from defects in material and/or workmanship one (1) year from the date of purchase. Any replacement products furnished will be free from defects in material and/or workmanship for the remainder of the original warranty period. This warranty does not cover: (1) replacement bag filters (2) defects not reported within the above time period, (3) items manufactured by other companies, (4) problems arising from failure to comply with Pentek instructions, (5) problems and/or damage arising from acts of nature, abuse, misuse, negligence or accident by any party other than Pentek, (6) problems and/or damage resulting in whole or in part from alteration, modification, repair or attempted alteration, modification or repair by any party other than Pentek, (7) noncompliance with applicable codes/ordinances.

If a defect in workmanship and/or material in a product or part covered by the warranty should arise, Pentek, at its sole discretion, will repair or replace the defective product or part (Pentek may consider, in good faith, the customer's preference).

All claimed defective product must: (1) be authorized for return by Pentek with an RGA number (2) include proof of the purchase date of the product or part (3) returned to Pentek prior to the expiration of the warranty date, at the customer's expense, shipment pre-paid, (4) be accompanied by a letter detailing the Model Number, Serial Number (if any), and a brief description of the problem.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, PENTEK DISCLAIMS ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH REGARD TO THE PRODUCTS, PARTS AND ANY ACCOMPANYING WRITTEN MATERIALS.

To the maximum extent permitted by applicable law, Pentek shall not be liable for any damages whatsoever (including, but not limited to, loss of time, inconvenience, expenses, labor or material charges incurred in connection with the removal or replacement of the Bag Filter Systems, special, incidental, consequential, or indirect damages for personal injury, loss of business profits, business interruption, loss of business information, or any other pecuniary loss) arising out of the use of or inability to use the defective products or parts, even if Pentek has been advised of the possibility of such damages.

Pentek's maximum liability under any provision of this Limited Warranty shall be limited to the amount actually paid for the Bag Filter System.

NOTE: Because some states do not allow the exclusion or limitation of incidental or consequential damages, the above limitations or exclusions may not apply.

THIS WARRANTY GRANTS SPECIFIC LEGAL RIGHTS, AND OTHER RIGHTS MAY APPLY. SUCH RIGHTS VARY FROM STATE TO STATE.



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Precautions

WARNING: For drinking water applications, do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

CAUTION: Filter must be protected against freezing (when used with aqueous solutions), which can cause cracking of the filter and water leakage.

CAUTION: Because of the product's limited service life and to prevent costly repairs or possible water damage, we strongly recommend that the bottom of all plastic housings be replaced every ten years. If the bottom of your housing has been in use for longer than this period, it should be replaced immediately. Date the bottom of any new or replacement housing to indicate the next recommended replacement date.

NOTE:

- Make certain that installation complies with all state and local laws and regulations.
- Do not use wicking or sealer for fitting connections into the cap of the filter. Teflon® tape is recommended for this purpose.
- Do not install where system will be exposed to direct sunlight.
- Allow a minimum of 3-inches clearance under the filter or optional sump stand to facilitate filter changes.

Installation

1. Before installing, verify that the materials of construction of the Pentek Bag Filter System are compatible with the fluid being filtered.
2. The location of the filter should include the following considerations: (1) adequate space for ease of changing the filter bag, (2) drainage or containment to collect drained or spilled liquid, and (3) proper ventilation, if required.
3. When installing the system, include isolation valves for the filter and support for the filter housing. Use caution when applying heat near the filter housing. It is best to weld or sweat all fittings before assembly to the filter. The filter head may be mounted to the filter support using 5/16 inch X 7/8 inch lag bolts. The bolt spacing is 3-inch on center, and the bolt circle is 2 1/2 inch. (See figure at right.)
4. The filter must be installed in the vertical position with the inlet/outlet ports at the top. Flow through the housing is inline. Note the inlet and outlet ports when connecting piping.
5. The filter housing is equipped with a 1/4 inch NPT gauge port on the outlet for installation of a pressure gauge (included) and a 3/8-inch NPT drain port at the base of the sump (3/8 inch NPT ball valve supplied). The gauge or valve should be installed using Teflon tape as a thread sealant.

Bag Selection

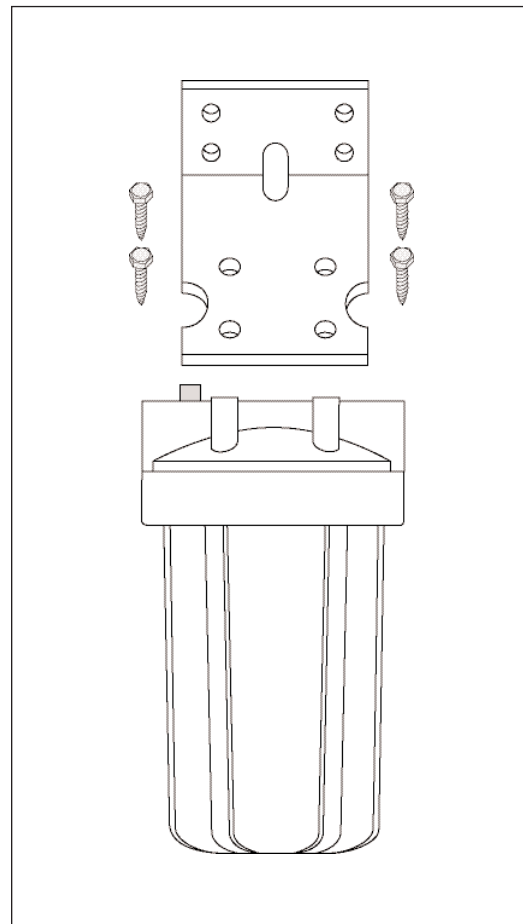
The Pentek Bag Filter System is designed for use with Pentek filter bags. However, the housing may accept some filter bags from other manufacturers. The unit is designed to accept a standard 4-inch FILTER SPECIALISTS, INC. (FSI) POLYLOC filter bag.

Other 4-inch filter bags may work if they meet the following criteria:

1. Filter bag length equals the depth of the filter basket plus 1-inch.
 2. The maximum allowable thickness of the filter bag at the sealing surface is .080 inches.
 3. The minimum allowable thickness of the filter bag at the sealing surface is .040 inches.
- NOTE:** The Pentek Bag Filter System may not be compatible with filter bags using reinforcing rings or snap bands.

Start-up

1. Open the inlet valve. It is recommended that the inlet valve be opened before the outlet valve to prevent any backflow.
2. Vent trapped air from the system before opening the outlet valve.
3. Open the outlet valve.



Bag Replacement

The pressure differential across the bag will remain fairly constant until the bag is approximately 80% blinded off. It is recommended that the bag be changed when the pressure differential reaches 15 psi. However, this figure can vary with the type of filter bag. The bag manufacturer's data should be consulted to determine the actual pressure drop for replacement.

WARNING: Review all precautions specific to the handling of the fluid being filtered before changing the filter bag. A filter bag that has been used with a hazardous liquid may contain residual amounts of this material and should be handled with the same safeguards that would be used in handling any hazardous and/or toxic material i.e. gloves, respirators, protective eyewear, etc. Filter bags should be disposed of in accordance with federal, state or local laws and requirements. Failure to follow precautions may result in injury.

1. Close isolation valves to the filter.
2. Drain sump. (See WARNING above)
NOTE: If bag has not been changed on a timely basis it may not drain. If necessary, the liquid contents of the used bag can be poured into the replacement bag to be filtered.
3. Unscrew sump from cap. Sump will unscrew counter-clockwise (when viewed from bottom).
CAUTION: Support sump at base while unscrewing to prevent dropping and possibly damaging the sump or drain valve.
4. Remove basket assembly from sump. (See WARNING above)
5. Remove bag from basket.
6. Remove o-ring from groove in the sump and wipe groove and O-ring clean. Relubricate o-ring with silicone grease. Insert o-ring in place and press into groove.
NOTE: This step is important to ensure a proper housing seal. Make certain the o-ring is seated level in the groove.
7. Insert new bag into the basket. Form the bag to the contours of the basket, making sure that the bag extends fully to the bottom of the basket.
NOTE: Make sure the filter bag overlaps the bag collar to insure a proper seal when the filter housing is closed.
8. Screw the sump onto the cap and hand-tighten securely. Do not over-tighten.

Troubleshooting

Leaks

1. Check the o-ring for dirt, cuts, or swelling. Replace o-ring if necessary.
2. Make sure housing is closed properly. Hand-tighten securely. Do not over-tighten.
3. Check all threaded connections and rethread as needed.
4. Check to see if the filter bag is dirty and blinded off. (See WARNING under Bag Replacement) If this is the case, replace bag according to instructions.

Poor Filtration Results

1. Check to make sure the filter bag is properly seated in the support basket. (See WARNING under Bag Replacement) The bag should extend fully to the bottom of the basket and the top should overlap the sealing collar.
2. Check for rips or tears in the filter bag.

QUESTIONS?

Call our Technical Support Department at 1-800-861-8758