

**SAVE THESE
INSTRUCTIONS**

ProLine™

By **PONDMASTER®**

PRO BIOLOGICAL FILTER AND FALLS

CARE AND OPERATING INSTRUCTIONS

MODELS

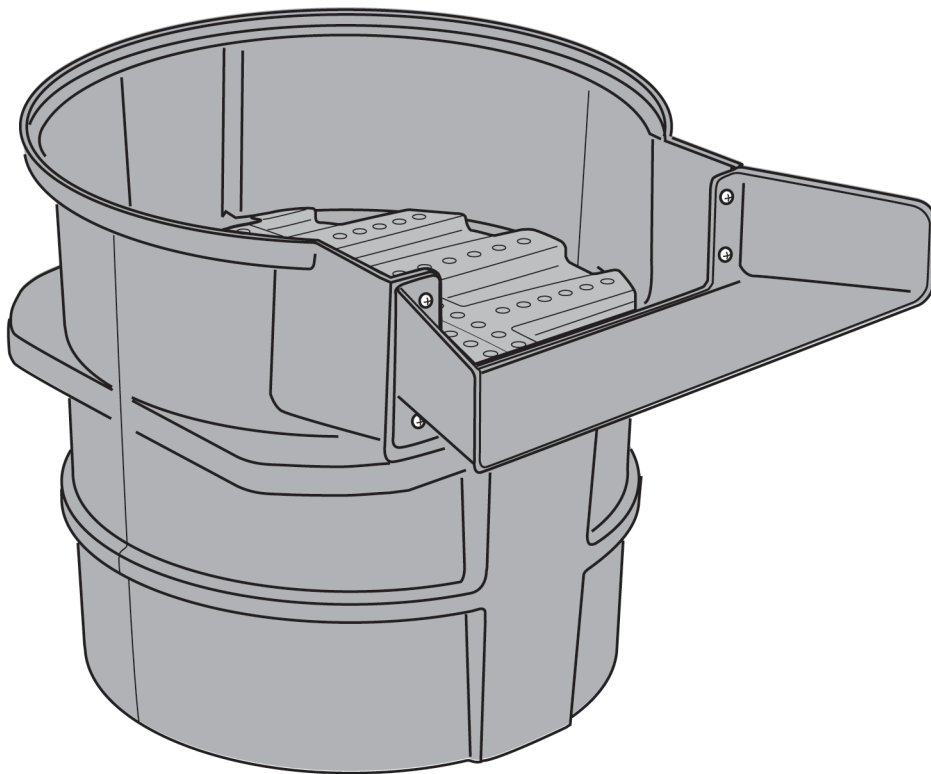
Pro5000 BioMatrix Filter & Falls

Pro5000 Filter & Falls with Debris Filter

UPC#

02490

02492



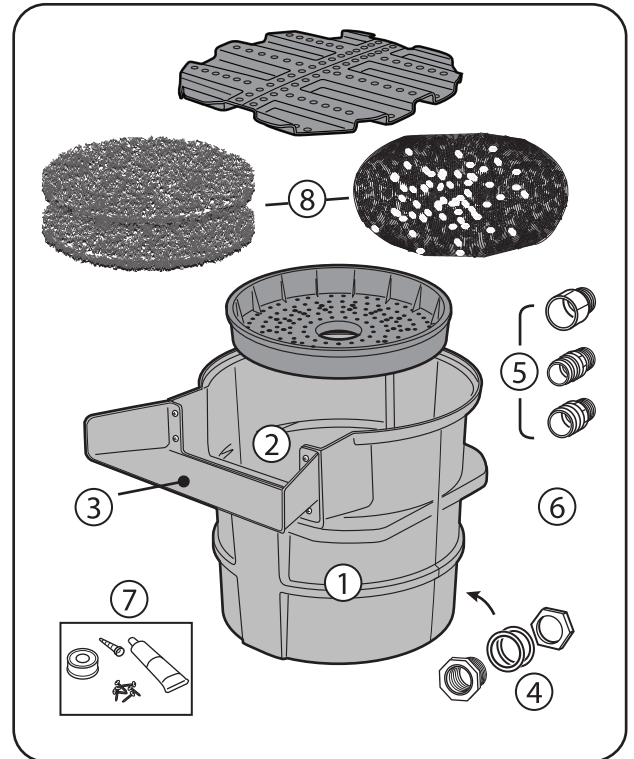
WARNING! PONDS ARE DANGEROUS TO SMALL CHILDREN! NEVER LEAVE CHILDREN UNSUPERVISED NEAR A POND.

1. CONGRATULATIONS!

Thank you for purchasing your new Pro5000 Filter and Falls. You now own one of the most versatile waterfall units ever designed. It has a number of features that set it apart from the rest:

- (1) Sturdy molded plastic construction
- (2) Large capacity for minimal turbulence and room for biological filtration media
- (3) Wide, reinforced waterfall lip.
- (4) Bulkhead assembly inlet.
- (5) Fittings for 1-1/2" and 2" tubing.
- (6) Anchoring Fins for permanent stable installation
- (7) Teflon Tape and Silicone Sealant
- (8) Biological filtration models feature either nonwoven polyester Debris Filter Pads or BioMatrix biological filter media in a convenient open mesh media bag to biologically treat your pond.
- (9) 1 Year Limited Warranty

The Pro5000 Filter and Falls are designed to be strong enough to resist collapsing from the pressure of soil and water around it, even when empty. It can easily support the weight of stones placed on its upper rim to conceal it. The large capacity of the Biological Filter and Falls means it will hold more filter media, providing greater surface area for bacterial colonization, and therefore more filtering capacity. The large multiple flat surfaces front and back also accommodate a large range of fitting options for maximum versatility in plumbing.



2. HOW BIOLOGICAL FILTRATION WORKS in the Pro5000 BioMatrix Filter and Falls

Fish extract nutrition from what they eat and excrete what's left back into the water column in the form of ammonia, which can be very toxic even at low concentrations. Your Biological Filter and Falls is specifically designed to maximize the natural processes that remove ammonia from the water. Water pumped into the Biological Filter and Falls brings the dissolved wastes into contact with bacterial colonies on the many surfaces of the internal filter media. These colonies digest, or metabolize, the ammonia. Some types of bacteria turn it into nitrites; others take the still toxic nitrites and dissolved oxygen and turn them into less toxic nitrates, a natural fertilizer that is easily taken up by plants. When the proper balance of fish, plants and aeration is reached, your Biological Filter and Falls will remove all of the ammonia and nitrite in your pond and since the bacteria work best when undisturbed, you don't have to clean it for the entire season. Even better, your Biological Filter and Falls makes it easy to find that balance by helping to aerate the water as it flows over the waterfall lip and by providing a great spot to place floating plants – right in the top of the Biological Filter and Falls itself. The PRO 5000 Biological Filter and Falls can handle water flows from 1000 to 5000 gallons per hour (GPH), so they work with a great variety of pump sizes.



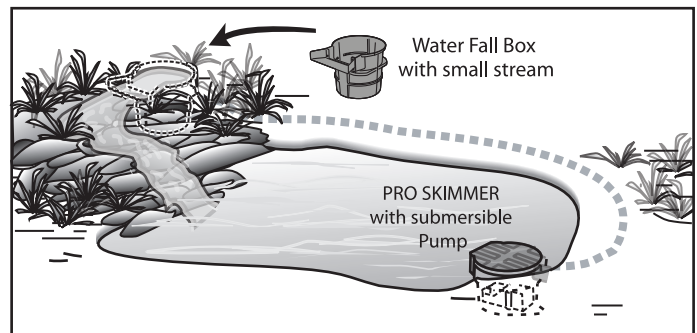
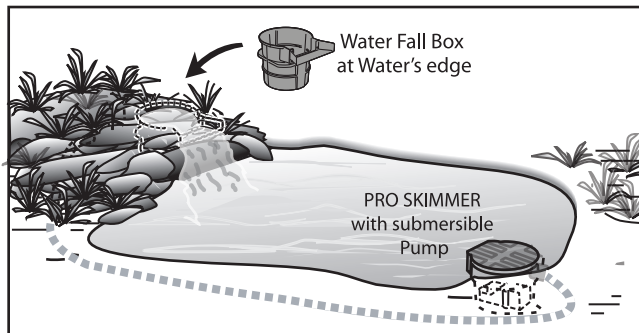
ELECTRICAL PRECAUTIONS

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.

3. LOCATION OPTIONS

Your Pro5000 Filter and Falls can be placed anywhere around your pond – inside the liner or at the liner perimeter. Most of the time it is placed at the beginning of a stream. The important thing to remember is that all of the water coming out of the filter must stay within the pond liner to avoid water loss. For maximum circulation and aeration, your Pro5000 Filter and Falls should be located on the side of the pond farthest from the pump location. The Falls are designed to seal to any flexible EPDM, PVC, or Butyl Rubber liner for leak-free service. Once you have determined the location of the filter, you should decide on the size of the pump that will feed it. You might want a lot of water movement in a rushing stream or powerful waterfall, or you may prefer a quieter flow or gentle trickle. Once you have decided on the effect you wish to achieve, you can choose the pump to suit.



CHOOSING THE CORRECT PUMP

A good rule of thumb for garden ponds from 500 to 5000 gallons is to circulate the entire volume of the pond every 1-2 hours to ensure good circulation while providing enough flow for an esthetically pleasing waterfall, stream or fountainhead. Your Pro5000 Filter and Falls was therefore designed to perform equally well with pumps of 1000 to 5000 GPH capacity.

To minimize friction and maximize water flow, the bigger the diameter of the hose the better. Even upsizing from 1-1/2" to 2" Flex PVC hose can make a major difference in actual water flow.

We recommend our Pondmaster 1200 and 1800 submersible pumps for smaller ponds under 1000 gallons; our 2000 and 3000 HY-Drives and Pro 2100 and 2600 pumps for greater head heights; and for even greater flows, our Pro 3200-XP, 4000-XP and 4800-XP Hy-Drive pumps. If an above-water rather than submerged pump is desired, check out our single-speed X-2520, X-4140, or X-6120 X-Series External Pumps. **See Pump Chart on next page.**

PONDMASTER PUMP REFERENCE CHART

Name	Model #	GPH @ 1'	GPH @ 5'	GPH @ 10'	Shutoff	Wattage Range*
Model 12	#02722	1200	800	600	13'6"	100 - 65
Model 18	#02728	1500	925	725	15'6"	125 - 85
HY-Drive 1600	#02663	1750	1450	1050	17'0"	125 - 110
HY-Drive 2000	#02685	2250	1250	750	15'0"	195 - 190
HY-Drive 2100	#02665	2100	1775	1325	22'10"	192 - 142
HY-Drive 2600	#02667	2600	2500	2025	26'7"	275 - 220
HY-Drive 3000	#02690	2800	2100	1350	15'3"	290 - 265
HY-Drive 3200	#02680	3700	2450	1000	12'0"	195 - 185
HY-Drive 4000	#02675	4100	2800	1575	13'0"	240 - 225
HY-Drive 4800	#02670	5200	4100	2550	18'6"	255 - 240
HY-Drive 6000	#02683	5500	4700	3400	22'8"	690 - 550

* Watts decrease as pump loads increase during normal usage. Examples show range from 0' to shut-off; watts continue to decrease as flow decreases.

PLUMBING

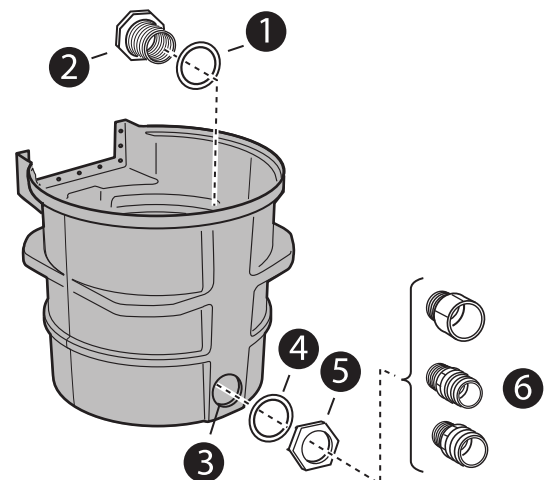
Note that it is often easiest to plumb the flexible hose to the Filter and Falls and set BOTH in position BEFORE excavating the pond. The soil from the pond excavation then be used to cover the hose and backfill around the Filter and Falls, saving time and effort.

Some units are shipped with Bulkhead Fitting assembled. If your unit requires assembly, slide the thick Rubber Gasket (1) over Bulkhead Fitting (2) and insert through opening in Filter and Falls wall (3). Place the thinner rigid Washer (4) over Bulkhead threads before attaching Nut (5). (See notes 2, 4)

- NOTES:** 1) The Nut is a left hand thread - - turn counter clockwise to tighten.
 2) The nut (5) has two different sized collars on its faces. Install the nut onto the bulkhead fitting with the smaller collar coming in contact with rigid washer (4).
 3) Choose the appropriate (6) fitting to attach to hose.
 4) Wrap threads of fittings with teflon tape before screwing into Bulkhead Fitting.

You may wish to consider adding a Tee connector and valve into your plumbing to allow backwashing of media.

SEE SECTION ON BACKWASH OPTION.



INSTALLATION TO FLEXIBLE LINER

Place the waterfall drum in the space that you prepared for it and check that it is level before burying.

Once the location for the Filter and Falls has been determined, make sure you have enough play in the liner to easily cover the whole front of the unit. You will need enough slack to allow the liner to rest up against the Filter and Falls drum without pulling or wrinkling.

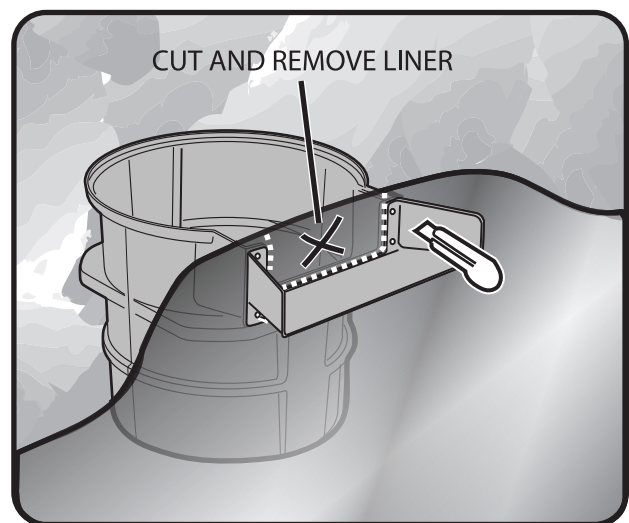
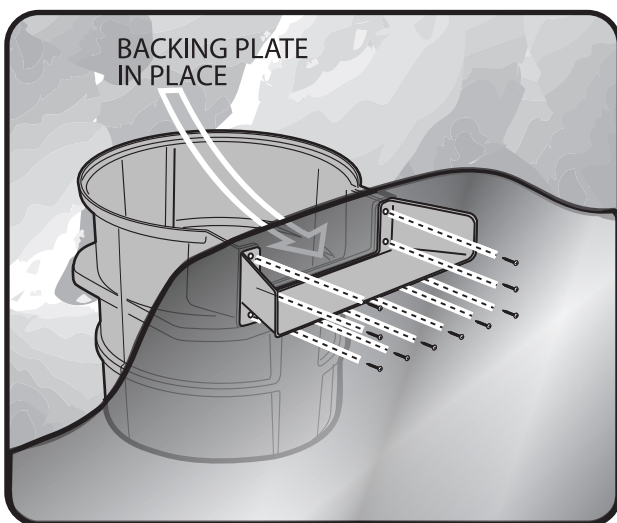
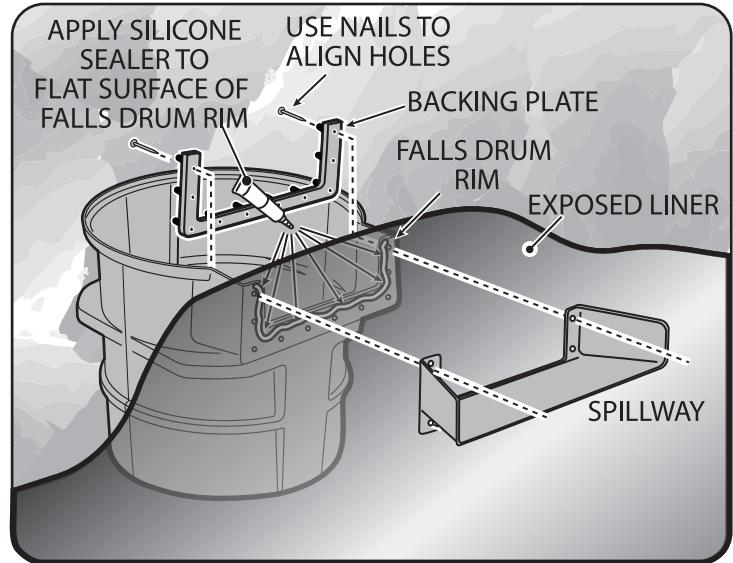
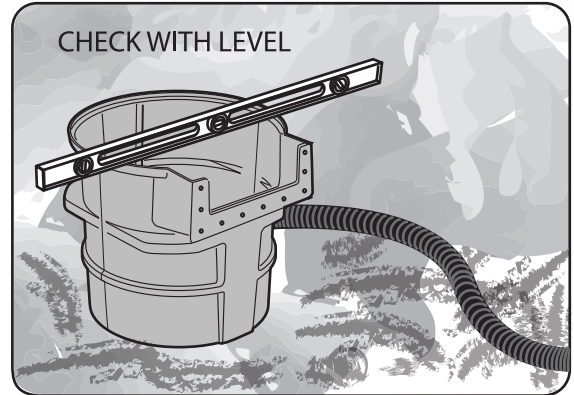
1) Carefully clean and rinse the liner inside and out with water, then dry it with paper towels or a clean cloth. The surfaces to be sealed must be clean and dry for the sealer to bond properly. If more aggressive cleaning is required, contact your liner manufacturer for the proper cleaning solution.

2) Check again that the liner will sit freely up against your Biological Filter and Falls drum without wrinkling or pulling.

3) Apply a continuous 1/4" bead of sealer around the Biological Filter and Falls drum rim. Make sure there are no spaces or voids in the bead between the holes and the edge of the cut-out on the face of the Filter and Falls.

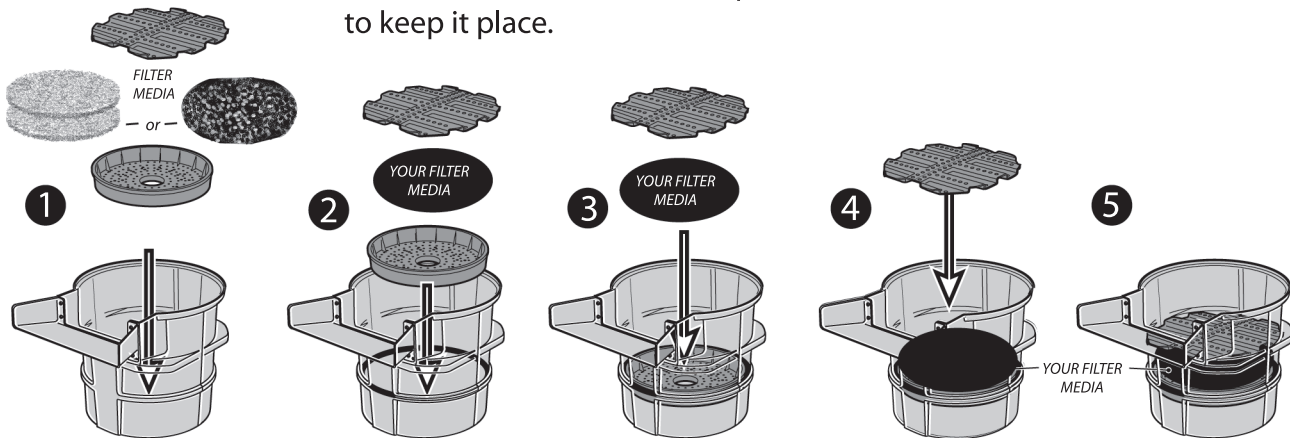
4) Insert a nail through one of the top holes of the backing plate as shown above. Push the nail through the corresponding hole in the drum's rim, then push the liner onto the nail to hold it in place. Push the second nail through the backing plate, falls drum rim and liner; then align the spillway using the protruding nails. Next, use a cordless screwdriver or drill set to slow speed at the lowest torque setting, and screw the spillway through to the backing plate trapping and sealing the liner up against the Filter and Falls drum. Be careful not to overtighten. Remove and replace the nails with screws last.

5) Carefully cut and remove the section of liner in the spillway opening.



FILTER and FALLS MEDIA SET-UP

Depending on your model, basic set-up provides an open chamber at the bottom intake of the water fall, a Media Tray to support the bagged media or the Debris Filters and an Upflow Grate that sandwiches the filter media to keep it place.



- 1 Filter media will be "Sandwiched" between the upflow grate and media tray.
- 2 Media Tray rests on inner ridge of Filter & Falls Drum
- 3 Filter Media lays on top of Media Tray.
- 4 Upflow Grate snaps into top groove in the waterfall chamber.
- 5 Complete set-up.

MAINTENANCE

Your Pro5000 Filter and Falls requires no maintenance other than periodically changing or refreshing the filter media.

FILTER MEDIA

Your Pro5000 Filter and Falls is a biological filter; it depends on an active colony of aerobic or oxygenating bacteria to remove ammonia from the water column. The colony will need 4 to 6 weeks to grow initially. After the bacteria have colonized the media, avoid rinsing the media in chlorinated water. Typical household tap water contains enough chlorine to wipe out the bacterial colonies. Instead, clean the media by immersing the bag of media in bucket or small tub filled with pond water and briskly shaking to break up and remove some - but not all - of the sludge that builds up. This is typically necessary once at the end of the season. Note that the "dirty" water resulting from cleaning the filter media is good fertilizer for most outdoor plants.

DEBRIS FILTER PADS

The filter pads provided in the 02492 Kit work as a debris filter and to a lesser extent a biological filter. The information above regarding how to clean the bagged filter media also applies to the debris filter pads. Note that depending on your particular pond conditions, cleanings may be needed more frequently. Debris filter pads (Item # 12461) can be replaced as needed.

WINTERIZING

The Pro5000 Filter and Falls can withstand winter conditions unless you live where winters are extremely harsh. If the falls are turned off during the winter months, be sure to empty the falls and any tubing that is above ground since standing water will form ice that can split valves and rigid fittings.

BACKWASH OPTION

To make maintenance of your Filter and Falls easy you can install a "Tee" and a valve into the line entering the Filter and Falls box. This set-up will allow backwashing of the media by turning off pump and quickly flushing the Waterfalls chamber out without having to remove the BioMatrix media bag. With pump off and valve closed, the Media Bag can be agitated in the pond water by hand to loosen and release some of the built up sludge in the media before backwashing. Note that chlorinated water should not be used on the media since it will kill the helpful bacteria colonies.

PARTS

Pro5000 Filter and Falls Models

Item # 02492 with Debris Filter Pads

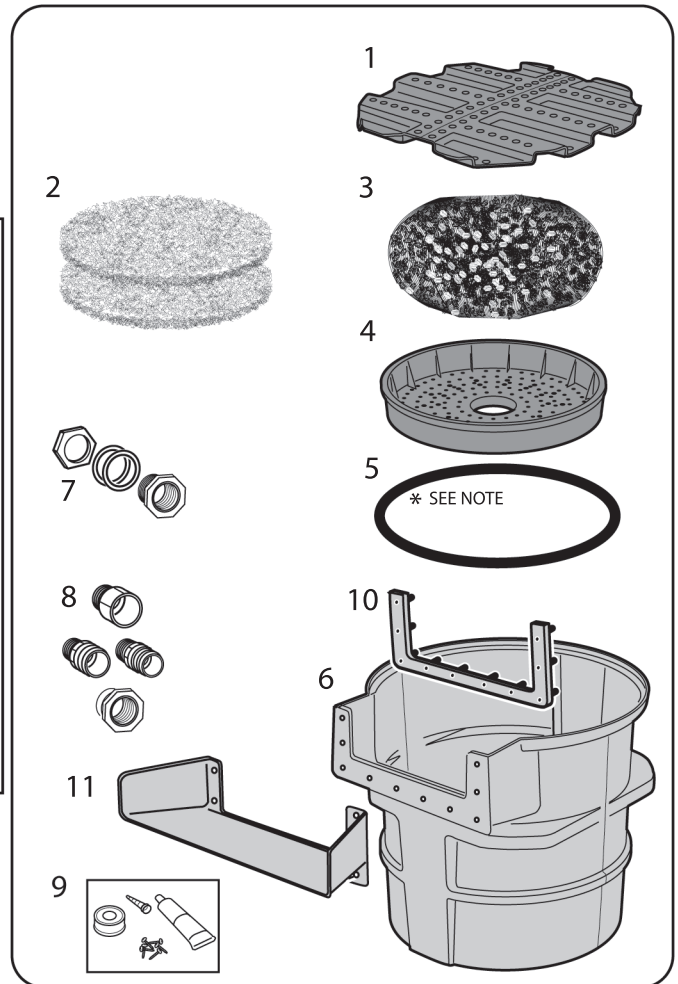
Item # 02490 with BioMatrix Media Bag

# DESCRIPTION	INCLUDED WITH MODEL	
	# 02492	# 02490
1 Upflow Grate	1	1
2 Debris Filter Pads	2	0
3 BioMatrix Media Bag	0	1
4 Media Tray	1	1
5 Support Ring *SEE NOTE	0*	0*
6 Filter and Falls Drum	1	1
7 Bulkhead Fitting	1	1
8 Tubing Fittings	1 set	1 set
9 Sealant, tape & Screws Part Bag	1	1
10 Backing Plate	1	1
11 Spillway	1	1

REPLACEMENT FILTER MEDIA

Debris Filter Pad (two required) Item #12461

* **NOTE:** The #5 Support Ring is not included in models manufactured after 2009. A design improvement made the part unnecessary.



LIMITED ONE YEAR WARRANTY

E.G.Danner Manufacturing, Inc will repair or replace any Pro 5000 Biological Filter and Falls found to be defective within one year of original purchase. Wearable items are not covered by this warranty. For warranty repair, return only the part that is defective to our factory. Please include a dated proof of purchase and \$20.00 for postage and handling. Damages or injuries resulting from negligence or misuse of the product are not covered by this warranty. This warranty gives you specific legal rights. You may have other rights which vary from state to state.

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