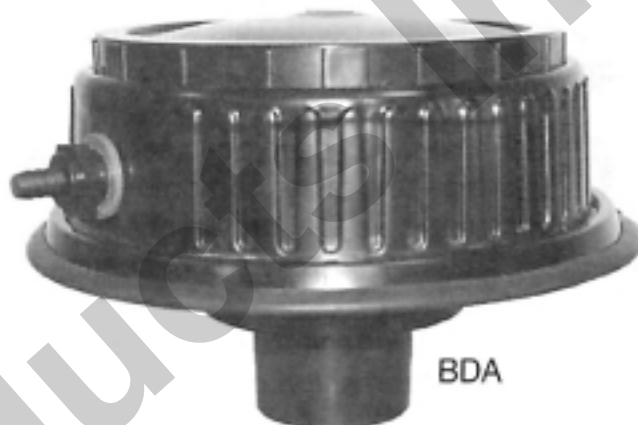




# Bottom Drain

## Installation Instructions

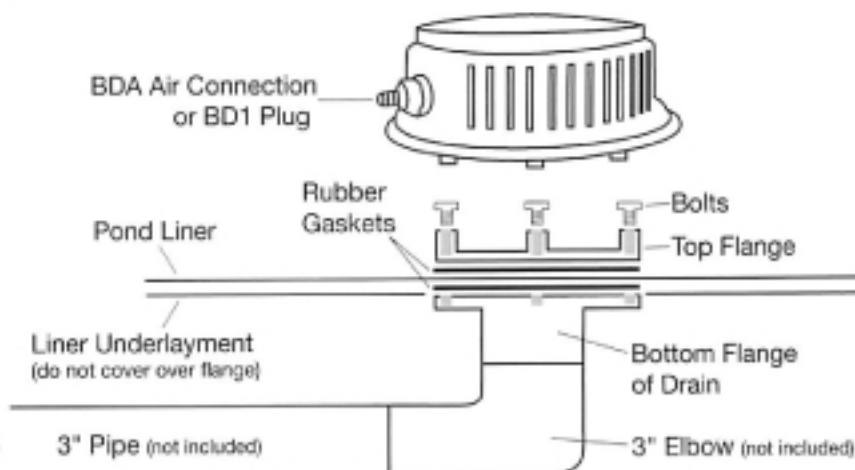


**1** Find the lowest point in your pond if possible. Dig the bottom of your pond at an approximate 30° downward slope to create a small area where water flow can be collected.

**2** Install all necessary drainage pipes including a 3" elbow (90°) directly underneath the lowest point in your pond. This is where the bottom drain will be installed.

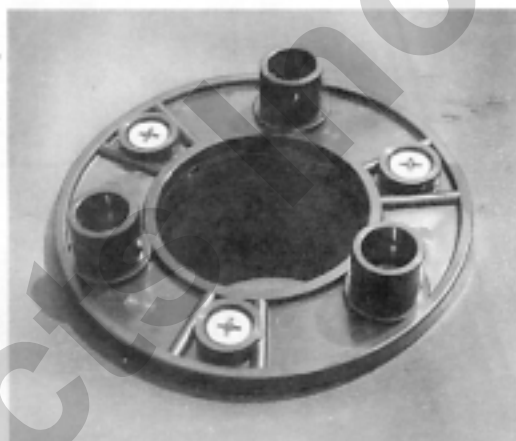
**3** Install the lower half of the bottom drain at the predetermined point in your pond, attaching it to the PVC elbow pipe with PVC glue. It is important that this connection is totally secure. When this step is complete, the installed piece should be recessed at least  $\frac{3}{4}$ " below the level of the pond bottom.

**4** Install your 45 mil EPDM liner. After your liner is fully installed, locate the spot where the lower half of the bottom drain has been installed underneath the liner, using your fingers find the six screw holes located in the gasket and rim of the bottom drain lower half. With a white pencil mark your liner with the loca-



tion of the screw holes. Using an awl or punching tool, punch through the liner at the pencil markings being careful that the diameter of the punched hole is not wider than the diameter of the screw hole in the rim of the drain underneath the liner.

**5** Apply a light coating of silicone sealant to the liner in the circular area directly covering the screw holes. Then align the screw holes in the upper half of the bottom drain with the holes punched in your liner, using the six flat head machine screws provided attach the upper half to the lower half. It is important that the studs on the rim of the upper half of the drain should point upward, the flat surface of the rim should be flush with the liner. Do not over tighten! At this point the liner should be firmly sandwiched between the halves of the bottom drain, and the rim of the upper half should be level or slightly below the bottom of the pond. This will create a final drop into the drain.



**6** Once the halves have been securely joined, carefully cut away the circular portion of the liner inside the drain, making sure to trim the liner flush with the inside edges of the drain. Apply a light coating of silicone sealant to the inside surface of the drain.

***\*The black gaskets on the two halves of the drain are made of rubber material. The compression of these gaskets against the liner provide a water tight seal.***

**7** Fill the drain cover dome with pea gravel or aquarium gravel until nearly full. Fill remaining space in dome with water to exhaust the air in the dome, install plug into the cover. If installing the BDA install the membrane air diffuser onto the dome. **Be careful, do not let anything fall into the pipe where the disc membrane air diffuser will be installed. It will damage the air membrane.**

**8** Align three studs on the bottom of the cover with studs on the rim of the upper half of the drain and insert. Press down until securely sealed. Do not glue or cement in place! The cover dome is meant to be removable for cleaning. The weight of the gravel in the dome will hold it in place.

**9** The shape of the air dome is designed to force debris and water to flow into the drain inlet. Do not place potted plants, stones or decorations near the bottom drain in a manner that could impede proper water flow.

**10** Periodically remove the air dome and inspect drain for blockage. If installing the BDA connect air hose from air compressor, recommended air flow of 0.5 to 1.5 cfm.

