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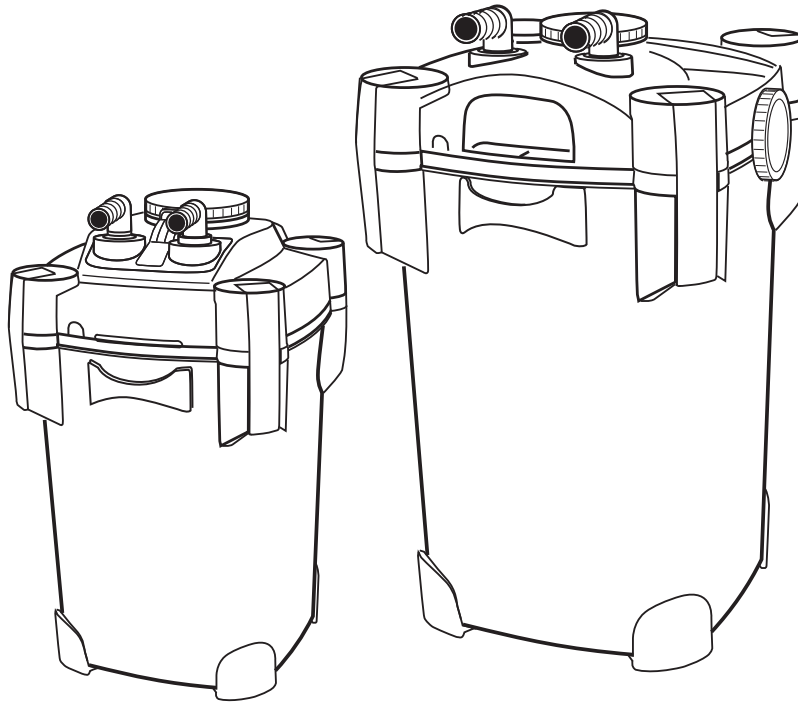
# PRESSURIZED FILTER SYSTEM

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## CARE AND OPERATING INSTRUCTIONS

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PRESSURE FILTER SERIES	ITEM NO. (No UV Clarifier)	ITEM NO. (With UV Clarifier)
CPF250/PF225	05410/84535	05415/84525
CPF500/PF450	05420/84515	05425/84505
CPF1000/PF900	05430/84575	05435/84565
CPF2000/PF1900	05440/84555	05445/84545

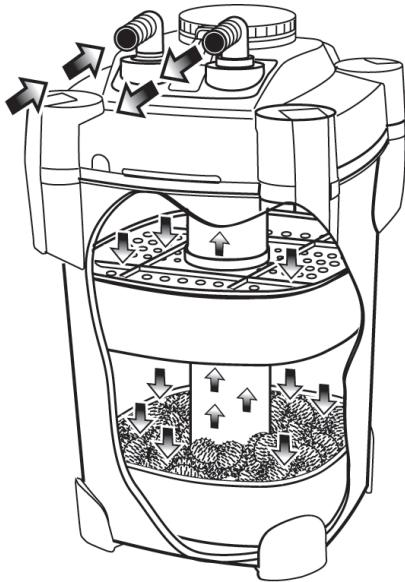


Pour afficher les instructions en français s'il vous plaît visitez  
<http://www.dannermfg.com/Store/instructions.aspx>

# PRESSURIZED FILTER SYSTEM

## INSTALLATION AND OPERATING INSTRUCTIONS

SAVE THESE INSTRUCTIONS



MODELS	UPC#	FILTRATION
CPF250U/PF225U CPF500U/PF450U CPF1000U/PF900U CPF2000U/PF1900U	05415/84525 05425/84505 05435/84565 05445/84545	Biological, Mechanical, and Ultraviolet (UV Clarifier included)
CPF250/PF225 CPF500/PF450 CPF1000/PF900 CPF2000/PF1900	05410/84535 05420/84515 05430/84575 05440/84555	Biological and Mechanical

**NOTE:** This filter is intended to pull suspended solids out of the water column. It is NOT designed to remove leaves and large solids from the pond. It should not be used as a pond vacuum. All pumps used with this filter must be used inside a Pump Bag or with a Skimmer or prefilter to prevent large debris from entering the filter chamber and blocking the biological filtration.

### HOW FILTRATION WORKS:

Both biological and mechanical filtration are essential for every pond; without them, your fish would be harmed by ammonia generated by the accumulated fish waste. The beneficial bacteria bed that builds on the filter media nitrifies any ammonia in the pond making it a healthier environment for aquatic life. Mechanical filtration removes debris in suspension in pond water keeping it cleaner and clearer.

Biomechanical filtration depends on the establishment of a colony of bacteria on the surface of the media that converts dissolved toxic nitrogenous waste to harmless compounds. When the bacteria are given the proper environment, they grow in a thin biofilm on the surface of each piece of media. The larger the surface area of the media, the larger the bacterial colony.

The media must first establish itself to handle the load of dissolved ammonia. Depending on the water temperature, it can take 2 - 4 weeks for the filter to establish itself in the pond environment. The ultraviolet filtration should be left off during initial seeding to allow the bacteria colonies to grow. The time required varies depending on climate, weather conditions, fish load and feed rates. Until the colonies grow large enough, the pond owner must take care to monitor levels of ammonia and nitrates in the water and take appropriate measures to correct any dangerously high levels.

The ultraviolet clarifier/sterilizer (UV) produces a wavelength of light that inhibits algae from reproducing by damaging its DNA. Please note that UV light does not kill algae that cling to the sides of ponds. If your pond has string algae you can add Pondmaster Pond Fix with activated barley to inhibit growth of floating Algae and Pondmaster Oxy Scrub to remove algae from rock surfaces.

### BEFORE YOU BEGIN:

- **READ ALL CAUTIONS** -- Ponds, outdoor electricity and UV lamps can be extremely hazardous if misused.
- **CHOOSE LOCATION** for your POND FILTER ARRANGEMENT -- There are several options setting up a pond filter.
- **SELECT THE PROPER SIZE PUMP** -- The right pump will ensure safe, quality filtration. The wrong pump will lead to inferior filtration and possibly damage the filter.
- **DECIDE ON OPTIONAL ACCESSORIES** -- It is easier to install accessories BEFORE installing the filter system.
- **COLLECT ALL THE ITEMS NEEDED TO COMPLETE THE PROJECT** -- Avoid 20 trips to the hardware store!
- **READ and KEEP ALL INSTRUCTIONS** -- Know how to use and maintain your filter.
- **\*\*\*FOR UV MODELS\*\*\* PREPARE POWER REQUIREMENTS** -- Prepare all electrical with care. Read and follow all instructions.

**WARNING!** PONDS ARE DANGEROUS TO SMALL CHILDREN!  
NEVER LEAVE CHILDREN UNSUPERVISED NEAR A POND.

**WARNING**

**If your filter includes a UV Clarifier please read the following:**

Do not attempt to look directly at bulb when lit; the ultraviolet light produced will harm your eyes.

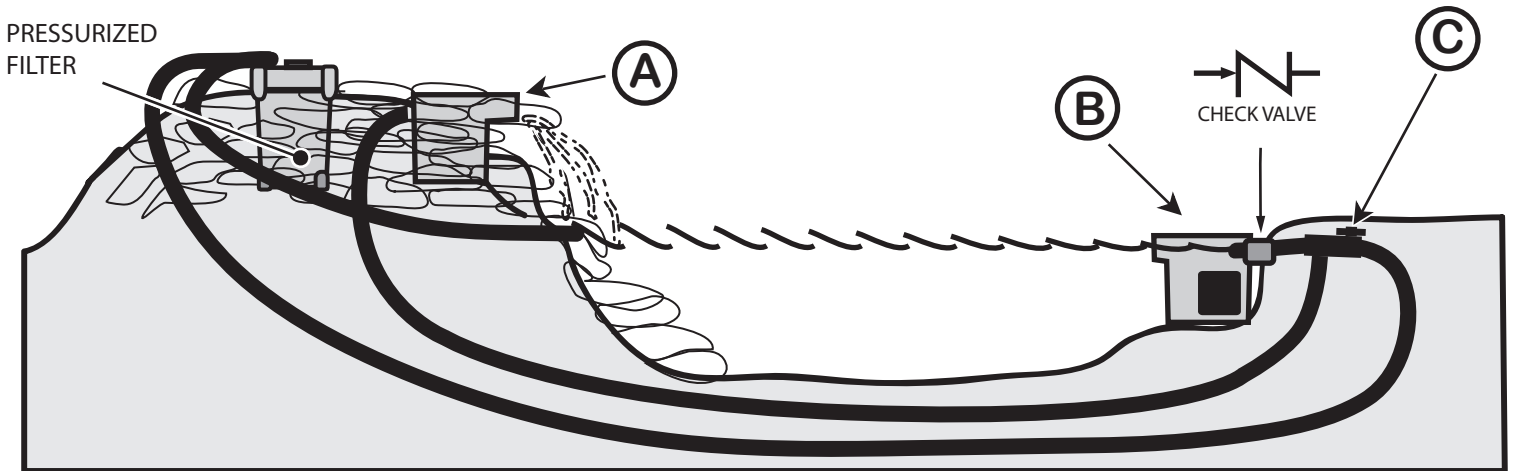
Do not allow exposure to your skin by the ultraviolet light; prolonged exposure will cause burns.

The units are provided with a safety switch that disables power to the bulb when the light unit is not assembled. Do not attempt to override this switch.

**WARNING**

This unit is for seasonal use only. It should not be used in freezing conditions because the quartz tube included with UV Clarifiers will crack, permitting live electrical current to enter the water. If the unit is dropped, unplug it and inspect the quartz sleeve for breakage or small cracks. Do not use until this inspection has been carried out.

**1 OPTIONAL ACCESSORIES for use with your pressurized filter**

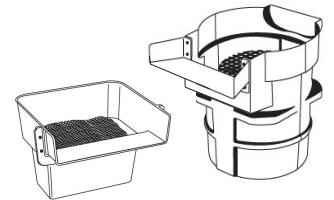


**A PRO BIOLOGICAL FILTER AND FALLS**

PROLINE PRO1000, BIO FILTER AND FALLS

(ITEM #'s 02477, 02478, 02479,)

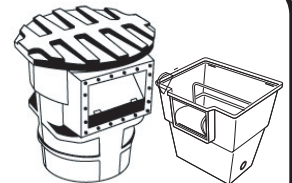
Produces a dramatic waterfall effect with extra wide spillway while providing extra filtration with flow through filter media and/or foam pads. Three sizes are available to make setting up a waterfall foolproof.



**B PRO SKIMMERS**

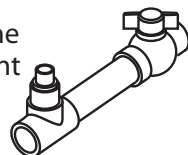
MINI POND SKIMMER (ITEM # 02450)

Provide an enclosure for the water pump and keep debris away from intake. Pro Skimmers have adjustable weir doors for maximum skimming with fish safe wings and removable leaf baskets. The Proline 5000 is perfect to handle the water flow demands of large ponds and the Mini Skimmer is suitable for use in smaller ponds.



**C VALVED BYPASS** (Bypass kit ITEM # 15015)

Use to split and control water flow between the filter and a waterfall or fountain. Useful to prevent overburdening the low pressure filter without losing any water flow to the water feature.



**D PUMP BAG** (ITEM # 12315)

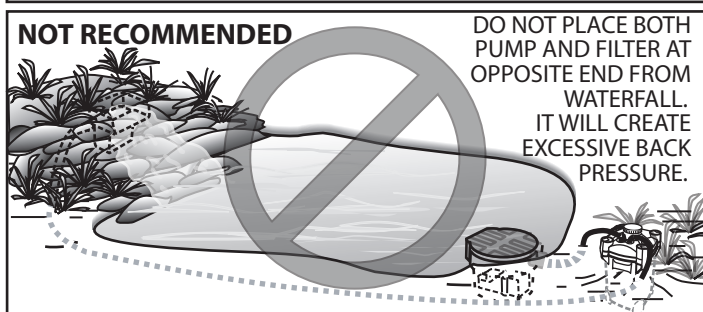
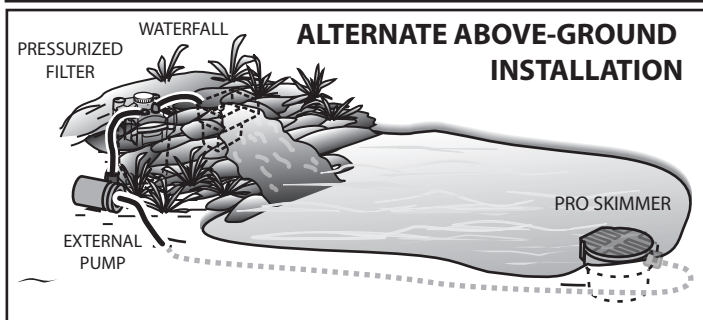
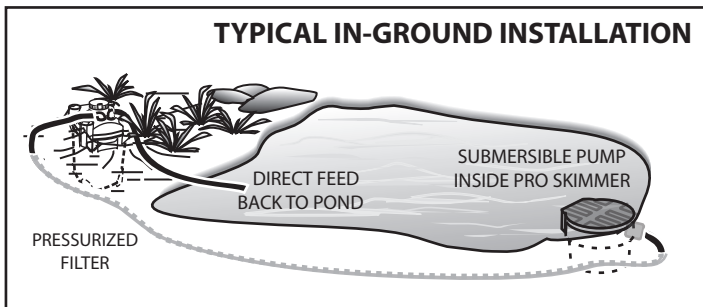
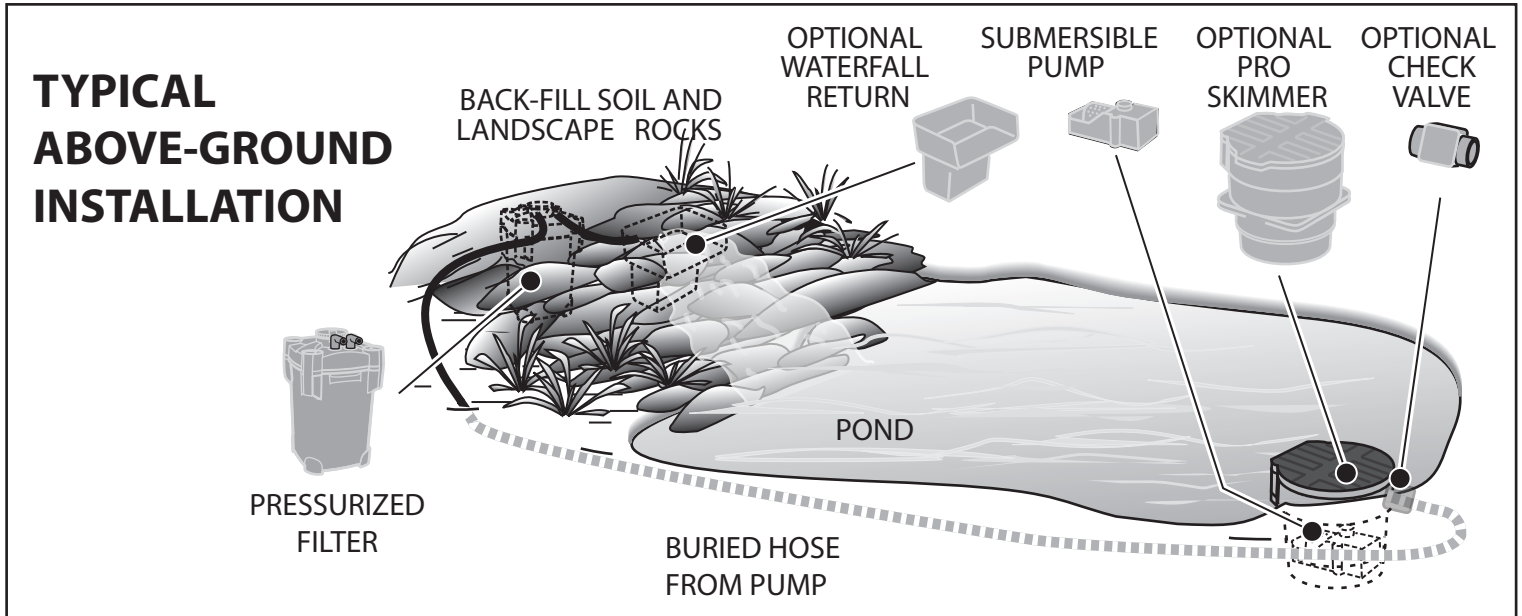
Plastic mesh enclosure protects pump from pulling in large debris.



## 2 CHOOSE FILTER / PUMP LOCATION AND SELECT ACCESSORIES

This filter must be connected to an external water pump. The water pump can be submersible or above ground depending on your preference. Pondmaster makes several perfectly matched powerful pumps and accessories to complete your filter system. Please note the following:

- The intake for the water pump should be positioned at the opposite end of the pond from the water return.
- Pressure Filter should be as close as possible and slightly below the waterfall to reduce back pressure to the filter. Always avoid using a long hose between the Pressure Filter and the waterfall.
- Bury the filter drum to just below the cover latches. If positioned above ground, use the backfill from digging the pond to surround the filter drum.



## 3 GATHER THE SUPPLIES NEEDED TO COMPLETE THE PROJECT

Besides the water pump, you will need the following items to set up the filter.

- Hoses -- Maximum 1 1/2" Flexible pressure hose (recommended). Note that a Valved Bypass must be incorporated into any high volume system (with pumps over the rated maximum pump output) or high pressure system (pumps that produce over 4 psi or 10' of head). See Hose **Pump and Tubing** chart on next page.
- Hose Clamps -- Stainless Steel, for each connection to pump and filter drain.
- In-Line Check Valve -- Prevents unintentional backwash in the event of a power loss. Must be sized to fit hose used between pump and filter.\*

\*Available at hardware stores, pool supply stores or irrigation supply centers.

OTHER SUPPLIES MAY BE NECESSARY DEPENDING ON WHICH OPTIONS AND ACCESSORIES YOU CHOOSE.

## 4 PUMP AND TUBING

## IMPORTANT INFORMATION!

### CHOOSING THE CORRECT PUMP

Your Pressurized Filter System works best within a certain range of flow. See Table below. Exceeding these values will cause leakage or breakage of the filter or its components and void the warranty.

PRESSURE FILTER MODEL	MAXIMUM PUMP OUTPUT (GAL/HOUR)	INTAKE PORT	OUTLET PORT
CPF250/PF225	500	3/4"	3/4"
CPF500/PF450	950	3/4"	3/4"
CPF1000/PF900	1200	3/4"	3/4"
CPF2000/PF1900	1800	1"	1"

Note that the hose fittings of your pressure filter vary depending on your model. Be sure to check the fitting sizes on the pump you choose and pick up the necessary adapters.

Choose a pump that does not exceed the recommended output for your pressure filter. Danner Manufacturing produces a variety of pumps to choose from for your set-up. See our website and/or your dealer for a selection of Pondmaster, Hampton Water Gardens and Supreme pumps.

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**Note that head height, length and diameter of hose and fittings all add to back pressure that can overburden your pressure filter or lead to low water flow. To maximize your system do the following:**

- Avoid using more tubing than is necessary for your filtration set-up.**
- Use tubing with a diameter that is equal or greater than the intake and output ports of the filter.**
- Keep tubing as straight as possible to avoid kinks.**
- 90° elbow connectors add to back pressure and should be kept to a minimum.**
- Use a bypass valve to bypass the optimal flow of water to the filter, allowing excess flow and pressure to return directly back to the water feature.**



### ELECTRICAL PRECAUTIONS

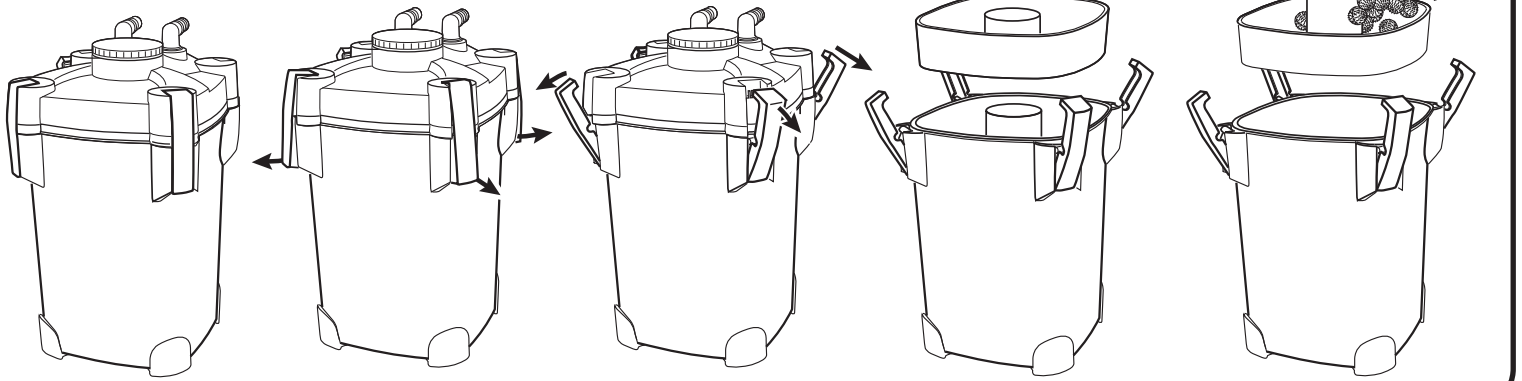
Always use a properly grounded outlet. Do not immerse the plug in water. **DO NOT REACH INTO THE WATER TO REMOVE THE PLUG. TURN OFF CIRCUIT FIRST.** A "drip loop" in the cords should be used. A "drip loop" is a loop in the cord below the level of the receptacle or plug that prevents water from traveling along the cord. The national Electric Code requires that a ground fault interrupter circuit (GFCI) be installed in every branch circuit supplying the fountain or pond equipment. Your dealer can supply GFCI units. **NEVER REMOVE GROUND PIN FROM PLUG.**

**WARNING: FOR YOUR PROTECTION, ALWAYS UNPLUG THE UNIT FROM ITS POWER SOURCE BEFORE INSTALLING OR SERVICING. DO NOT REACH, REMOVE OR DISASSEMBLE BEFORE YOU DISCONNECT POWER.**

## 5 SET UP FILTER MEDIA

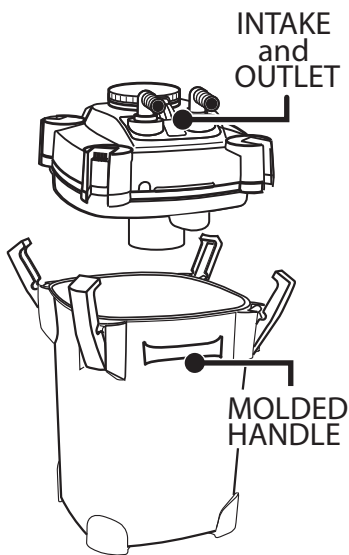
Unpack the Main filter unit. Open the cover by pulling latches out at bottom then pivoting them outward at the top. Then pull straight up on cover. If your filter includes the UV Clarifier, carefully lift the cover and check that UV bulb is connected to the fixture inside the quartz sleeve. If it has become dislodged during shipping see separate sheet included with UV units for instructions to access bulb. Carefully place the cover aside.

Debris Filter Media Pad fits into the top tray. BioMatrix filter ball media is used in the bottom tray or trays depending on your model. If your BioMatrix filter ball media is packed in plastic bags, empty them evenly into the bottom tray(s) and dispose of the bags.



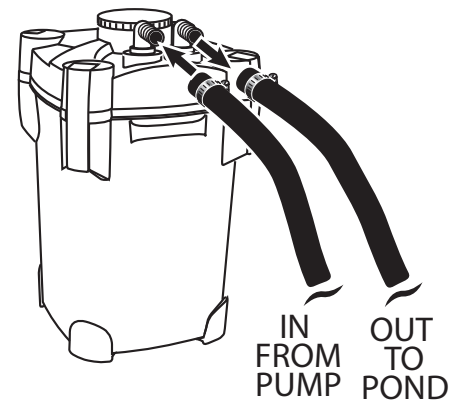
When finished, replace cover paying careful attention to align intake / outlet ports with molded handle in filter drum.

Close latches - - Clip tops first then press bottoms inward.



## 6 HOSE ASSEMBLY

Connect hoses from pump and to water return as shown using stainless steel hose clamps (not supplied). We recommend using an in-line check valve before the pump connection.



## 7 TEST FILTER SET-UP

Once hoses are connected, the filter should be checked with the pump running. Check that hoses are supported well enough to avoid stressing the plastic intake and outlet ports once they are weighted with water during operation. Supporting the hoses will help prevent kinked tubing. Check for leaks and tighten hose clamps if needed.

## 8 FILTER MAINTENANCE

The debris filter pad is first to receive the water that is pumped into the filter. When the debris filter begins to clog it can be removed and rinsed or replaced completely. If you choose to rinse the debris filter, rinse with water taken from the pond instead of chlorinated tap water. Doing this will avoid killing off the useful bacteria colonies that grow on the filter pads. Conditions vary, but generally the Biomatrix Ball Media will begin to grow helpful bacteria in a few weeks. Once established, these should not be disrupted during the warm weather season.

### QUICK DISCONNECT / FLOW CONTROL VALVE INSTRUCTIONS

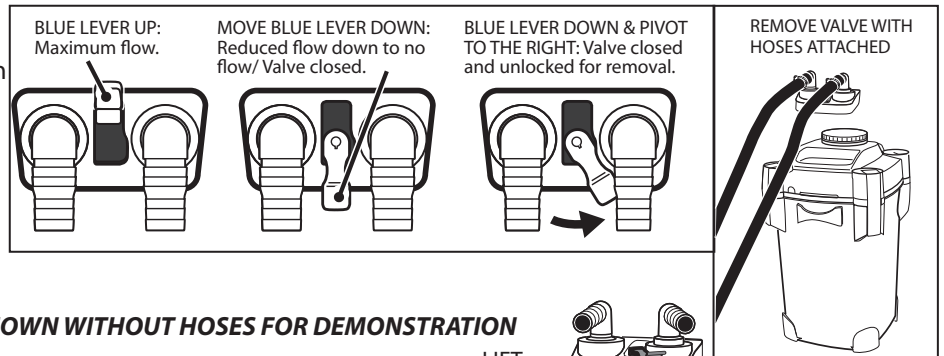
For Models **CPF 250, 500, 1000**  
**PF 225, 450, 900**

The intake and outlet are mounted to a removable Quick Disconnect / Flow Control valve.

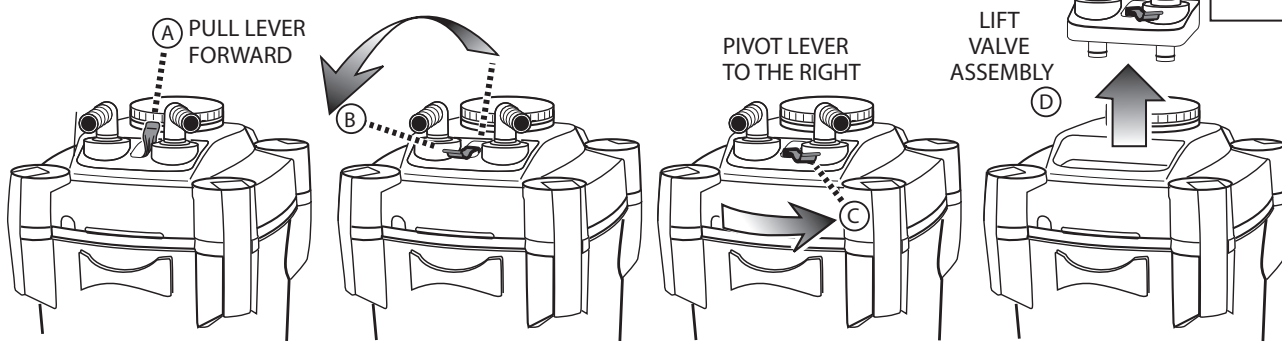
The Blue Lever will adjust flow rate as well as shut off the hoses allowing you to leave them attached to the valve assembly at the pond while servicing the filter case.

- 1) Turn off pump.
- 2) Pull Lever forward. This will close off flow in both hoses inside the valve. (A) (B)
- 3) Pivot the Lever to the right - this unlocks the Quick Disconnect Valve. (C)
- 4) Pull Valve assembly straight upwards. (D)

#### TOP VIEW OF VALVE ASSEMBLY

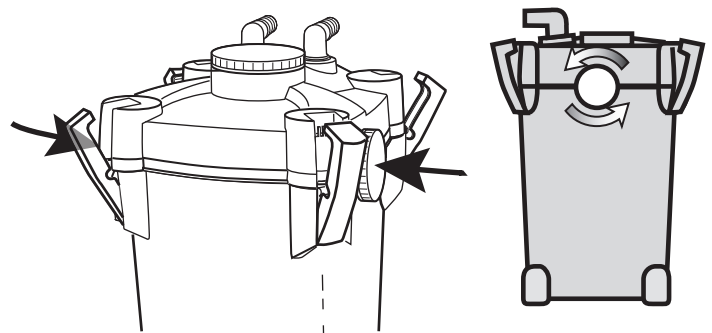


#### ILLUSTRATION SHOWN WITHOUT HOSES FOR DEMONSTRATION



**IMPORTANT!** 1) Always keep connection surfaces of valve assembly, cover and filter case clean of any dirt, sand or debris before reassembling.  
2) During reassembly press Quick Disconnect / Flow Control Valve completely down into filter cover before pushing lever back to left and up into maximum flow position.

**CPF2000/PF1900** series includes pressure release knobs on both sides of the cover. Once the corner latches are in the open position, rotate both of the knobs counter clockwise to break the seal and lift the cover.



**IMPORTANT! ALL MODELS:**

Always keep Cover O-Ring and contact surfaces of cover and filter case clean of any dirt, sand or debris before reassembling.

## 9 WINTERIZATION

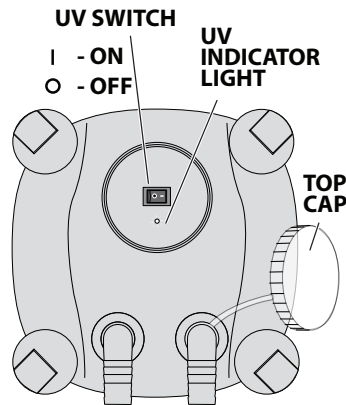
These filters are intended for use in non-freezing environments. If used in areas with cold winters, they must be removed from service, dried and stored before the freezing weather occurs. Failure to do so will void the warranty.

# Instructions for Filters with UV clarifiers

UV Clarifier is built into the covers of models 05415, 05425, 05435, 05445, 84525, 84505, 84565 and 84545

Do not use the UV clarifier when water is not passing through the filter. Note that a safety switch is built into the cover to deactivate the UV bulb power when the cover is removed. Do not attempt to defeat the purpose of the switch by forcing the micro-switch. Never look directly at UV bulb; the UV rays are harmful to eyes and skin.

The switch to activate the UV filtration is under the Top Cap. When the UV unit is on and properly working an indicator light will glow RED.



The UV bulb will need replacing. We recommend changing bulbs once per season since all UV bulbs diminish in strength as they are used. Note that the UV bulbs will continue to light up long after the useful UV wavelengths are no longer effective. See the following steps to change the bulb.

For best results, keep quartz sleeve clean. Always allow unit to cool before disassembly. Carefully disassemble and clean outside using a solution of 30% white vinegar to water. Allow to soak to soften scale. Use a bottle brush and mild detergent to clean inside of quartz sleeve. Make certain inside of tube is dry before reassembly. Lubricate O-Rings with Silicone grease (not supplied) before reassembling.

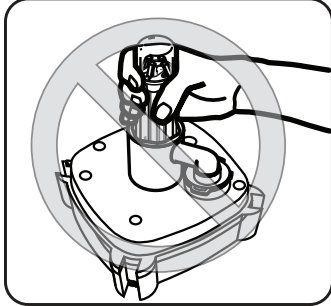
**DANGER: ULTRAVIOLET RADIATION.** Disconnect Power Before Replacing Lamp. Connect only to a circuit that is protected by a ground-fault circuit-interrupter (GFCI).  
**WARNING:** Risk of Electric Shock. Disconnect power before servicing. Do not immerse in water. Household use only.  
**GROUNDING INSTRUCTIONS** – This appliance must be grounded. In the event of a malfunction or breakdown, grounding will reduce the risk of electric shock by providing a path of least resistance for electric current. This appliance is equipped with a cord having an appliance-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is installed and grounded in accordance with all local codes and ordinances.  
**WARNING** – Improper connection of the appliance-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service representative if you are in doubt whether the appliance is properly grounded. Do not modify the plug provided with the appliance; if it will not fit the outlet, have a proper outlet installed by a qualified technician.



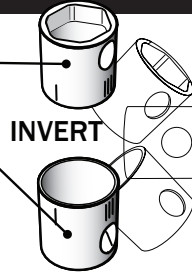
# Quartz Sleeve Removal / Bulb Removal

## CAUTION!

USE BLUE QUARTZ SLEEVE REMOVAL TOOL TO LOOSEN OR RE-TIGHTEN QUARTZ SLEEVE. NEVER FORCE QUARTZ SLEEVE WITH BARE HANDS.

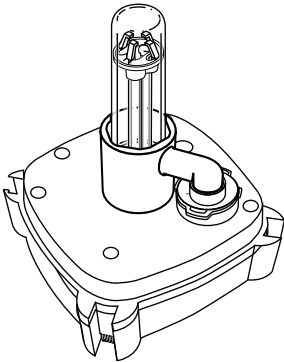


UPPER CENTER TUBE BECOMES QUARTZ SLEEVE REMOVAL TOOL WHEN INVERTED.  
SEE BELOW

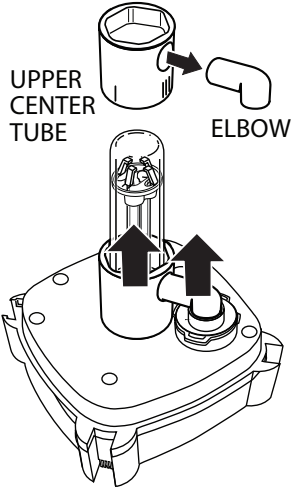


The quartz sleeve removal tool is molded in BLUE material. It functions as the Upper Center Tube during filter operation and becomes the QUARTZ SLEEVE Removal Tool when inverted.

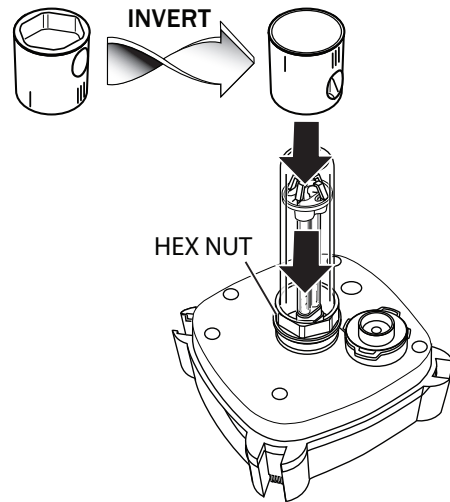
1) Disconnect power, remove filter cover and place upside down on a stable surface.



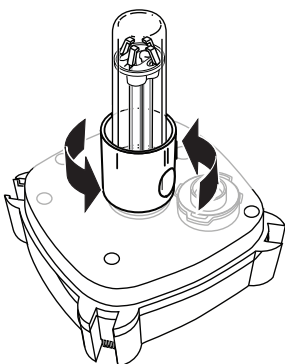
2) Lift and remove the Blue Upper Center Tube with Elbow. Remove the Elbow.



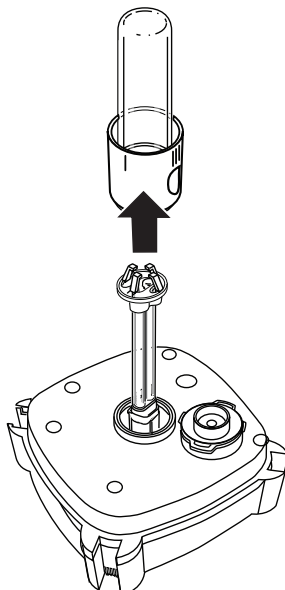
3) Invert & place Blue Center Tube back down over hex nut. It can now be used as the removal tool.



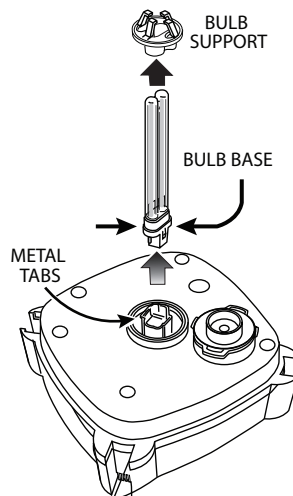
4) Turn the Quartz Sleeve Removal Tool counter-clockwise approximately 1/8 turn until it stops. The Quartz Sleeve is now unlocked.



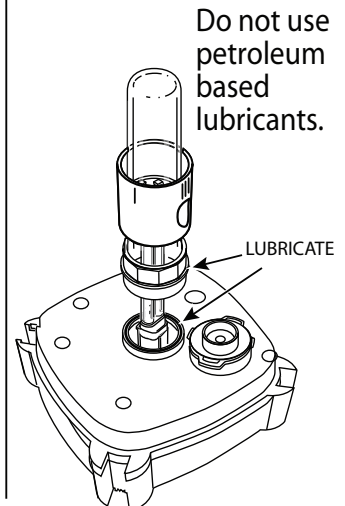
5) Pull straight upwards on unlocked Quartz Sleeve.



6) To remove bulb, grasp bulb at base and pull straight upwards. Flex metal tabs on socket outward to help release bulb.



7) Reverse order for reassembly. Lubricate O-Rings with SILICONE GREASE before reinserting and turning Quartz Sleeve to locked position.



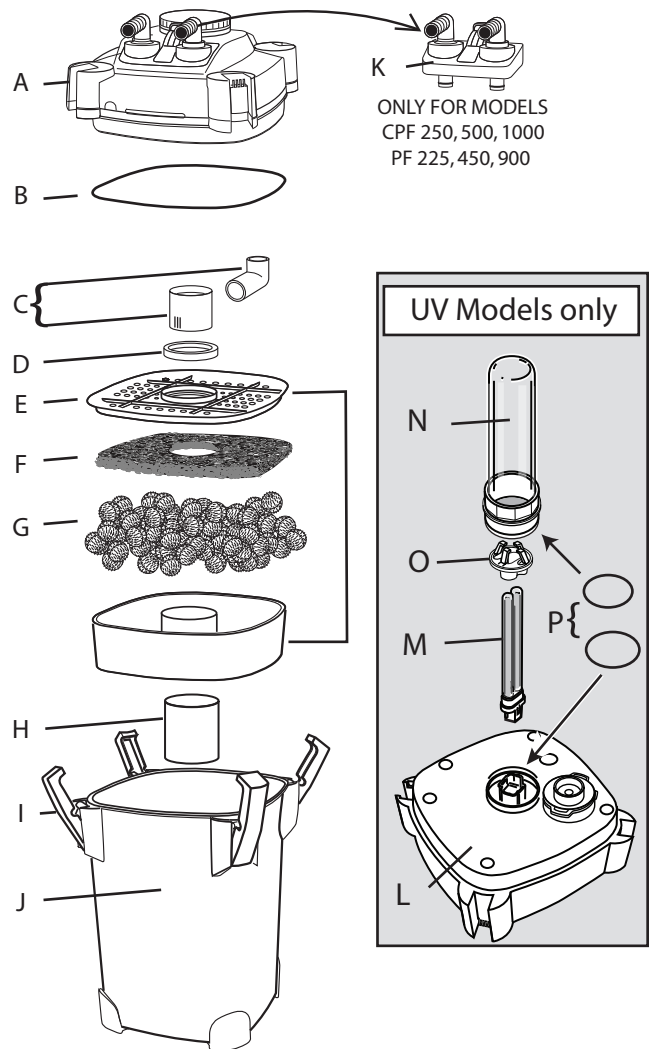
# 10 PARTS and ACCESSORIES \*

Specify your CPF Model. Parts vary in design and included quantity

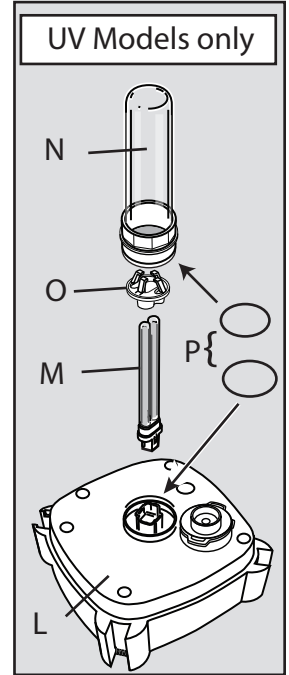
CPF/PF      ITEM#

Write down your model and Item number here: 

		For Models CPF 250 - 1000 PF 225 - 900	For Models CPF 2000 PF1900
A	Cover (Non UV models)	15430	15440
B	Cover O-ring	15451	15456
C	Upper Center Tube w/ Elbow	15470	15471
D	Rubber Gasket	<i>Picture Reference Only</i>	
E	Media Basket Cover with Media Basket	15427	15428
F	Debris Filter Pad	15415	15425
G	BioMatrix Ball Media (40 pcs)	15420	15420
H	Media Basket Support (Varies by model)	<i>Picture Reference Only</i>	
I	Filter Case Latch - set of 4	15480	15481
J	Filter Case	<i>Picture Reference Only</i>	
K	QD Intake / Outlet Models: CPF 250, 500, 1000 PF 225, 450, 900 only	15475	Not Applicable
L	UV Cover (with Ballast)	15435	15445
M	UV Bulb (13 watt)	15455	15455
N	Quartz Sleeve w/O-Ring	15460	15460
O	Bulb Support	15465	15465
P	O-Ring Set for UV	15453	15453



ONLY FOR MODELS  
CPF 250, 500, 1000  
PF 225, 450, 900



\* **NOTE:** Some parts are shown and listed here for reference only and may not be available.

## **WARRANTY**

Danner Filtration systems are warranted against failure due to defects in materials and/or workmanship for one year from date of purchase. This warranty covers defects occurring under normal use and applies to the original purchaser at retail and may not be transferred. The warranty and remedies set forth herein are conditional upon proper installation, use, maintenance, storage, and conformance with the applicable use. It will be based upon Danner Mfg. discretion as to whether the defects are of manufacturing origin. For warranty repair, return only the part that is defective to our factory. Please include a dated proof of purchase and \$10.00 for postage and handling. Any damages due to improper installation are not covered by this warranty. This warranty does not apply to appearance or accessory items. This warranty does not include damage due to handling, transportation, unpacking, setup, installation, repair or replacement of parts supplied by any other than Danner Mfg.; improper maintenance, modification or repairs by the purchaser; abuse, misuse, neglect, accident, fire, flood, or other acts of God. Any oral statements about this product made by the seller, the manufacturer, their representatives or any other parties do not constitute warranties and shall not be relied upon by the user and are not part of this contract. Neither the seller nor the manufacturer shall be liable for any injury, loss or damages, direct, incidental, or consequential, including but not limited to incidental or consequential damage for lost profits, lost sales, injury, and inability to use the product and the user agrees that no other remedy is available. Before using, the user shall determine the suitability of the product for their intended use and the user shall assume all risk liability whatsoever in connection therewith. To validate this warranty, keep your proof of purchase (copy of sales receipt). Warranty covers the repair or prorated replacement of the Danner Mfg. products. Danner Mfg. denies all liability for any other loss including but not limited to loss of equipment, income, livestock, or personal injury.

**THE FOLLOWING VOIDS WARRANTY: PRODUCT LABELS ARE DEFACED OR REMOVED.  
PRODUCT IS IMPROPERLY INSTALLED OR MAINTAINED BY USER OR THEIR AGENT.  
PRODUCT IS ABUSED, MISUSED, OR DAMAGED BY USER OR THEIR AGENT. PRODUCT  
DAMAGE IS CAUSED BY OVER-TIGHTENING FITTINGS ON VALVE PORTS. USE OF HIGH  
PRESSURE PUMP WITHOUT UTILIZING A PROPERLY INSTALLED VALVED BYPASS.  
PRODUCT IS NOT REMOVED FROM SERVICE AND DRIED DURING FREEZING CONDITIONS.**