

Whole House High Flow Sediment Water Filter

Models : HPB1 & HPB1BC

(A) INTRODUCTION

This residential high flow water filter is designed for whole house water filtration for reduction of sediment, dirt, rust, sand and other fine particulates. It can be used on municipal water supplies as well as water coming from a well, lake, cistern etc.

(B) TECHNICAL SPECIFICATIONS

MODEL →	HPB1	HPB1BC
Total Height	13 ¾"	13 ¾"
Max Flow Rate @ 60 psi, 15 psi Δp	20 GPM (75 LPM)	
Inlet outlet connections (Female NPT)	1"	1"
Includes wall mounting bracket	-	✓
Includes 5 micron filter cartridge	-	✓
Includes wrench	✓	✓
Maximum working pressure**	100 psi (689 kPa)	
Operating temperature	4°C to 38°C (4°F to 100°F)	

* Flow rate of system depends on model and type of filter cartridge used as well as water pressure

** Install a pressure regulator and water hammer arrestor if pressure exceeds maximum rating at any time. **Note:** If daytime pressure is over 80 psi, night time pressure may exceed maximum pressure rating.

(C) INSTALLATION

Installation Cautions

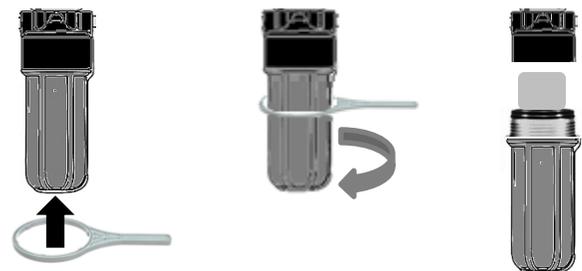
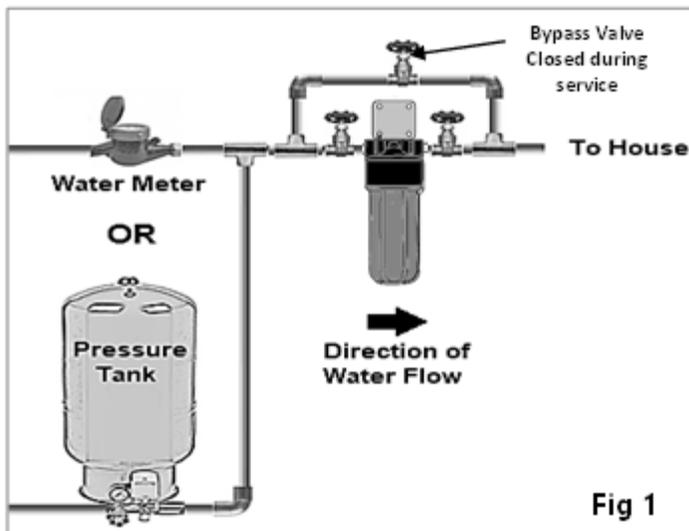
- **For use on main cold water line only.**
- **Always install after your pump and pressure tank (well or lake water) or after your meter and your main shut off valve (city water). NEVER INSTALL FILTER HOUSING BETWEEN YOUR WELL PUMP & PRESSURE TANK as that can cause damage to the unit and/or your well pump.**
- **Caution:** The rubber O-rings provide a water tight seal between the head and sump. It is important that they are properly **seated in the grooves** of the sump or a water leak could occur.
- **Do not** use on water that is microbiologically unsafe without adequate disinfection before or after the filter. For effective disinfection install a Rainfresh PROFESSIONAL UV Water Disinfection System
- **Do not** over tighten metal fittings into plastic filter head or it may crack.
- **Do not** use torch/heat near plastic housing. If necessary, wrap a wet cloth around the pipe and head to absorb heat. All solder joints should be made before joining pipe to the filter head.
- **Do not** install in direct sunlight.
- **Do not** use thread sealing compounds. Use thread seal tape for connections into unit.
- **Do not** use petroleum based lubricants on the unit as that can damage the unit and cause leaks. Use only food grade silicone lubricant available at most retail stores.
- Allow at least four (4) inches below filter sump for clearance to allow room for removal during filter changes
- **Prevent unit from freezing**
- **ELECTRICAL GROUNDING:** If water pipes are used to ground your electrical system, install jumper wire (not included) across the filter unit.
- **If water pressure** will at any time exceed the maximum pressure rating of the filter system, a pressure regulator and water hammer arrestor must be installed before the filter to prevent **potentially damaging shocks caused by high pressure**. Recommended regulator setting is 75 psi / 5.1 bar/ 517 kPa or less.
- **Do not install in multi-storeyed buildings over 4 storeys high or in non-residential applications.**
- Installation shall comply with province/state and local regulations.

What is Included



The filter can be installed on copper, PEX or CPVC pipe using appropriate fittings.

For installation location, see fig 1. Note: Allow at least four (4) inches below filter for clearance. Some water spillage may occur during filter cartridge changes. Therefore installing near a floor drain is preferable.



1. Using the wrench (HPB1-5), unscrew the filter bottom sump from the head and remove filter cartridge (included with model HPB1BC). Set these aside until later.

2. Identify INLET & OUTLET

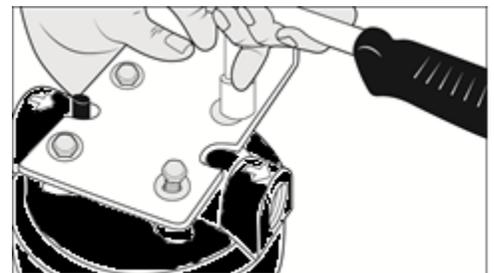
The filter housing is clearly marked with an arrow as "IN" and "OUT". Make sure that the flow path is correctly followed when making connections. The raw water supply connect to IN and the filtered water connects to OUT.



3. Attach the mounting bracket :

Orient the inlet and outlet of the head (marked on top of the head) to match your plumbing.

Mounting bracket (# HPB1-6) (included with model HPB1BC) attaches the filter housing firmly to the wall and prevents stress on the inlet/outlet connections. Using the 4 self-tapping steel screws included attach the bracket to the head. Then mount the bracket to the wall using appropriate screws. Attach at least one set of screws on to a wall stud to support the weight of the filter housing.



4. Plumb in the INLET and OUTLET of the filter. It is recommended that you install bypass piping (see Fig 1) so that unfiltered water can be directed to the house in case of emergency. The bypass valve remains closed during normal service.

Install the cartridge:

- Remove plastic wrap from filter cartridge and place it in sump (fig 2), making sure it is centered.
- Screw on the sump onto the head by turning counter-clockwise to tighten.
- Hand-tighten only (Fig 3). **CAUTION: DO NOT USE WRENCH TO TIGHTEN THE SUMP.** The wrench is to open the sump only
- Open valves before and after the filter unit, slowly turn on water supply and check for leaks. Flush water for 10 minutes prior to use. **THE FILTER SYSTEM IS NOW IN OPERATION**



Fig 2

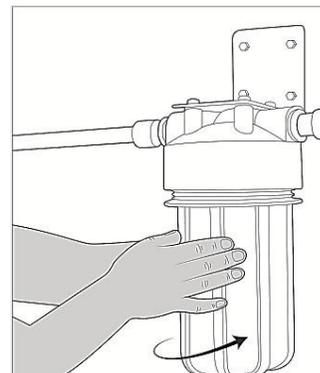


Fig 3

(D) MAINTENANCE

1. **O-ring Seals (HPB1-3):**
 - a. Replace O-rings annually.
 - b. Lubricate both O-rings on the top of the sump after every cartridge change to prolong their life. Use food grade silicone lubricant or other non-petroleum based lubricants only.
2. **Sump (HPB1-2):** Lubricate threads on the sump with the same silicone lubricant after every cartridge change
 - a. **Caution:** It is highly recommended to **replace sumps at least once every 5 years** to prevent costly repairs or possible water damage. Record date of installation of new sump at the bottom.
3. **Cartridge Replacement:**
 - a. Replace filter cartridge when either flow drops or every 4-6 months, whichever is earlier. Wash the filter sump (HPB1-2) with mild soap and water. **DO NOT** use harsh cleaners or hot water. If the unit is not used in winter, or will be subject to freezing temperatures, drain unit and remove cartridge.

To replace cartridge:

1. Shut off the inlet valve and open a faucet close by until pressure in the unit is relieved. Alternatively you can press the red vent button on top of the unit until pressure is released. Now shut off outlet valve to prevent water in the plumbing lines to continuously drain through the housing.
2. Place an empty bucket under the sump to catch any water spilling out of the housing
3. Using the supplied wrench (HPB1-5), unscrew the sump. Discard old cartridge and rinse sump.
4. Remove O-rings and replace if they have been in use for a year. Otherwise wipe them with a soft cloth or paper towel and clean the groove on which the O-rings are seated.
5. Apply food-grade silicone lube on the O-rings and replace. All lubricate the sump threads
6. Clean inside of the head as well to make sure the sealing surface is free of debris and stains.
7. Insert new cartridge into the sump and screw sump back on to filter. Hand-tighten only. **DO NOT USE WRENCH TO TIGHTEN SUMP.** Slowly open the water and flush for a few minutes before use.

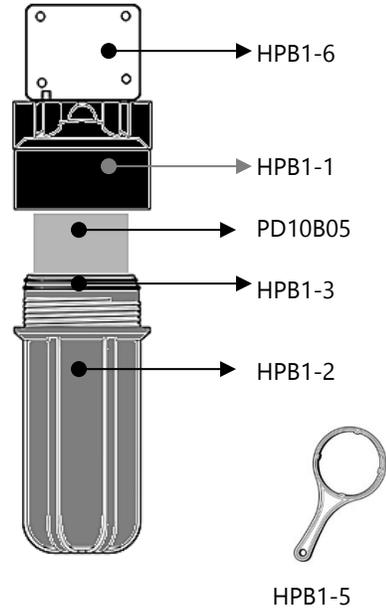
(E) TROUBLESHOOTING

PROBLEM	SOLUTION
Sump is difficult to remove	1) Unit may still be under pressure. Close supply valve and open a faucet to release pressure 2) Head seal (HPB1-3) may be stuck. To break the seal, use a pipe on the wrench handle as extra leverage to open the housing. Never use wrench to tighten the sumps. Always lubricate the O-rings with food grade silicone and replace annually
Leak at pressure relief	1) Unscrew from underside of head and clean O-ring & seat. Or replace vent O-ring

valve

(F) PARTS LIST

Part #	Qty	Description
HPB1-1	1	HPB1 Head with PRV 1" FNPT
HPB1-2	1	HPB1 Sump
HPB1-3	2	HPB1 Sump O-rings (sold as set of 2)
HPB1-5	1	HPB1 Wrench
HPB1-6	1	Mounting bracket, powder-coated steel (included with model HPB1BC only)
PD10B05	1	5 micron PP sediment filter cartridge (included with model HPB1BC only)



Drinking Water

NSF/ANSI 61

CSA B483.1

(G) LIMITED WARRANTY

Envirogard system housings are warranted, to the original Consumer purchaser/owner, for a period of one (1) year, from the date of purchase, against defects in materials or workmanship. The Company's obligation under this warranty shall consist of repair, replacement or credit, at its option, of any part found by Company inspection to be defective, provided that the product has not been misused, abused, altered or damaged as determined by the Company and provided that only approved Rainfresh Professional replacement cartridges and seals have been used in the housing. This warranty does NOT apply to the replacement cartridge which by nature will diminish in performance through normal use and requires regular replacement. This warranty does NOT cover, and is intended to exclude, any liability on the part of Company for any incidental damages, consequential damages, labour charges or any other costs incurred in connection with the purchase, installation, use, maintenance or repair of the water filter whether under this warranty or any other warranty implied by law. Some provinces/states do not allow the exclusion of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from province to province/state to state. This warranty applies only to equipment purchased and installed in domestic residential applications in Canada or the U.S.A. This warranty does NOT apply to commercial/industrial installations.

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