

Pond-Less Falls

Elite Cascade Falls Box, Pump Canyon & Matrix

Installation Guide

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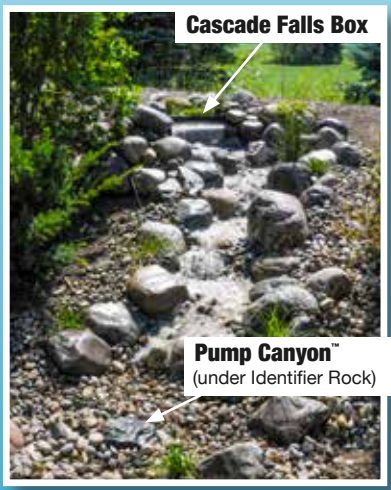
LUXURY WATER FOUNTAINS AT AN AFFORDABLE PRICE

For use with

Elite Falls Boxes: #PB1106, #PB1113, #PB1120, #PB1182
Pump Canyons: #PB1366, #PB1168, #PB1175
Matrix Boxes: #WMSM17, #WMLG34

THE BLUE THUMB POND-LESS SYSTEM

A Pond-Less Cascading Waterfall is a type of waterfall that functions similar to a pond waterfall, except that the "pond" is created underground in a closed reservoir system. Water is pumped through the **Cascade Falls Box** creating a waterfall that spills over rockwork and then disappears through a rock bed back into the underground basin.

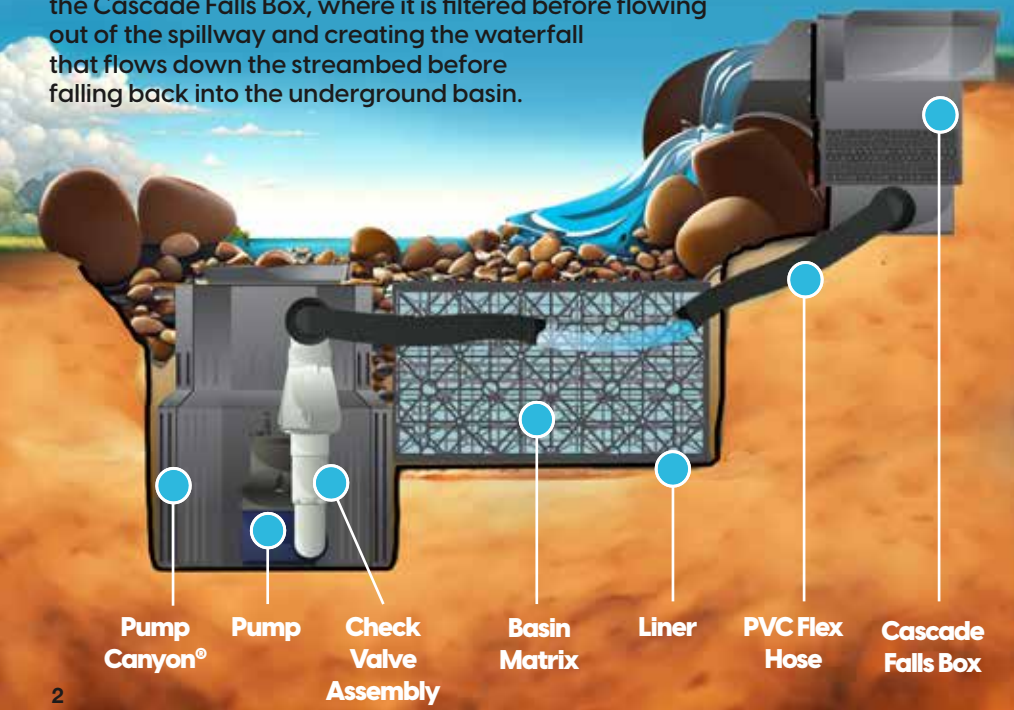


Creating a Blue Thumb Basin

We recommend completing the reservoir/basin before adding the Cascade Falls Box to the top of the stream. A hole is dug to the size, depth, and orientation of the Pump Canyon and Basin Matrix boxes. The hole is then lined with a flexible Liner to hold the water. The Pump Canyon and matrix boxes are added to keep space open for the reservoir water. After it is formed to the basin and the stream, the liner will be secured to the Cascade Falls Box at the top of the stream. Rockwork and plants will disguise the system so it looks natural.

How it Works

When the waterfall is turned on, water is circulated from beneath rocks and gravel by a submerged Pump located inside the protective Pump Canyon on the basin bottom. The water is pumped up through a PVC Flex Hose, around the Basin Matrix boxes, and up to the Cascade Falls Box. The water passes through the Cascade Falls Box, where it is filtered before flowing out of the spillway and creating the waterfall that flows down the streambed before falling back into the underground basin.



ELITE CASCADE FALLS BOX INSTALL



Included with Your Elite Cascade Falls Box

Spillway Widths: 14", 22", 30" and 40"

- Attached Landscape Lid
- Black Matala Diffuser Mat (Installed)
- Two Factory Installed Spinweld Fittings
- Detachable Weir
- Self Tapping Stainless Steel Screws
- Black Silicone
- Plumbing and Fittings Needed
- Lifetime Manufacturer Warranty

STEP 1

Assemble Cascade Box Plumbing

Your Blue Thumb Elite Cascade Box has two spinweld fittings, one on each side of the bottom of the box.

1a Choose which side your water feed hose will come into the Cascade Box. Thread the **PVC male adapter** into that spinweld applying the Teflon Tape (included) on the threads first. Use silicone if desired.

1b Thread the **PVC plug** into the remaining spinweld. Use the Teflon Tape (included) on the threads first. Use silicone if desired. You may use the second spinweld for a second pump line.







STEP 2

Position Cascade Box

2a Prep Area Compact the excavated area where the Cascade Box will sit to prevent future settling.

2b Level The waterfall box should sit level from side to side and should be tilted forward slightly (about ¼ bubble on your level) to ensure that the water will easily flow forward through the spillway.

Backfill Using soil, backfill around both sides and the back of the waterfall box.





Cascade Falls Box Install continued...





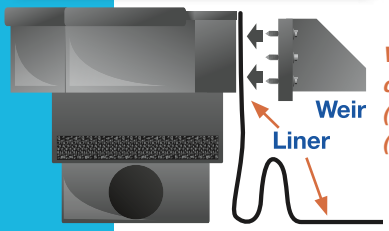
STEP 3

Hook-Up Flexible PVC Pipe

3a We recommend using Flexible PVC pipe for feed hose because it is very flexible and easy to work with.

- The 14" & 22" Elite Cascades are plumbed to accept 2" Flexible PVC Pipe;
- The 30" Elite Cascade is plumbed to accept either 2" or 3" Flexible PVC Pipe
- The 40" Elite Cascade is plumbed to accept 3" Flexible PVC Pipe

3b Using PVC Primer & Cement, glue the flex pipe into the PVC male adapter.



We recommend having the following within reach: cordless screwdriver, 5/16" nut driver bit, waterfall weir (included), silicone (included), stainless steel screws (included), utility knife (with new blade), and a clean rag.

STEP 4

Prepare for Liner Attachement

4a Position Liner Bring the liner up to the face of the cascade box and check the positioning of the liner against the Cascade box. Use the liner clips (included) to temporarily hold the liner to the box.

The liner should follow the contours of the pond edge or stream and the face of the Cascade box. It is a good idea to leave a little slack in the liner where it transitions from the pond edge or stream to the face of the Cascade box. This will ensure that the weight of the rocks used in the waterfalls will not pull down on the liner once it is attached to the Cascade box.







4b Wipe Clean Kneeling in front of the Cascade box remove the liner clips and fold the liner back toward you leaving it to rest on your lap. Using the clean rag wipe down the face of the Cascade box around the area where silicone will be applied. Also clean the area on the liner that will be coming in contact with the area you cleaned on the Cascade box.

4c Apply Silicone Apply a bead of silicone along the sides and bottom of the opening on the face of the Cascade box, keeping the silicone bead centered the entire way.

STEP 5

Secure Liner to Cascade Falls Box

5 Bring the liner back up into position against the face of the Cascade box. Hold the liner in place again with the liner clips to help keep it from moving around as we prepare to attach the weir.

Gently run your fingers along the liner over the area where you applied the silicone and flatten the bead out slightly. This will help ensure a more even distribution of the silicone as we compress it when we screw down the weir.



STEP 6

Attach Weir to Cascade Box

6a Place Weir Bring the weir into position. The weir has a return edge that will make it easy to hold against the Cascade box.



6b Secure Weir Once in position begin driving the stainless screws into place. Start with the top screws on the left and right to hold the weir in position. Continue driving screws into the remaining pilot holes on the weir with your third screw going into the middle hole on the underside of the weir.



6c Trim Liner Carefully trim out the section of liner inside of the waterfall area to open the channel where the water will flow through.



6d Seal with Remaining Silicone Use the remaining silicone to run an additional bead along the joint where the Cascade box, liner, and weir come together. Smooth out the bead using your finger.



STEP 7 - FINISH

Install Landscape Lid & Add Finishing Touches

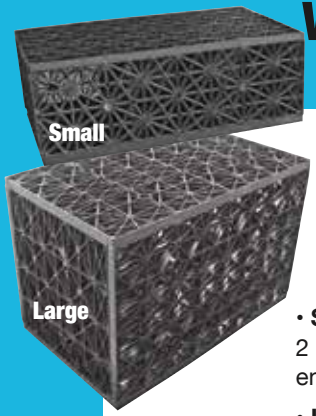
7a The Blue Thumb Landscape Lid allows you to make the open top area of the Cascade box disappear into the landscape. Position the Landscape Lid on the Cascade box. The most popular method of disguising the Cascade box is to plant aquatic plants within the channels of the landscape lid. Add pea gravel to fill the rest of the channel and landscape lid area.



7b There are holes in the bottom of the landscape lid that will allow water to wick up to the root system of the plants. Other options include hiding the Cascade box using mulch or gravel. Adding in some driftwood is a nice touch as well.



WATER MATRIX BOX ASSEMBLY



Included with Matrix Boxes

• **Each box has 8 Matrix Panels** designed to replace up to 90% of the gravel stone traditionally used in the reservoir of Cascading Falls applications with over 3 times more water storage capacity than the gravel.

• **Small** - 26.5”L x 16”W x 9.5”H; Water Volume 17 Gallons; 2 large top/bottom panels, 2 short side panels, and 4 small end/center support panels

• **Large** - 26.5”L x 16”W x 17.5”H; Water Volume 32 Gallons; 4 large top/bottom/side panels and 4 small end/center panels.



Matrix Box assembly is quick and easy. Simply pop the pieces together and you’ve created a sturdy basin and a lot of water volume for your waterfall and stream.

This kit shows panels for a small matrix box.



STEP 1 Lay one large side panel flat on a solid surface. The ground works well because it will allow you to utilize a greater downward force when performing the following steps.

STEP 2 There are seven(7) rows of holes for setting the support panels. Push the four(4) end/center panels into place utilizing the two(2) end positions and the two(2) rows located on either side of the center position.



STEP 3 Place the second large side panel on top of the four(4) support panels. Start at one end and work one complete row at a time into place making sure to keep everything aligned.



STEP 4 Finally, press the two(2) small side panels into place in the same way by starting at one end and working your way across one row at a time.



Set aside assembled Matrix Boxes. They are helpful in determining reservoir excavation shape and size.

ELITE CASCADE FALLS BASIN
Using Pump Canyon & Matrix Boxes



Included with Pump Canyon

One-piece molded vault with detachable lid for easy pump access and two spinwelds; one for hose connection and one for optional autofill (Item #PB1342) installation.

- **Mini** - 12.25” x 14” X 16”H; Flow rate 2,500 gph
- **Small** - 15.5” x 18” X 22.5”H; Flow rate 7,500 gph
- **Large** - 24” x 27.75” X 31.5”H; Flow rate 20,000 gph

STEP 1

Choose Pump Canyon Location

The **Pump Canyon** should be located at the bottom of a streambed where a waterfall or stream ends. This will be the ending point for your stream/waterfall and is where your pump will be located for recirculation of the water. Your Pump Canyon should be used within a basin area along with another water storage system, like Water Matrix Boxes.





STEP 2

Excavation of Basin Area

Excavate your basin area to the necessary size based on the length & width of the stream/waterfall you will be creating.

The depth of the basin will be determined by the size of Pump Canyon you are installing.
The Mini Pump Canyon requires a depth of 19”.
The Small Pump Canyon requires a depth of 25”.
The Large Pump Canyon requires a depth of 34”.



STEP 3

Underlayment & Rubber Liner

3a Once you’ve completed the excavation you can lay the protective Underliner in the basin. Spread the Underliner evenly.



3b Next, lay Rubber Liner in the basin on top of the protective Underliner.

After the Underliner and Liner are installed you can add another layer of Underliner on top of the liner for additional puncture resistance.



Cascade Falls Basin Install continued...



STEP 4

Position Pump Canyon

Position the Pump Canyon within the basin in the desired position. It is recommended that you position the Pump Canyon so that it can be easily accessed for future maintenance of your pump.

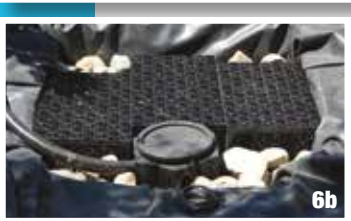


STEP 5

Fill Basin Area With Matrix Boxes

Fill the basin area around the Pump Canyon with Water Matrix Boxes. These will allow you to maximize the volume of water kept in the basin and help to support the weight of the rockwork above.





STEP 6

Add a Submersible Pump (not included)

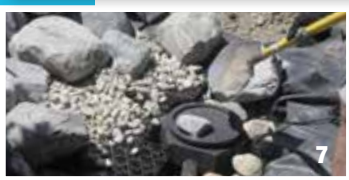
The Mini Pump Canyon® can handle pumps with volumes up to 2,500gph (gallons per hour).

The Small Pump Canyon® can handle pumps with volumes up to 7,500gph.

The Large Pump Canyon® can handle pumps with volumes up to 20,000gph.

6a Place appropriately sized pump into the Pump Canyon®

6b Connect Flex Hose to the Pump and run the hose up to the Cascade Box. *(See kit Instructions.)*



STEP 7

Finish off the tops of the matrix boxes with decorative gravel large enough that it won't fall through the openings of the matrix box.



STEP 8 - Finish

Mark Canyon Location

Place a flat rock over the lid of the Pump Canyon® as an identifier so you can easily find where it is located for maintenance.