

## **Basics of Building a Bubbler**

### Tools and Materials Needed

Shovel	Pump and Fittings
Knife and/or saw	Ball Valve(s)
Expanding Foam or Sealant	Flex Hose
PVC Glue	Pieces of Shim Stone
Decorative Rock	Bubblers

### If Using Pond Liner

Liner  
 Felt Underlayment  
 Extra Padding or Styrofoam  
 Blocks  
 Valve Box & Extensions

### If Using Fountain Base

Fountain Base  
 Extra Pond Liner (if necessary)



### Building a Bubbler

- 1) Preparation
  - a) Choose a rock or rocks that fit your surrounding area. Also, generally choose a bubbler or bubblers in groups of odd numbers (usually one or three looks best).
  - b) Location, location, location – select a spot where you will enjoy the bubblers the most.
- 2) Option 1 - Dig a Hole
  - a) If using pond liner, dig a hole 1.5 - 2.5 feet deep. The larger the bubblers, the deeper the hole should be. To account for the splash, generally dig the hole to allow a minimum 1.5 feet of space on all sides from the edges of the bubblers. Also, slope the bottom of the hole to the place where the pump will set.
  - b) If using a fountain base, dig a hole slightly larger and deeper than the base.

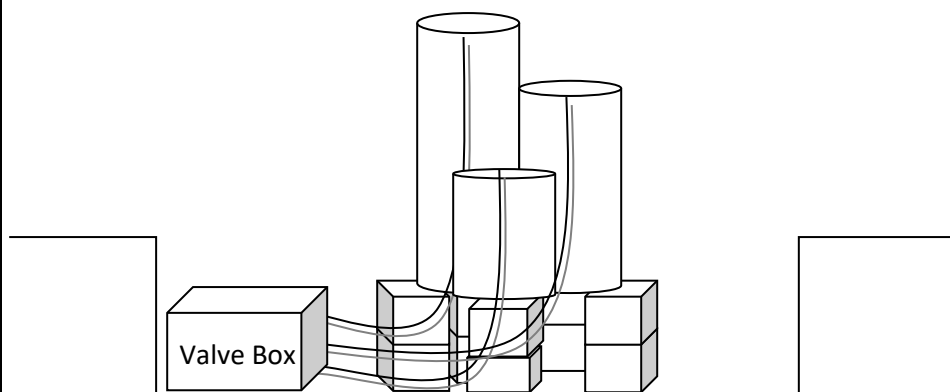
Option 2 – Build a Wall

  - a) Another recommended option is to build a wall around the bubblers. A wall ties the feature together and separates the bubblers from the rest of the landscape.
  - b) Follow the guidelines for digging a hole to determine what size of wall you need to build.
  - c) If there is an uneven grade, build the wall so that it is level on the top.
- 3) *If Using Pond Liner*
  - a) If using liner, measure the length and the width of the hole. Add at least 1 foot to each measurement.
  - b) Account for the depth of the hole by adding the height of each side of the hole.
  - c) Example: If the hole is 5 feet long, 5 feet wide and 2 feet deep on each side, then a 10' x 10' liner would be needed. A similar size underlayment should be used as well.
  - d) Lay the underlayment in the hole. This will help protect the liner from punctures. Lay the liner over the underlayment.

### *If Using Fountain Base*

- a) Set the fountain base in the hole. If using bubblers that take up most of the fountain base or that will create a lot of splash, pieces of pond liner may need to be laid around the outside of the fountain base to direct the water back to it.
- 4) Placing the Bubblers
  - a) If using pond liner, place some padding or Styrofoam in the bottom of the hole to help protect the liner. Stack blocks, bricks, or rocks to create a base for the bubbler to sit on. Start with the largest or tallest bubbler first. If using a fountain base, set the largest bubbler first. It may be necessary to cut a small section of the grate away to allow the flex hose through.
  - b) Set the bubbler on top of the blocks or base. Make sure that you do not cover the hole on the bottom when setting it. Use shim rocks to stabilize and level the bubbler.
  - c) Run the flex hose through the bubbler. Generally, it is best to leave it about 2 – 3" from the top of the hole, although it can also be set just a short way in and be sealed at the bottom.
  - d) Repeat steps a – c for each bubbler that is set.
  - e) When setting the bubblers direct the flow of water based on the characteristics of each bubbler. A level can help determine which direction the water is going to flow. If you are setting multiple bubblers, make sure that there is water flowing in each direction that is visible.
  - f) Once all bubblers are set, seal the flex hose in the hole using expanding foam or other sealant. If using expanding foam, make sure that it does not overflow and fill the hole as well.
- 5) Connect the Plumbing
  - a) Set the pump off to one side of the bubblers. If using pond liner, it is recommended that a valve box be used to protect the pump and to allow for easy access.
  - b) Ball valves are recommended to help control the flow of water. Use a ball valve for each bubbler. When connecting the ball valve to the flex hose, place the ball valve in a place that is very accessible. If using liner, try to place the ball valves inside the valve box with the pump.
  - c) Use PVC cement ball valves and fittings to the pump. Allow to dry. Now is also a good time to check the seal of the flex hose in the bubblers.
- 6) Check Your Work and Adjust
  - a) Once the glue and sealant have dried, fill the hole or container with enough water to cover the pump.
  - b) Run the pump to make sure that all the bubblers are set in the correct position. Adjust the ball valves to control water flow. Some of the bubblers' positions may need to be readjusted as well to allow for better flow.
- 7) Final Steps
  - a) Once you are satisfied with the water flow, it's time to put on the finishing touches.
  - b) If using liner, fill the hole most of the way with  $\frac{3}{4}$  - 1  $\frac{1}{2}$ " River Rock. Add your desired decorative rock on top. Cut away any extra liner.  
If using a fountain Base, add your desired decorative rock on top of the grate.
  - c) Spray down bubblers and decorative rock. The water may be dirty for a couple of days, but it will clear up over time.
- 8) Relax and enjoy!

3 Tier Bubbler Diagram



Close up of 3 Tier Bubbler Plumbing Set Up

