PROECO PRODUCTS

HCF Series Pressurized Filters

Instruction Manual

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The **HCF Series** filters combine both biological and mechanical filtration into one compact package. All filters include our Eco Media which is designed with a very high surface area to propagate large quantities of beneficial bacteria. The Easy-Clean feature of this filter makes maintenance a simple and quick job. Combine the HCF filters with our HPP pumps for a wide variety of pond and water feature applications.

ECO MEDIA

High Capacity Filters

- Designed for pools, spas, ponds and water features
- Top diffuser ensures even distribution over the media bed
- Tank made of durable HDPE Polymetric material

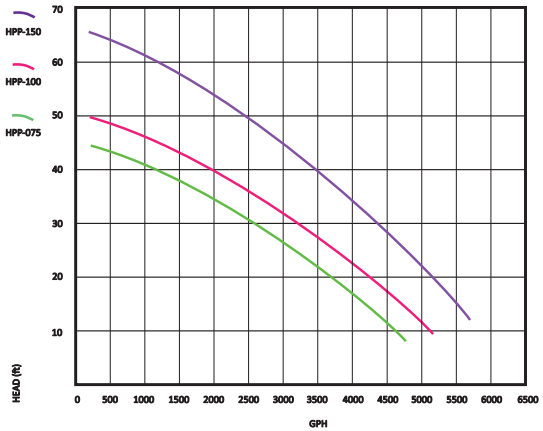
	HCF-19	HCF-24	HCF-30
Design flow rate (gpm)	40	50	98
Outlet/Inlet (in)	1.5	1.5	2
Filter Area (sq ft)	2.1	3.04	4.91
Maximum pressure (psi)	50	50	50
Recommended pump model	HPP-075	HPP-100	HPP-150
Recommended pump HP	.75	1	1.5
Recommended pond size (no fish)	9,000	20,000	40,000
Recommended pond size (with fish)	4,500	10,000	20,000
Eco Media Included	Yes	Yes	Yes
Dimensions (L x W x H) (in)	19 x 19 x 37	24 x 24 x 44	30 x 30 x 48
Warranty	3 Years	3 Years	3 Years

Pump and Filter Systems

ProEco Pump and Filter Systems are performance matched for maximum flow and energy efficiency. The systems are designed for quick and easy assembly of the components.

	HCF-19-S	HCF-24-S
Filter	HCF-19	HCF-24
Pump	HPP-075	HPP-100
Pump & Filter Base	Included	Included
Connection Hose	Included	Included
Hose Fittings	Included	Included
Hardware	Included	Included

The **HPP Series** pumps are designed for high efficiency and quiet operation. These pumps can be used for waterfalls, filtration systems, pools and spas. The integrated large basket strainer with see through cover makes maintenance simple and easy. The Self-Priming feature makes for simple and easy operation.



HPP

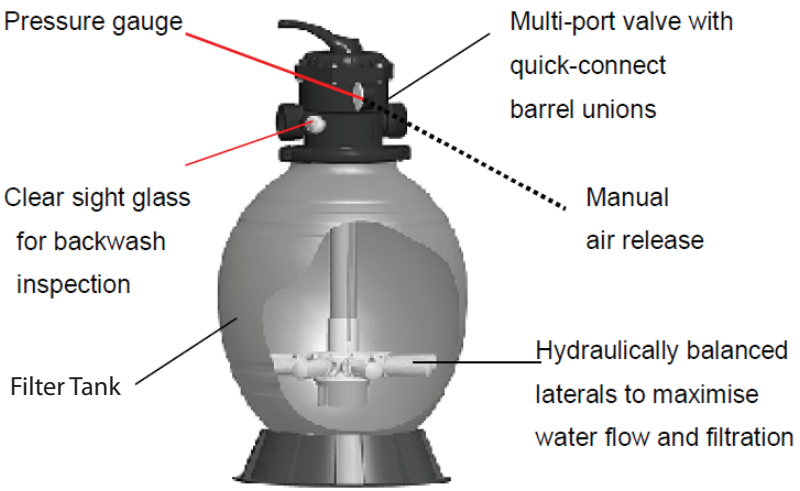
	HPP-075	HPP-100	HPP-150
HP	.75 HP	1 HP	1.5 HP
Voltage	115V, 60Hz	115V, 60Hz	115/230V, 60Hz
Power Consumption (amps)	8.8	9.7	15/7.5
Max. Flow Rate (gph / gpm)	5,200 / 87	5,800 / 97	6,400 / 107
Max. Head (ft)	45	50	65
Inlet / Outlet Size (in)	1.5	1.5	1.5
Power Cable Length (ft)	6	6	N/A
Dimensions (L x W x H) (in)	22 x 10 x 12	22.5 x 10 x 12	23 x 10 x 12
Warranty	2 Years	2 Years	2 Years

IMPORTANT SAFETY INSTRUCTIONS

Read all instructions before using this product.

⚠ **WARNING:**

- Pressurized filters are designed to be operated with water temperatures between 0° C (32° F) and 45° C (113° F). Operating the filter outside of this range mage damage the filter.
- Installation should be carried out in accordance with local codes and regulations by a qualified and authorized installer.
- Use the product only for its intended use.
- Close attention is necessary when used by or near children.
- Store product in a dry place when not in use.
- Use only manufacturer's attachments and spare parts.



INSTALLATION

1. Postion the filter as close to the water feature/pond as possible to reduce presure/ flow loss and maximize the filter's efficiency.
2. Position the filter so that it is free from flooding and away from low lying areas.
3. Position the filter so that the plumbing connections, multi port valve and bottom drain are convenient and accessible for operation, servicing and maintenance.
4. The filter should be installed on a concrete slab, very compacted base or equiva lent. Ensure that the base will not subside , preventing any strain on the plumbing fittings.
5. Ensure that there is no movement of the filter during operation of the multi port valve.

ADDING THE FILTER MEDIA

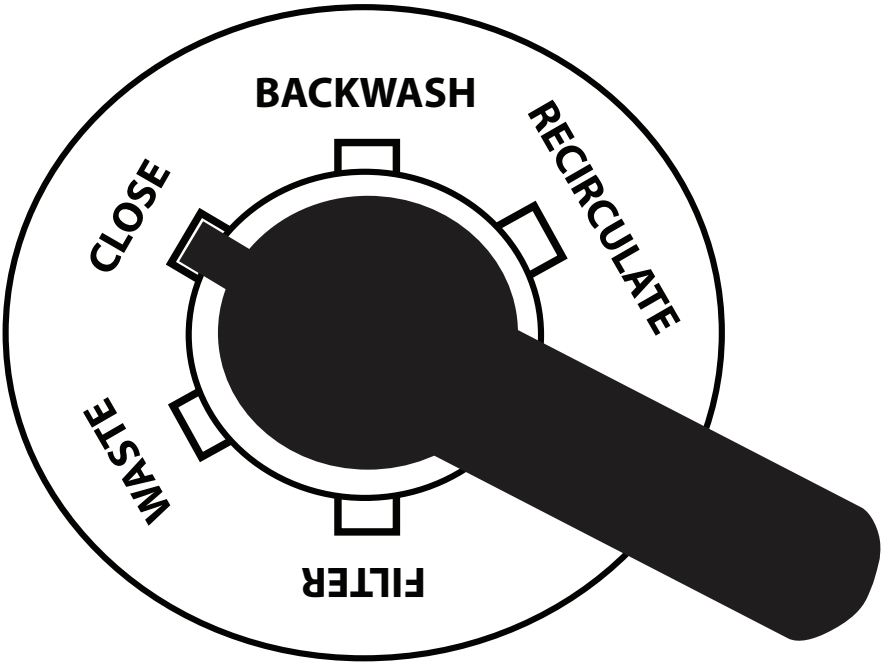
1. Remove the multi port valve from the top of the filter and set it aside.
2. Before adding the media into the filter, do visual inspection of the laterals to ensure that none of the laterals are loose or damaged.
3. To reduce stress on the laterals, add enough water to the filter to provide a cush ioning effect when the media is added.
4. Filters are supplied with a media locator that centers the riser pipe and prevents media from entering the riser pipe. Place the media locator in the center of the riser and carefully add the media. Remove the media locator once filling is com pleted.
5. Lubricate the multi port gasket with a silicone based lubricant.

PLUMBING

1. Verify the that incoming water pressure is within the filter's recommended operating range. Install a Pressure Reducing Valve (PRV) if pressure exceeds the recco-mended operating range.
2. If the filter is to be installed below water level or if it is connected to a water main isolation valves must be installed to prevent water from flowing into the water main.
3. Minimize the length of pipe and the number of fittings to minimize friction loss and maximize the efficiency.
4. Connect all plumbing to the multi port valve taking care that all joints are glued or tightened securely to prevent leakage.
5. To prevent damage to the pump and filter use only sealants specifically formulated for plastics.
6. Ensure that solvents are not excessively applied to fittings as this could damage gas gets and create sealing problems.
7. Do not over tighten fittings or adapters.

INSTALLING THE MULTI PORT VALVE

1. Screw the barrel unions onto the threaded ports on the multi port valve.
2. When rotating the multi port valve into position leave some leeway for alignment of the plumbing.
3. Once the multi port valve is into position and the plumbing is aligned apply Teflon tape to the barrel union thread.
4. Screw the barrel union into the threads of the multi port valve and hand tighten. The barrel union should be firmly threaded into the multi port valve and there should not be any play in the threads.
5. Tighten the barrel union with an appropriate tool.
6. Repeat these steps until all barrel unions are firmly installed into the multi port valve.
7. Connect all plumbing to the multi port valve and allow 24 hours for all glue to dry before testing.
8. Test the filter for leaks. If leaks occur repeat the steps above until all leaks are stopped.



MULTI PORT VALVE

1. **FILTER - Position for filtering.** Water flow is directed by the multi port valve down to the top of the filter media. As water flows down through the filter bed debris is trapped by the media. The filtered water is returned from the bottom of the filter tank through the multi port valve back out to the feature.
2. **BACKWASH - Position for cleaning the filter media.** Water flow is reversed up through the filter media, flushing the trapped debris out the waste line.
3. **RINSE - Position for flushing the filter.** Water flow is directed down through the media and out the waste line and rinsing the media.
4. **WASTE - Position for bypassing the filter to the waste outlet.** Water flow is directed to the waste outlet, bypassing the filter.
5. **RECIRCULATE - Position for bypassing the filter bed back to the feature.** Water is circulated through the multi port valve but not through the filter bed.
6. **CLOSED - Position for closing all flow through multi port valve and the filter.**

CAUTION: The pump must always be shut off before any position changes of the Multi Port valve can be done.

INITIAL START UP OF THE FILTER

1. Verify that the pump is shut off and that all plumbing connections have been made and they are secure.
2. Depress multi port valve handle and rotate it to the **BACKWASH** position.

   NOTE: To prevent damage to the control valve seal always depress the multi port valve handle before rotating the handle.
3. Turn on the pump and fill the filter tank with water.

   CAUTION: All suction and discharge valves must be open before starting the pump. Failure to do so could cause injury or damage.
4. Once water flow is steady out of the waste line turn on the pump for at least 1 minute to flush impurities out of the system.
5. Turn off pump. Rotate the valve handle to the **RINSE** position. Turn on the pump until water in the sight glass is clear (approximately 10 to 15 seconds)
6. Turn off pump. Rotate the valve handle to the **FILTER** position. Turn on pump.
7. Adjust suction and return valve to achieve the desired flow and re-check all connec tions.
8. Record the start up pressure gauge reading. Pressure will increase as the filter accumulates debris and flow will decrease. When the pressure reading is 7.2 psi higher than the start up pressure or the flow is insufficient to meet demand it is time to clean the filter (BACKWASH).

BACKWASHING

1. Turn off pump.
2. Release filter pressure by loosening the Pressure Relief Valve until the pressure drops to zero. Retighten the Pressure Relief Valve.
3. Rotate valve handle to the **BACKWASH** position.
4. Turn on the pump.
5. When the water in the sight glass runs clear turn off the pump.
6. Rotate the valve handle to the **RINSE** position.
7. Turn on the pump.
8. When the water in the sight glass runs clear turn off the pump.
9. Rotate the valve handle to the **FILTER** position. Turn on pump for normal operation.

WINTERIZING

1. Turn off pump.
2. Remove the Multi Port valve.
3. Drain and clean the filter tank.
4. Drain and cap all suction and supply lines.
5. Reinstall the multi Port valve but do not completely tighten. No pressure should be able to build up in the filter tank.
6. Cover all for the equipment for the winter.

TROUBLE SHOOTING	
Excessive force needed to operate the Multi Port valve	Foreign matter or debris lodged in the Multi Port valve assembly. *Rinse the filter several times.* ***If rinsing doesn't resolve the problem disassemble the valve to remove the obstruction.***
Dirty Water	Insufficient filter time. ***Allow filter to operate longer*** Heavy filter load. ***Backwash and continue filtering*** Pump not operating. ***Troubleshoot the pump*** Clogged filter bed. ***Backwash and continue filtering***
Filter media in the backwash	Excessive media. ***Remove excess media*** Excessive water flow. ***Reduce flow*** Incorrectly sized media. ***Replace with correct media***
Filter media in the return water	Filter is in recirculate mode. ***Put into filter mode*** Damaged laterals. ***Replace laterals*** Damaged multi port valve. ***Repair or replace multi port valve***
Short filtration cycles	Excessive water flow. ***Reduce flow*** Filter media impacted***. Clean filter media*** ***Check water chemistry***

Limited Warranty

This PROECO product is covered by a 3-year limited warranty by PROECO PRODUCTS. The limited warranty period begins from the date of purchase and covers material and manufacturing defects or failure of the product to operate as specified by PROECO PRODUCTS during the duration of the limited warranty period.
This limited warranty does not cover failure or problems related to:
– Improper installation, see this manual for proper installation procedures.
– Modification of the product in any way including attempts to repair the product by someone other than a PROECO PRODUCTS trained and authorized repair technician.
– Failure to follow proper safety, care and maintenance guidelines as outlined in this manual.
It also does not cover those parts of the product that are subject to normal wear and tear during usage of the product, such as:
– Impellers on pumps
– Filter pads and filter medium in filters
– Lamps in lights and UV clarifiers
– Anodes in Ionizers
PROECO PRODUCTS's sole liability shall be to replace or repair the product covered by this limited warranty. PROECO PRODUCTS shall not be liable for any consequential damage to any other part of the water garden, pond, water feature, landscape, structure, or the contents of any structure where the product is located or used including no liability for damage or harm to fish, animals, or plants in or around the water garden, pond or water feature.
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