



Installation and Operating Instructions

Pentek Models ST-BC-4, ST-BC-5, ST-BC-8, ST-BC-10, ST-BC-12, ST-BC-15, ST-BC-16, ST-BC-20

General

These quality engineered, high-flow filters in 304 Stainless Steel are widely used and recommended for "Central Filtration" systems such as required for apartment buildings, schools, clubs, camps, institutions, farms, restaurants and cafeterias where outside building installations require flow rates from 28 - 125 gpm (1,580 - 7,500 gph), when installed with PENTEK dirt/rust cartridges (Models S1 or P25) for cold water installations up to 100° F (38° C).

All 304 Stainless Steel filters are shipped without cartridges installed, featuring a single clamp for fast and easy removal of the cover.

The internal center rod features a tightening hand knob to facilitate fast cartridge change-over and sealing. Rated flow capacities are based on sediment removal with 25-Micron Rated filter cartridges.

When used with PENTEK taste/odor Model C1 cartridges, flow rates will range from 12 - 60 gpm (720 - 3,600 gph).

Specifications

Model	Rated Capacity*	Maximum Operating Pressure	Dimensions		Cartridges (Maximum)			Pipe Size (NPT)	Shipping Weight (Lbs)
			Height	OA Dia.	No.**	Dia.	Length		
ST-BC-4	28 gpm	125 psig - 300° F	19 1/4"	10"	4X1	3"	9 3/4" or 10"	1 1/2"	20
ST-BC-5	35 gpm	125 psig - 300° F	19 1/4"	10"	5X1	2 1/2"	9 3/4" or 10"	1 1/2"	20
ST-BC-8	56 gpm	125 psig - 300° F	29"	10"	4X2	3"	9 3/4" or 10"	2"	30
ST-BC-10	70 gpm	125 psig - 300° F	29"	10"	5X2	2 1/2"	9 3/4" or 10"	2"	30
ST-BC-12	84 gpm	125 psig - 300° F	39 3/4"	10"	4X3	3"	9 3/4" or 10"	2"	40
ST-BC-15	103 gpm	125 psig - 300° F	39 3/4"	10"	5X3	2 1/2"	9 3/4" or 10"	2"	40
ST-BC-16	110 gpm	125 psig - 300° F	49 3/4"	10"	4X4	3"	9 3/4" or 10"	2"	50
ST-BC-20	125 gpm	125 psig - 300° F	49 3/4"	10"	5X4	2 1/2"	9 3/4" or 10"	2"	50

* Above Rated Capacity based on sediment removal with a 25-Micron filter cartridge and 1 psig initial clean pressure drop. For taste/odor removal, rated flow capacities based on effective contact time are: ST-BC-4, 12gpm; ST-BC-5, 15 gpm; ST-BC-8, 24 gpm; ST-BC-10, 30 gpm; ST-BC-12, 36 gpm; ST-BC-15, 45 gpm; ST-BC-16, 48 gpm; ST-BC-20, 60 gpm.

** Number of cartridges refers to the number of 9 3/4" or 10" cartridges which are configured around the housing times the number of cartridges that may be stacked. Example: 4X2 means that 9 3/4" cartridges are configured four around and two high. Standard housing gasket is Buna-N.

IMPORTANT NOTICE — Must Be Read Before Installation

WARNING: The housing **MUST BE** protected against freezing. Failure to do so may result in cracking of the housing and leakage.

WARNING: If pressure may exceed **125 psi** at anytime, a pressure regulator **MUST BE** used.

WARNING: After opening to install cartridges, make sure to replace cover according to instructions, or it will leak under pressure.

WARNING: DO NOT use air to test housing for leaks.

WARNING: DO NOT use housing for air filtration.

CONNECTING THE FILTER

The filter should be mounted in an elevated position permitting easy draining. The drain plugs located on the filter wall should be removed, and piping with drain valves installed as in Fig. 1 or 3.

Identify inlet and outlet connections (inlet is always higher than the outlet).

TAKE CARE NOT TO HOOK THE FILTER UP BACKWARDS. Place filter as shown and connect piping, being sure to install a shut-off valve on each side of the filter. **NOTE:** When filter is installed next to the water meter or pressure tank, the main shut-off valve serves as pressure-side (filter inlet) shut-off.

TO INSTALL AND CHANGE CARTRIDGES

When changing cartridges, it is good practice to flush out the filter housing to remove accumulated dirt and sediment. Use the following procedure to dismantle the filter:

Shut-off inlet and outlet valves. Slowly open drain valves to release pressure, then open the vent to allow filter housing to drain. After the filter has drained completely, remove clamp nut and belly-band cover clamp. Lift off cover. Unscrew hold down knob. Lift off hold down plate, exposing cartridges. Remove the top cartridges and discard. Cartridge posts will now be visible. Inspect housing to be certain that all water has drained. Lift each cartridge post and discard the remaining. Clean all parts thoroughly. Check condition of cover gasket, and replace if needed.

REASSEMBLING FILTER/STARTING OPERATION

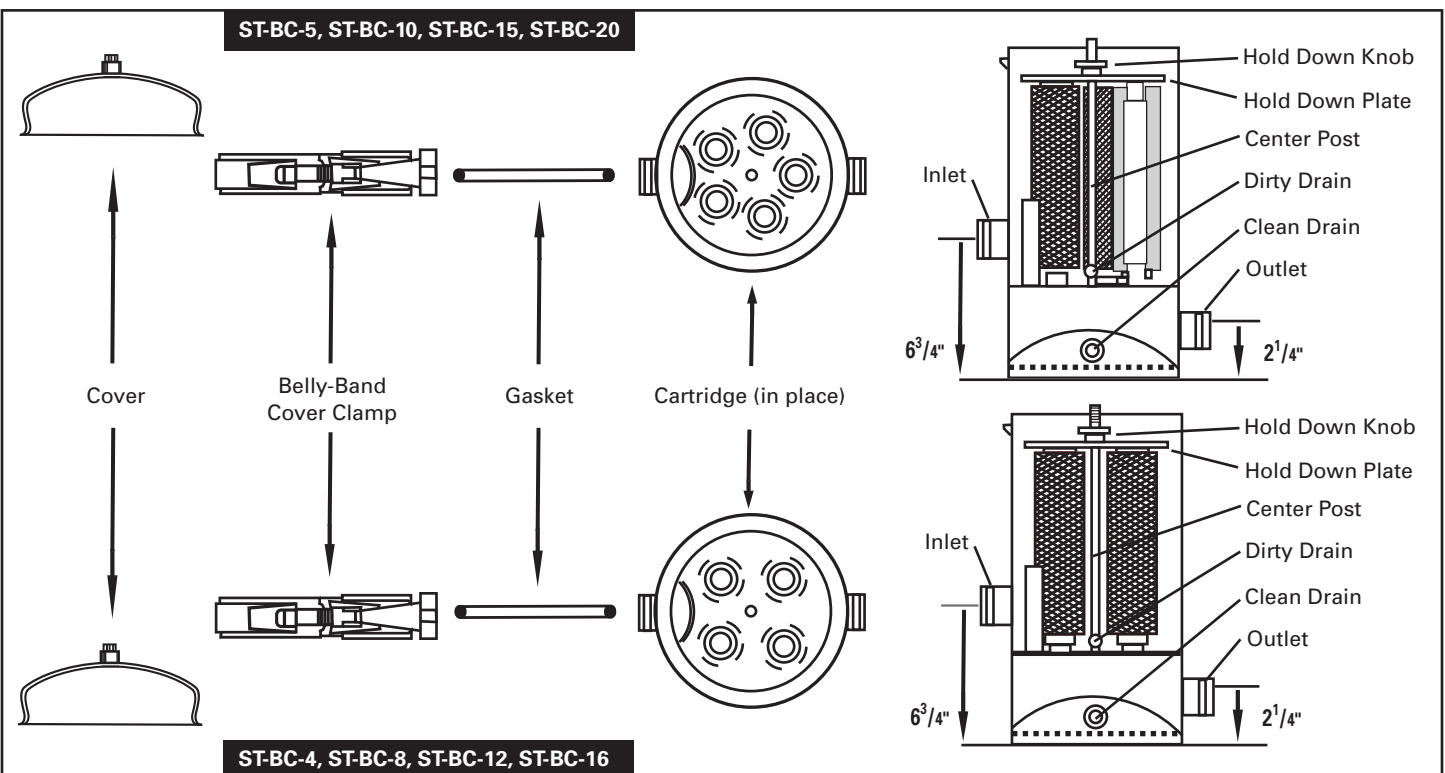
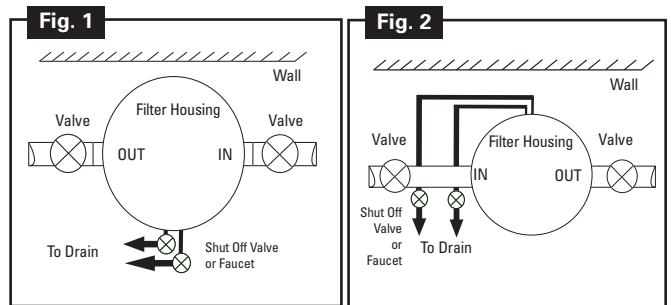
Place each of the cartridge posts into the openings provided at the bottom of the housing. With the cartridge posts in position, place new cartridges on them. Install by gently sliding them down the cartridge posts. **DO NOT JAM, FORCE OR DROP IN PLACE.** Place hold down plate over center post, guiding seal plates into the center of each cartridge. Tighten down hold down knob. **DO NOT OVERTIGHTEN.** Assemble cover using instructions.

1. Head must be properly aligned on beveled gasket before applying clamp.
2. Be sure head cover is not tilted or cocked on gasket.
3. Upon applying clamp, strike sides of clamp with mallet as the

bolt is being tightened, making sure flange of head and body are being grabbed by the retainers of clamp.

4. Continue to tighten bolt striking clamp until retainers of clamp have secured flanges of both cover and body. Clamp is properly tightened with approx. 1/2" gap between each end of clamp.
5. Filter is ready for service.
6. **Make absolutely sure** if there is a valve on the discharge or outlet, that it is open.
7. **Slowly** open valve on inlet, allowing cartridges and gasket to position.
8. Relieve internal pressure by opening vent plug in head cover.
9. Start pump.
10. Your filter is now operational.

Upon putting filter into service and it is found to be leaking at the clamp, **DO NOT CONTINUE OR ATTEMPT TO TIGHTEN BOLTS OF CLAMP UNDER PRESSURE.** Relieve pressure partially and drain water before removing clamp. Re-install starting at Step 1.



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