



# Atlantic®

Product Manual | Manuel du Produit | Manual del Producto



PV1700 - 74235 | PV7500 - 89583 | PV15000 - 89584  
PVEXT - 89858 | SP1600 - 74271 | SP1900 - 74227  
SP2600 - 74228 | SP3800 - 74229

1.330.274.8317

[www.ATLANTIC\\_OASE.com](http://www.ATLANTIC_OASE.com)

# Introduction

Thank you for purchasing your Atlantic Pond-free equipment. You have chosen the finest products available for the creation of long-running, low maintenance water features. Atlantic Pond-free features exchange the open water of the pond for a gravel-topped excavation, maximizing visual impact while minimizing headaches and maintenance. Typically, a pump placed in a protective vault inside a lined reservoir continuously recirculates water over a stream or waterfall. A bed of gravel hides the basin, vault and plumbing from view, leaving only the stream and waterfall visible.

## Eco-Blox Reservoirs

Upon start-up, the pump draws water from the reservoir to fill the streambed, from top to bottom, until the water overflows back into the reservoir to complete the cycle. The amount of water needed to complete this cycle is the 'transitional' water volume. If the reservoir is too small, the stream too large or the streambed built improperly, too much water will be withdrawn before the water can return to the reservoir. The water level above the pump will drop and the pump will start to run dry, leading to overheating and damage. By calculating the transitional water volume, then designing the reservoir to hold at least three times as much, the water level in the reservoir will never drop by more than one-third when the system is started, keeping the pump safely submerged at all times. Assuming that it will take about 3" or 0.25 ft. of water to fill the stream and get the system recirculating, we can calculate the transitional volume, minimum reservoir volume and Eco-Blox quantity by using the formulas below:

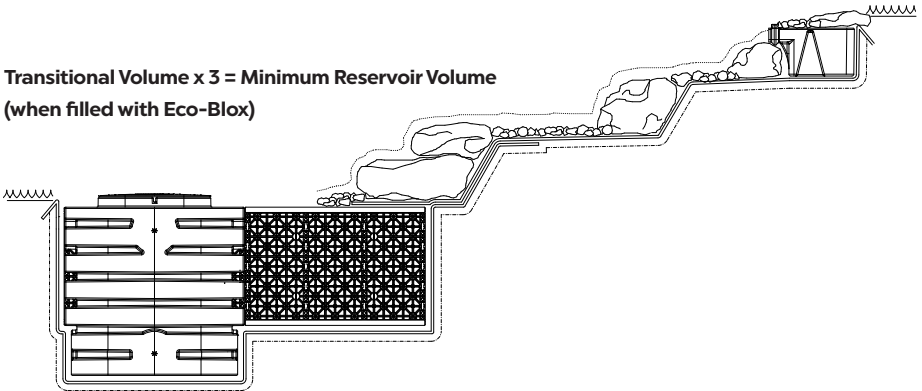
$$\text{Stream Depth}(.25\text{ft}) \times \text{Avg. Length}(\text{ft}) \times \text{Avg. Width}(\text{ft}) = \text{Transitional Volume}$$

$$\text{Transitional Volume} \times 3 = \text{Minimum Reservoir Volume}$$

$$\text{Minimum Reservoir Volume} \div 4.2 = \text{Number of Eco-Blox to fill Reservoir}$$

WATER DEPTH CONVERSIONS		
1" deep = 0.08'	3" deep = 0.25'	5" deep = 0.42'
2" deep = 0.16'	4" deep = 0.33'	6" deep = 0.50'

**Transitional Volume x 3 = Minimum Reservoir Volume**  
**(when filled with Eco-Blox)**



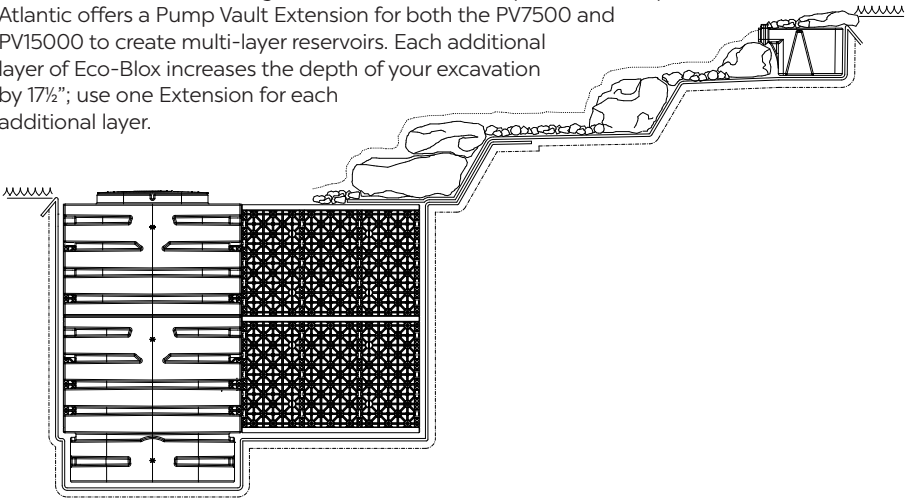
## A Note About Gravel-Filled Reservoirs

Because Eco-Blox are 96% void space, the reservoir can be dug to the size required for the water volume needed. Backfilling with gravel fills 65% of the reservoir with stone, leaving only 35% available for water storage. A gravel-filled basin needs to be three times larger than an Eco-Blox basin to hold the same volume of water. The Eco-Blox reservoir saves time, labor, material and cleanup.

$$\text{Transitional Volume} \times 9 = \text{Minimum Reservoir Volume (when filled with gravel)}$$

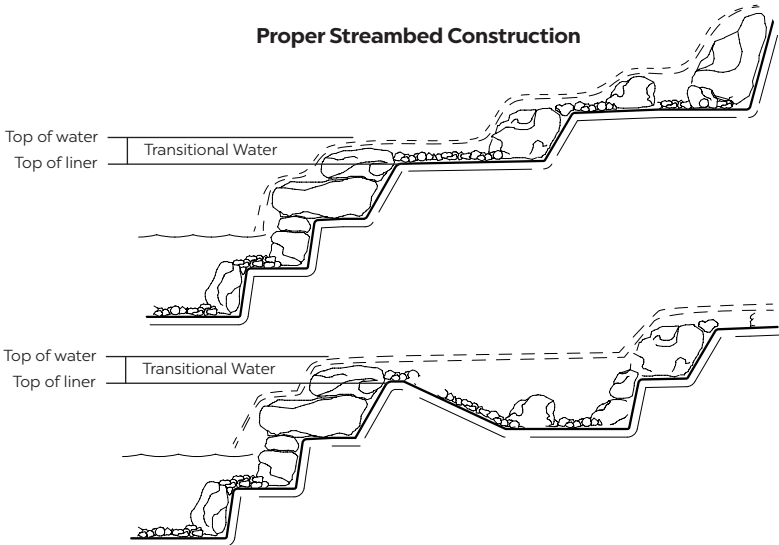
## For Larger Basin Volumes

For installations where a larger basin volume or a deeper basin is required, Atlantic offers a Pump Vault Extension for both the PV7500 and PV15000 to create multi-layer reservoirs. Each additional layer of Eco-Blox increases the depth of your excavation by 17½"; use one Extension for each additional layer.

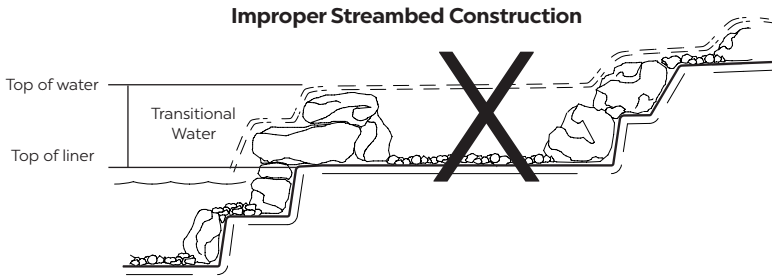


## Streambed Construction

The less the water level in the basin drops as the pump turns on and the stream fills, the smaller the reservoir can be. Proper streambed construction can reduce the amount of water needed. Since transitional volume is determined by how high the spillway stones extend above the liner, minimizing that height reduces the amount of water necessary to fill the streambed. The drawings to the right display two examples of proper streambed construction to keep the transitional water to a maximum of 3-4" in depth.



Improper construction greatly increases the amount of transitional water. In the example below stone, gravel and foam are used to create a waterfall. These barriers are never fully watertight. When the pump is turned off, the water will drain down to the highest point of the liner. When started, the system will require much more than 3-4" of water to cycle. More transitional water means a much larger reservoir will be required.



## Eco-Blox Reservoir Installation

Once you have determined the proper basin size for your project, decide on the shape of the reservoir and the placement of the vault. The vault should be placed away from the waterfall, where the lid can be accessed easily. Tailor the excavation to the shape of the reservoir, making the excavation at least 6-8" larger on all sides, with vertical walls to make installation and backfilling easier. Dig down 18" for the Eco-Blox plus another 2" - 4" for gravel. Level and tamp the bottom of the excavation. The area under the Pump Vault will need to be deeper depending on the Vault used. Test fit the Eco-Blox and Vault in the excavation and mark where the Vault will be located. If using the PV1700 on the outside of a rectangular reservoir, you may wish to notch into the sidewall of the excavation to fit the Vault. The PV15000 exactly replaces one Eco-Blox to simplify installation. Following the mark, excavate an additional 4" for the PV1700, extending the edges of the pocket created a couple of inches to ensure the bottom of the Vault will sit down completely in the recess. Tamp the bottom of the pocket. For the PV15000, excavate an additional 7 1/2" and tamp. This additional depth will recess the Pump Vault lower than the rest of the reservoir, ensuring that the pump in the Vault will stay submerged. Carefully line the excavation first with underlayment, then install the EPDM liner. Another layer of underlayment may be added on top of the liner for greater security before setting the Eco-Blox. The tops of the Eco-Blox should be level.

**NOTE: For best results, install the pump and optional Autofill before installing the Vault in the reservoir following the instructions in the next sections.**

Install the plumbed Vault in the excavation, ensuring it sits properly in the recess. Gather and fold each layer of underlayment and liner on top of the Eco-Blox as if wrapping a gift. Backfill the space around the wrapped Eco-Blox and Vault to lock them into place, using sand or clean fill in 6" layers. Add and compact fill evenly all the way around to avoid pushing the Eco-Blox out of alignment. Top the liner and basin with 3/4" or larger gravel or decorative stone. Smaller, more decorative gravel, landscape glass, etc. can be used to cover the top of the basin, provided a mesh with smaller openings is installed beneath the material.

## Eco-Blox Small / PV7500 Installation

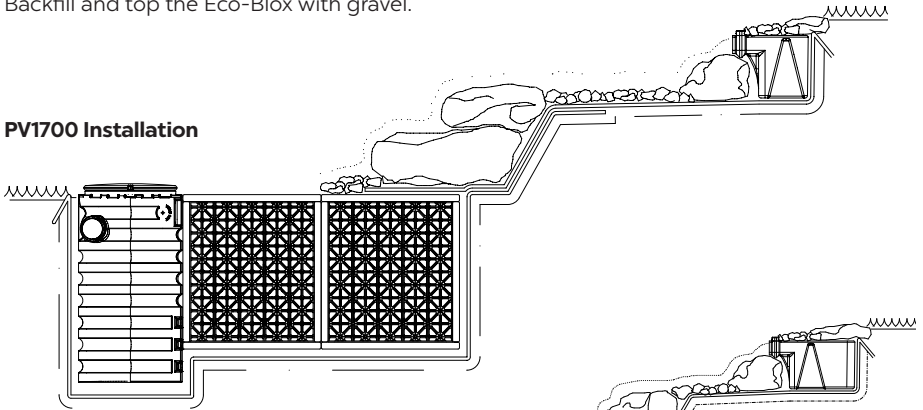
Because the reservoir should accommodate at least three times the transitional volume, we always recommend using the Eco-Blox for Pond-free reservoirs. However, there may be situations where the Eco-Blox SMALL must be used with the PV7500 Pump Vault. **WARNING - Eco-Blox Small hold only half the volume of full-size Eco-Blox. With only half as much water stored, there is a much greater chance of the pump running dry as water splashes or evaporates.**

The procedure is the same as for Eco-Blox reservoirs, but the excavation only needs to accommodate the 9" height of the Eco-Blox Small plus another 4" for gravel, a total of 13". The area under the PV7500 Pump Vault will need to be 7½" deeper than the rest of the excavation. The additional depth will recess the Pump Vault lower than the rest of the reservoir, helping the pump in the Vault to stay submerged.

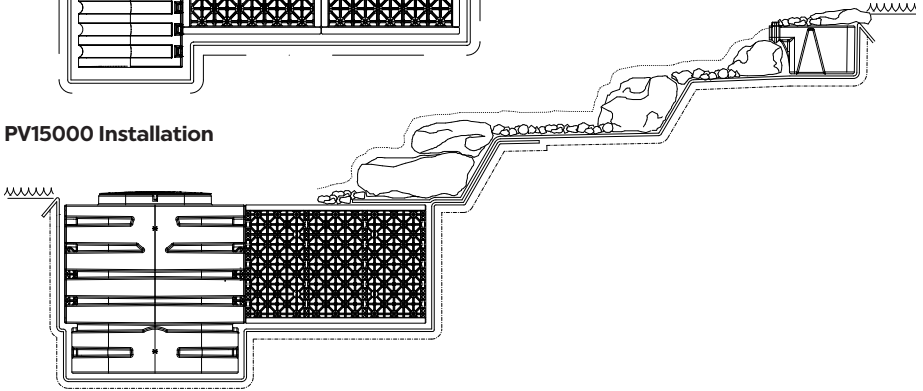
**NOTE: For best results, install the pump, optional Check Valve and optional Autofill in the Vault before installing the Vault in the reservoir.**

Install underlayment and liner, then install the Eco-Blox SMALL and the plumbed PV7500. Backfill and top the Eco-Blox with gravel.

**PV1700 Installation**

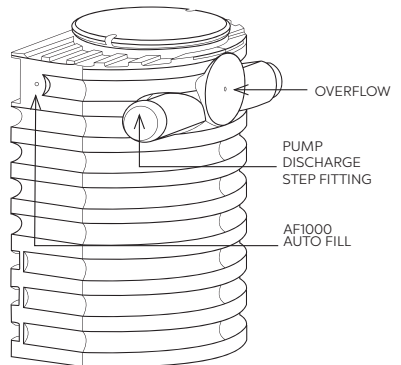


**PV15000 Installation**



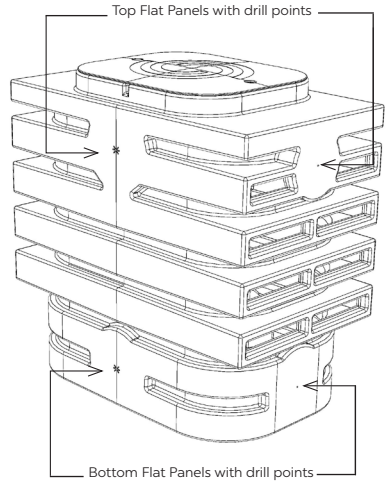
**Plumbing the PV1700 Pump Vault**

The PV1700 is Atlantic's most compact, easy to install pump vault. The PV1700 features an incredibly strong enclosure, pump discharge step fittings molded into each side of the enclosure with cut lines for 1½" and 2" pump discharges, marked drill points on the left and right sides for an Auto Fill and a flat panel on the back for an overflow. The step fittings allow the installer the flexibility to exit out the left or right side. After deciding how the Vault will be plumbed, cut off the unneeded step with a hand saw. Assemble a TR215CV Check Valve (refer to TR215CV manual for installation instructions). Attach check valve to pump and place assembly in Vault. Choose one of the drill points to install an AF1000 Auto Fill (optional, refer to AF1000 manual for installation instructions) and place completed vault assembly in reservoir.



## Plumbing the PV15000 Pump Vault

Atlantic's PV15000 Pump Vaults do not come pre-drilled, allowing the professional installer to customize the tubing size and port locations to any application, with multiple drill points and flat panels. The top of the Vault accommodates Auto Fill and overflows. Flat panels at the bottom accept 3" bulkheads for waste drains and custom plumbing applications. Decide on the configuration that best suits the application, then install the pump, plumbing and Auto Fill (optional, see auto fill manual for installation instructions) before placing the completed vault assembly in reservoir.



## SP1600/SP1900/SP2600/SP3800 FastFalls Installation

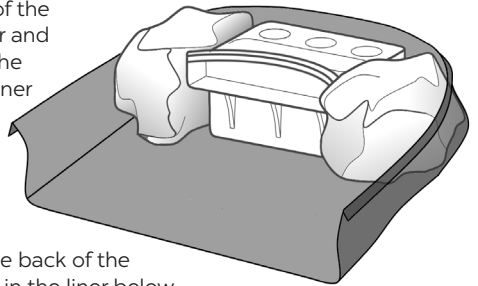
### Setting the Fastfalls

Place the FastFalls on a level bed of undisturbed soil if possible, to avoid settling. If installing above existing grade, compact the area thoroughly. This critical step will ensure that the FastFalls will not settle out of level over time. Blocks or bricks set on virgin soil can also be used to raise the FastFalls while reducing the chance of settling.

Place the FastFalls right at the basin's edge to create a single dramatic fall, or pull the FastFalls back from the edge to create a stream. Leave plenty of liner around the FastFalls to make it easy to camouflage with rock later.

To ensure a leak-proof installation, test place the FastFalls in the desired location and level it from side-to-side and front-to-back. The closed design of the FastFalls ensures that water will only exit the unit over the spillway, so there is no need to tilt the FastFalls forward.

When you are satisfied with the placement of the FastFalls, remove the unit and install the liner and underlayment, being careful not to disturb the level base. Place the FastFalls on top of the liner in its original position. Check the unit for level to ensure that nothing has changed.

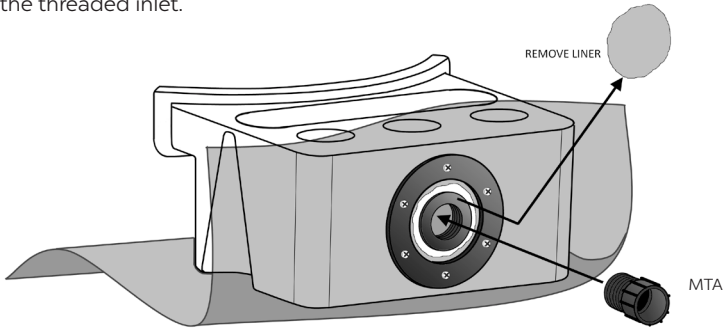
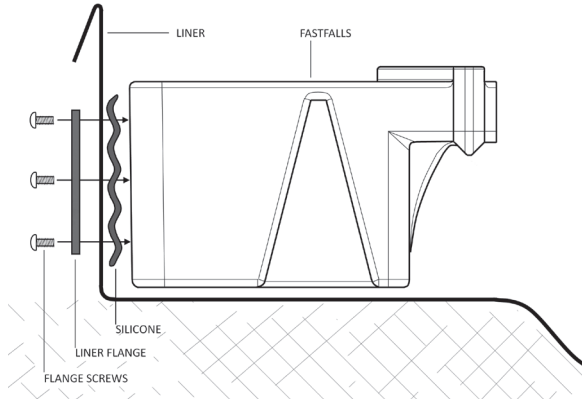


### FastFalls Liner and Plumbing Attachment

Hold the liner up against the flat panel on the back of the FastFalls enclosure. Leave some excess slack in the liner below the inlet. This will help alleviate any future strain on the liner connection. Make sure the back surface of the FastFalls, and the back side of the liner is clean and free of debris. Once you are satisfied with the position of the liner, lower it down and prepare to apply the silicone sealant.

Apply Silicone Sealant in a continuous, consistent bead along the center of the threaded inserts. Once completed, return the liner to its dry-fit position.

Attach the supplied flange to the FastFalls, starting with the top screw first, working around the flange. If needed, use an awl or nail to pierce the liner before inserting the screws. Do not fully tighten any screws until all of the screws have been installed. Once completed, trim away the liner on the inside of the flange to expose the threaded inlet.

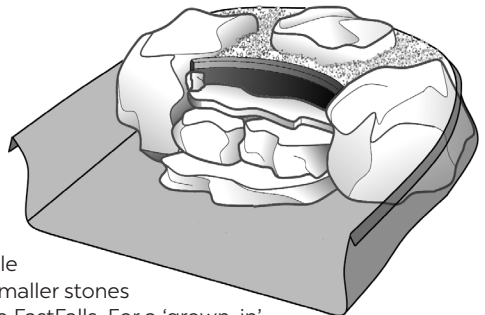


**Tighten flange screws with a hand held screwdriver only. Over tightening the screws could strip out the inserts or crack the liner flange. The screws need only to be snug for the silicone to make a seal.**

Apply silicone on the threads of the Male Thread Adaptor (MTA). Screw the MTA into the inlet until tight. Use PVC Glue (not included) to glue the PVC flex hose into the MTA. Once the FastFalls is sealed to the liner, level and positioned correctly, place a couple of large stones on top of the FastFalls to ensure it does not move when backfilling.

### Hiding the Fastfalls

Position rocks on either side of the FastFalls, inside the liner. Start working the rock in and around the front of the FastFalls, building up to the lip of the FastFalls, which will provide support for a lip rock. The Fastfalls will support the weight of gravel and rocks, stacked directly on top of the unit. Consider covering the whole unit with a single sizeable overhanging capstone, or stack individual smaller stones and gravel on top to completely conceal the FastFalls. For a 'grown-in' look, cover the FastFalls with soil and plant small evergreens and perennials right on top. The raised lip will keep the gravel or soil from washing into the water.

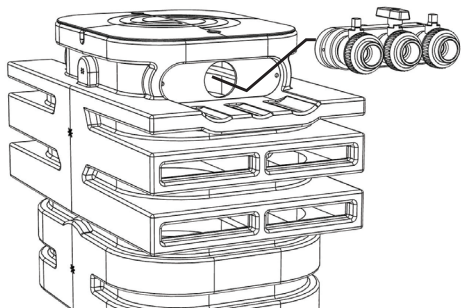


## The Eco-Rise System

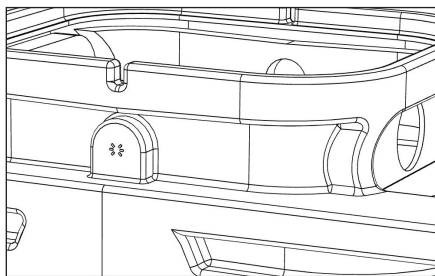
### Plumbing the PV7500 (Eco-Rise System)

The PV7500 comes pre-drilled for use with the Eco-Rise Diverter for multiple features or 1½" pipe for a single larger feature. If multiple pumps are needed, the other side will need to be drilled. Bore a 2¾" diameter hole using the molded drill point as a guide.

Eco-Rise Diverters mount in the molded pockets on the neck of the PV7500 Pump Vault. Either one or two may be used, but each should be plumbed to its own pump. Insert the Diverter into the hole in the pocket and secure with the supplied hardware.



Next install the pump and Triton Check Valve, following the instructions included with the Check Valve. Cut the Check Valve discharge pipe at Perfect Cut Line B for TT1500, TT2000, TT3000 and TT4000. Determine whether you need the 2" outlet fitting for the Eco-Rise Diverter or the 1½" outlet fitting for 1½" pipe. Set the finished assembly in the Vault and attach to either Diverter or pipe. See page 9 for Perfect Cut Chart.



The AF1000 Automatic Fill Valve is optional but strongly recommended to keep the water level in the reservoir safely above the pump, avoiding pump burnout. Mounting locations are provided on either side of the PV7500. Follow the Auto Fill instructions to install.

### Excavating and Setting the PV7500 (Eco-Rise System)

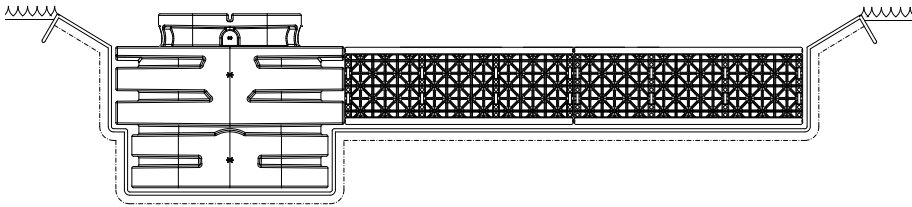
The size of the reservoir depends on the size, height and number of the decorative fountain elements. For a general rule of thumb, the basin should extend out at least twice the height of the decorative elements in all directions. A three-foot-tall by one-foot-wide column would require a seven-foot splash zone. The Eco-Blox reservoir only needs to be large enough to support the decorative items. The liner can then be oversized to create a 'splash skirt' around the basin to recapture as much water as possible with minimum additional excavation.

Once you have determined the size and shape of the reservoir, lay out the Eco-Blox and Pump Vault. The Vault should be placed at the perimeter of the excavation where the lid can be accessed easily, typically closest to the electric service. Make sure the pump cord will reach.

After determining the size and shape of the reservoir, excavate at least a foot wider and longer than required to leave room for backfilling. Excavate the entire area of the basin to a depth of 13". This will accommodate one layer of Eco-Blox Small plus the gravel to hide the reservoir. Dig the area where the PV7500 Pump Vault will sit 7½" deeper to accommodate it. The additional depth will help ensure the pump remains completely submerged. Level and tamp the bottom, then cover the bottom and sides with underlayment to protect the liner, carefully working it into the corners and the deeper Vault area. Set the liner over the



underlayment, leaving the edges above the finished grade all around. An additional layer of underlayment may be added for greater security.



Set the Pump Vault in the deep pocket, then install the Eco-Blox. The top of the field of blocks should be level. Pull the liner up snugly without lifting the blocks and fold it over the top of the Eco-Blox, then do the same with the underlayment. Backfill evenly all the way around the blocks in 6" lifts, tamping the soil in as you go, being careful not to push the Eco-Blox out of place, until the fill reaches the top of the blocks. Grade outside of the reservoir to create a bowl that will return splash to the reservoir. Creating a slight berm at the outer edge of the bowl will keep runoff from entering the basin.

### Accessories

#### Triton Check Valve

Locate the model number of the Atlantic Pump Vault and TidalWave pump used for this installation on the chart. Follow the corresponding column down and row across until they intersect. The number or letter at the intersection point is the 'perfect cut' reference mark for this installation. If the corresponding reference mark is a letter, then the 1½" threaded end of the discharge pipe will be used. If the corresponding reference mark is a number, then the 2" threaded end of the discharge pipe will be used.

#### Discharge Pipe 'Perfect Cut' Reference Chart

Shaded areas denote pumps that exceed maximum flow rates or dimension for use with the corresponding Pump Vault. Use of this equipment combination is not recommended and could void the warranty.

	PV1700*	PV7500	PV15000
TT1500	B	B	H
TT2000	B	B	H
TT3000	B	B	H
TT4000	B	B	H
TT5000	0	0	5
TT6000	0	0	5
TT7500	N/A	N/A	4
TT9000	N/A	N/A	4
PAF-20	3	N/A	7
PAF-25	3	N/A	7
PAF-40	3	N/A	7
PAF-75	3	N/A	7
A-05	3	N/A	7
A-05L	2	N/A	6
A-21	2	N/A	6

\* For use with Pump Vault Extensions, the discharge pipe can be extended using a coupling and 2" Sch40 PVC pipe.

\* 'Perfect Cut' dimensions specified are for use in Pond-free applications using the cut off outlets on the rear of the PV1700. If using the PV1700 exiting from the front flat panel, add 2" to the 'Perfect Cut' mark specified for the pump being used.

#### AF1000 AUTO FILL KIT

Drill points or flat areas have been provided for the proper Auto Fill location on any side of the Pump Vault. It is a good idea to completely install the pump, check valve assembly, and discharge hose before you drill for the Auto Fill. This will help you determine the best side of the Pump Vault to place the Auto Fill so that it has proper clearance on all sides. The center point of the Auto Fill should be located approximately 1½ to 2" above the normal operating water level of the basin. See Auto Fill Instruction Manual for installation instructions.

## **Warranty**

All Atlantic Pump Vaults and FastFalls carry a limited lifetime warranty. This warranty is extended solely to the original purchaser commencing from the date of original purchase receipt. A misused or abused product voids this warranty.

Pump Vault Accessories (AF1000 Auto Fill Kit and TR215CV Triton Check Valve) included in this manual carry a one-year warranty.

This warranty excludes labor/cost of labor for removal or installation of any product.

## **Warranty Claims**

In case of warranty claims, the complete product should be returned to the place of purchase accompanied by original receipt.