#### More great products by Aquascape:

#### EcoSystems® EcoBlast™

EcoBlast<sup>TM</sup> is the latest in our water treatment arsenal. EcoBlast<sup>TM</sup> is the first line of defense to quickly and safely break down algae from waterfalls, streams, rocks, plant pots and anywhere algae build-up has occurred. Start using EcoBlast<sup>TM</sup> to spot treat the trouble areas on the pond and follow up with S.A.B.<sup>TM</sup> Extreme on a monthly basis to help keep it clear!

#### **Fast Acting**

EcoBlast<sup>™</sup> is not temperature sensitive and can be used during colder temperatures. 100% safe for fish

EcoBlast™ applications are based on sq.ft. of affected areas:

- 8.8 oz. treats up to 200 square feet.
- 38.4 Oz. treats up to 780 square fee. 7 lb. treats up to 2,275 square feet.



#### EcoSystems® S.A.B. Extreme

S.A.B.™ Extreme is designed to restore balance to the pond ecosystem by breaking down organic material that creates problems for pond hob-

by ists in and around waterfalls, rocks, stream beds, plant pots, pumps and filtration systems.

S.A.B.  $^{\text{TM}}$  Extreme is actually 3 products in 1! We have taken the natural ingredients that make up S.A.B.  $^{\text{TM}}$  and combined them with the degrading powers of Activated Barley  $^{\text{TM}}$  and the natural biological filtering powers of AquaClearer  $^{\text{TM}}$  Extreme Dry Bacteria

- Helps break down organic materials that create debris problems around waterfalls, rocks, plant pots, pumps and filtration systems
- Fortified with AquaClearer™ Extreme Dry Bacteria & Enzymes
- Works great in combination with Ecoblast™

8.8 oz. treats up to 2,700 gallons 38.4 oz. treats up to 12,000 gallons 7 lb. treats up to 33,800 gallons



#### EcoSystems® EcoFloc™

EcoFloc™ clears pond water by combining suspended particulate via a process commonly known as flocculation. Combined particulates are easily removed. It is a 100% safe and natural product, will not harm fish, plants, or wildlife.

8 oz. liquid treats up to 4,000 gallons 23 oz. liquid treats up to 11,500 gallons



#### EcoSystems® EcoBarley™

EcoBarley™ is an easy to use quick acting pellet. It can be used inside most filters and skimmer systems, as well as set off to the side of the pond. Includes mesh bag for easy application. Tap into the natural degrading power of barley to help create a clear, unfouled pond.

2 lb. box treats up to 3,000 gallons 5 lb. tub treats up to 7,500 gallons



#### **EcoSystems® EcoCarbon™**

 $\mathsf{EcoCarbon}^\mathsf{TM}$  safely clears tea-colored pond water.  $\mathsf{EcoCarbon}^\mathsf{TM}$  is highly effective at removing dissolved organics from the pond water, such as stains and discoloration caused by leaves and organic debris.  $\mathsf{EcoCarbon}^\mathsf{TM}$  is also an effective method to remove trace amounts of chlorine and chloramines.

- 4 lb. treats up to 800 gallons
- 9 lb. treats up to 1,800 gallons 18 lbs. treats up to 3,600 gallons



For more information on care and maintenance, please refer to the Owner's Manual included with this skimmer or Aquascape's *Pond Building for Hobbyists* book.

Also visit www.aquascapeinc.com

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# **₽** PRO-Fit System

# Classic Skimmer

# **Installation Instructions & Owner's Manual**

# Step-by-Step Installation Instructions for the:

• Classic Skimmer

Congratulations on the purchase of the AquascapePro<sup>™</sup> Classic Skimmer.

Thank you for choosing an Aquascape PRO-Fit™ System. Because we understand that your needs are different based on your preference, application or design, we want to give you the flexibility of using the different product lines that we offer within the same project without losing the ease of purchasing a kit.

Since the PRO-Fit<sup>TM</sup> System is designed to be used with different product lines, each PRO-Fit<sup>TM</sup> System will come with 2 sets of instructions: one for the skimmer (or MicroSnorkel<sup>TM</sup> and MicroCentipede<sup>TM</sup>) and one for the BIOFALLS® (or Endless Cascades<sup>TM</sup>). During the construction of the pond, you may have to refer to one or the other for the necessary steps.





Made in U.S.A. for: Aquascape, Inc. St. Charles, IL 60174 • Brampton, ON LGT 5V7

# STEP 1

#### **Locate & Mark Out Your Pond Area**

- We suggest that you use a plain old garden hose to define the shape of your new water feature. The hose is flexible, and can be pushed and pulled in various shapes. Step back, evaluate and modify your design until you have something that you really like.
- Double check to make sure the length and width of your layout
- does not exceed the amount of liner required for the pond.
- Be sure to locate the water garden close to a patio, deck, porch, or other hardscape. Also, keep in mind viewpoints of the water garden and waterfalls from inside. Try to make it visible from the kitchen, family room, or bedroom for year-round enjoyment.
- Once the water garden is shaped and defined with the hose, take a can of brightly colored, highly visible spray paint and outline the shape (around the hose) on the grass. (See fig. 1)



Fig. 1 Spray paint and outline the shape.

# STEP 2

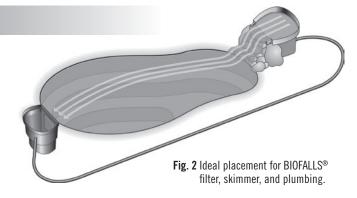
# **Place filters into position**

- Since the BIOFALLS® filter is typically the main waterfall, it should be positioned so it's facing the main viewing areas.
- Make sure it is placed close to the edge of the pond so you can use the pond liner to connect up to the BIOFALLS® filter - unless you're adding a stream. Adding a
- stream will require the BIOFALLS® filter to be set further away from the pond and will require an extra section of stream liner.
- In order to maximize circulation, the BIOFALLS® filter and Skimmer are ideally placed on opposite ends of the pond, directly across from each other. (See fig. 2)

# STEP 3

# Lay plumbing

- To eliminate the need to dig a trench, lay the PVC flex pipe in place, along the edge of the pond, before excavation.
- The PVC flex pipe can withstand extreme weather conditions so it is unnecessary to dig a deep trench.
- To eliminate the frozen and potentially broken PVC flex pipe, the pipe should be sloping down from the waterfall to the skimmer to help drain as much water from the line as possible.



At this point, please refer to the "Hook Up and Level BIOFALLS® Filter" step of your BIOFALLS®/ Endless Cascade Manual!

#### STEP 4

# **Excavate your Pond**

#### The shape and depth

- We suggest excavating the pond no more than 18-24" deep. This depth provides the proper water levels required for aquatic plants and is deep enough to keep fish alive during winter. See the maintenance section for more information on caring for fish.
- The excavation should be dug with a series of shelves. The shelves will add stability to the walls of the pond and will also create planting beds for different types of aquatic plants.
- The first shelf should be about 8-10" down (See fig. 3) or the height of a standard shovel.
- The second is typically down another 8-10" (See fig. 4).
- The third shelf (if desired) will be excavated down another 6" (See fig. 5), reaching a final excavation of 24".
- All of the soil removed from the excavation can be spread and compacted around the BIOFALLS®

filter, creating a berm. The filter should be completely surrounded by soil by the end of the project. (See fig. 6)

# STEP 9

# **Connecting the Check Valve to the Pump**

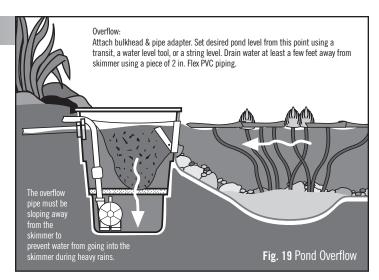
 If you have helpers, while the waterfall is being constructed. one person could be working on the installation of the pump. check valve, filter mats, and overflow. (fig. 19 and fig. 20)

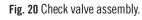
**Important:** Bring the pipe through the back of the skimmer before attaching the fittings.

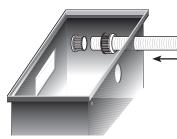
 Remove the threaded collar and slip the pipe adapter from the check valve. Make sure that you

put the threaded collar on the pipe before you glue the fitting on the pipe.

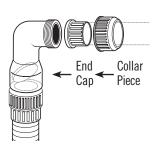
- Slide the threaded collar onto the flexible PVC pipe.
- Using the flexible PVC primer and glue, attach the slip pipe adapter to the flexible PVC pipe, and thread the check valve into the pump discharge and place the pump into the skimmer box.



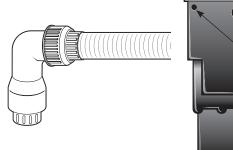




1. Feed flex PVC pipe through back of skimmer first.



2. Slide collar piece over PVC, then glue pipe end cap to PVC tubing.



3. Slide collar up to check valve and hand tighten. It's as simple as that! Skimmer Vault: Rear View

Electrical

Over Flow

Discharge

# **STEP 10**

# Fill Pond

Fill up the pond with water. The pond should be filled just below the level of the overflow in the skimmer.



2 7

# STEP 7

#### **Add Rock and Gravel**

 You can expect to use several tons of stone and gravel for your water feature. Talk to your dealer for help choosing the quantity and sizes of stone and gravel.

#### **Rocking in the Pond**

- Start from the bottom and set the largest character boulders first against the vertical walls; then stack the smaller boulders on top. (See fig. 16)
- Be careful when placing any large boulders so you don't damage the liner.
- The opening on the front of the skimmer can be hidden by placing boulders on either side and bridging a stone across, creating a cave effect.

**Note:** Make sure the boulders do not block the water flow into the skimmer.

 Cover all remaining flat surfaces with a couple inches of decorative gravel. This will help lock the boulders in place, as well as cover the remaining liner, protecting it from ultraviolet rays, and giving bacteria a place to colonize, not to mention it just looks better.

• This is also a good time to add lilies to the plant pockets. Remove the lily from the pot and place it into the lily pocket. Top-dress the lily with a layer of gravel to hold the soil into place. Lilies, if not on hand at this time, can be added after the pond is filled. (See fig. 17)

#### **Underwater Lights**

- After the boulders are in position, set your underwater lights in between your boulders so they are hidden from view. For the greatest effect, lights should face away from the main viewing area. (See fig. 18)
- See lighting system instructions for placement, positioning, and installation of underwater lights.
- 10-watt waterfall lights can be installed in the stream and waterfall later in the project.



Fig. 16 Starting at the bottom, set the largest character boulders first then fill in with the smaller ones.



Fig. 17 Loose gravel should be placed around the lily to keep the soil from being stirred up in the pond after the water is added.

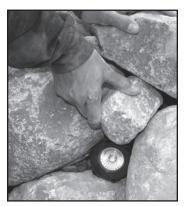


Fig. 18 Set your underwater lights in between your boulders so they are hidden from view.

# STEP 8

# Wash Rocks and Gravel

- Using a garden hose, rinse the rocks and gravel from the highest part of the pond down to the bottom.
- Place an AquascapePro clean-out pump or the pump purchased with the pond kit in the lowest

area of the pond. Use discharge hose or an extra section of PVC Flex pipe to pump the muddy water. This step helps the pond clear up faster.



#### Excavate your Pond cont ...

#### **Design spaces for plants**

- Design your shelves wider in areas where you wish to place aquatic plants. (See fig. 8)
- Marginal and bog plants require a water depth up to about 10", so the top shelf is a perfect location for these plants. (See fig. 8)
- Water lilies will vary according to species, but a depth of 12-24" at the crown works best, so the second shelf or bottom of the

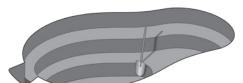
- pond will work great for the lilies. (See fig. 8)
- To make planting lilies easier add a few 'lily pockets'. These pockets are simply depressions or bowls cut into the soil 6-8" deep and 10-16" in diameter. The goal is to create a natural looking pond, and this is possible only if plant pots are eliminated or completely hidden. (See fig. 8)
- It is typical to set the water level 2- 3" below the main viewing
- area (patio, deck, etc.). This will bring the water level of the pond up close to the edge of the pond without going over the sides. (See fig. 6)
- Dig a hole alongside the pond to house the skimmer filter.
- The skimmer should be excavated down to a depth so that the proposed water level in pond is approximately 3/4 inch below the top of the opening of the skimmer. (See fig. 7)
- Make sure the excavated shelf in front of the skimmer is low enough to provide access to the lower screws on the faceplate.
- Re-check all your measurements, including length and width of pond, plant shelf depth, and overall pond depth.



Fig. 3 Dig entire pond one shovel depth.



**Fig. 4** Dig second shelf one shovel depth and start excavation of skimmer hole.



**Fig. 5** Dig a third shelf, if desired.



**Fig. 6** Soil backfilled around the filter creates a planting berm.

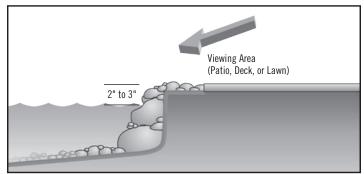


Fig. 7 Set water level 2" - 3" below viewing area.

#### On the Level

When excavating, it is important to make sure that all of the edges are level. This is not only to avoid an unexpected low edge, but also to make sure that the skimmer sits at the proper height to skim. There are several different methods that can be used to level, depending on the resources that are available. The most accurate method is to use a transit, either sight or laser, and take several readings around

the perimeter. Transits need to be rented or bought, however, and may not be the most practical option for a one-time installation. There are two other options that utilize more common household items and may be more convenient. First, you can take a standard 2"x 4" board and lay it across the pond or basin with a common bubble level resting on the center. The level will show if the two sides are even, and all sides can be measured in the same way by altering the angle of the board across the

pond. The second method is to use a line level. A line level is basically a small bubble level attached to the end of a string. The other end of the string is then attached to a stake that is placed at any point around the perimeter. The level is then walked around and readings are taken at several different points to ensure the sides are even. Remember, the pond or basin does not have to be perfectly level, but general readings should be taken to avoid any major problems.



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#### Excavate your Pond cont ...

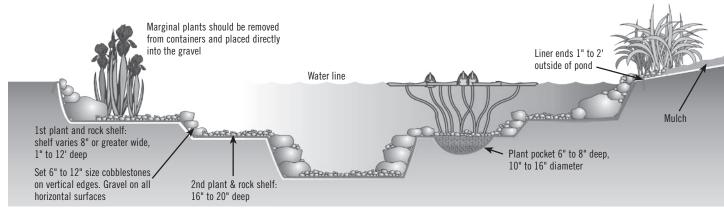


Fig. 8 Pond excavation - side view of plant pockets.

#### STEP 5

# **Install Underlayment and Liner**

- Remove any sharp objects from the excavated hole that may damage the liner.
- Unfold the underlayment fabric and place it into your excavated pond. Starting from the bottom. remove the slack from the underlayment, making sure it conforms into all of the elevations.
- Now place the EPDM Fish-Safe liner on top of the underlayment. (See fig. 9)
- The installation process is the same as the underlayment, starting at the bottom and contouring the liner up and out of the pond.
- Try to get the large folds out, but the main goal is to make sure that it's lying flat and going into all corners. Don't try to get it perfect—you will hide the liner with rocks and gravel later.
- Make sure the liner is high enough around the edges of the pond. This should not be a problem if you measured out the pond and excavated it correctly. Problems can be fixed by readjusting the liner into the excavation, backfilling (making the pond smaller) in areas where there is not enough liner, or simply buying a larger liner.



**Fig. 9** Place the liner on top of the underlayment following the same installation procedures. Make sure liner is positioned in such a way that allows it to extend and completely cover the opening on the BIOFALLS® filter.

# STEP 6

# **Installing the Skimmer and Overflow Installation**

- Follow the same bulkhead installation steps used when installing the bulkhead on the BIOFALLS® filter. (see BIOFALLS® manual).
- Install the PVC slip fitting into the bulkhead on the outside of the skimmer to receive the pump plumbing and overflow plumbing. Use some of the silicone sealant or

teflon tape (not included) to coat the threads of the fitting, in order to help provide a watertight seal.

#### Set up and Level the Skimmer

 You've already roughed out a hole for the skimmer during the excavation phase. Use a 2' bubble level in order to make sure your Skimmer is properly set into position. Your

Skimmer should be level from sideto-side and front to back.

- Make sure skimmer is set so the desired water level in the pond is approximately 3/4" below the top of skimmer opening. (See fig. 10)
- Follow instructions for Overflow Installation.

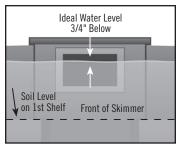


Fig. 10 Cross section of ideal water level viewed from front of skimmer

#### Installing the Skimmer and Overflow Installation cont ...

#### Attaching the **Skimmer Liner Plate**

- Position the liner against the Skimmer opening, making sure there is slack below the opening. This will help reduce tension on the liner plate when placing boulders in front of the unit.
- Mark the outer perimeter of the Skimmer opening on the liner; then mark a second box 1.5" inside of it. This ensures that you don't cut too much of the liner. which would result in a possible leak. (See fig. 11)
- Cut the inner box using a pair of scissors, and insert the skimmer liner plate into the hole.
- Temporarily install the liner plate and liner to the skimmer using two screws in the upper corners. Using an awl or nail, poke the first hole in the liner. Be careful not to damage the threads on the nut inserts when punching the holes with the awl! Remove the awl or nail while holding the liner plate and liner in place and begin threading one of the screws into the filter. Repeat this process for the other screw. (See fig. 12)

Note: Power tools are not recommended for installing the screws and may strip the nut inserts.

• Now remove the liner plate from the skimmer, keeping the screws installed through the liner plate

#### and liner.

- Pre-installing the two screws in the earlier steps will make it easy to line up the skimmer faceplate after the silicone is applied and will keep the silicone in as thick of a bead as possible. Apply a bead of fish-safe silicone sealant around the skimmer opening, over the nut inserts. (See fig. 13)
- Replace the skimmer liner plate and the two corner screws, and then proceed with the bottom two corners (See fig. 14). Make sure the holes in the liner plate that the weir flap clicks into are on the bottom.
- With the 4 corners secured, you may now punch the remaining holes with your awl and thread in all the screws. Again, be careful not to damage the threads on the nut inserts.
- Let dry for at least one hour before introducing water!

**Note:** Pump and debris basket assembly instructions are found in Step 10.

#### **Overflow Installation**

- The built in overflow will allow the water in an overflow situation to flow through the pipe and drain away from the pond. Use a pvc plug (not included) to plug the bulkhead if you do not want the overflow option.
- Excavate a trench for a section of PVC Flex pipe to come off the back of the desired bulkhead. The trench should be no less than 5 ft from the back of the skimmer and be graded away

- from the pond (See fig. 15).
- Create a drainage area at the end of the pipe by excavating a small pit, roughly 16 inches in diameter and at least 12 inches deep. Fill the pit with excess gravel
- Prime and glue the section of PVC Flex pipe into the bulkhead and run it to the top of the gravel pit. Cover the gravel pit with a small section of underlayment and top with soil.

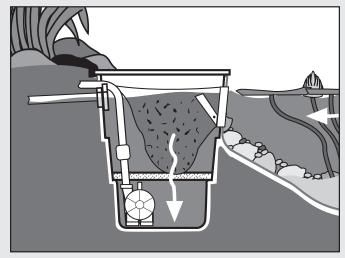


Fig. 15 Single pump and overflow



Fig. 11 Mark the outer perimeter of the skimmer opening on the liner; then mark a second box 1.5" inside of it. Cut out at inside mark.



Fig. 12 Remove the awl or nail while and begin threading one of the screws



Fig. 13 Apply a bead of fish-safe silicone Fig. 14 Replace the skimmer liner plate holding the liner plate and liner in place sealant around the skimmer opening. over the nut inserts.



and the two corner screws, and then proceed with the bottom two corners. Punch remaining holes, thread screws.

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