



# “How To” Series: You’ll Love That Bottom Drain

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Water Gardens and Koi Ponds are all about one thing... **Enjoyment.** Anything that contributes to that enjoyment, reduces maintenance, and contributes to the health of one’s favorite fish is extremely rewarding.

**A bottom drain definitely fits into the benefits column.**

- Water seeks its own level. So, as water is pumped out of the skimmer, it creates a void. That water is replaced by drawing water from the bottom drain.
- Reduces debris and muck build-up
- Leaf debris is sent to the skimmer for easier removal
- Evacuates more fish waste
- Sends more toxin build-up to the filtration system
- Contributes to cleaner water

“Gin Clear” water certainly increases the enjoyment of the pond and its pond life. A bottom drain contributes to the ability to achieve “Gin Clear” water and a healthy fish environment.

Since proper installation has the tubing running under the liner to a skimmer box, the installation needs to be done either on a new pond build or a renovation.

So, the question is, if a bottom drain provides so many benefits why are they not talked about and promoted more often? The Quick Answer: The additional minimal cost, which can run between \$277.00 to \$355.00, is not measured against the lifetime benefits to the pond and the pond owner!

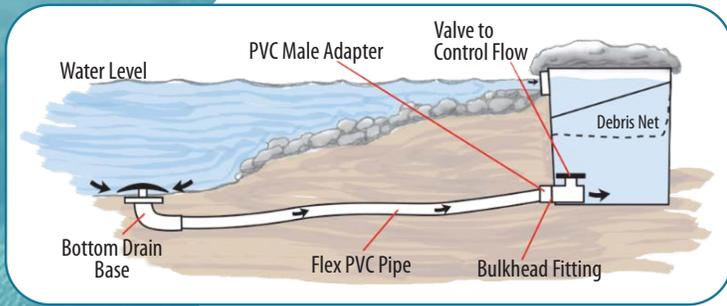
For the Do-It-Yourselfer, most times they do not totally understand the benefits that additional cost in materials provides. And they think it is more complicated to install than it really is.

When a contractor is bidding on a pond installation a lower bid increases their chances of securing the project. So, by not including the cost of a bottom drain they can provide a lower cost quote there by increasing their chances of being the lowest bid.



**You’ll Love That Bottom Drain**

# The Installation Process Isn't Complicated



*The bottom drain should be placed at the deepest part of the pond with the tubing running under the liner to the skimmer box.*

*Use a bottom drain installation kit with all the required fittings. This natural cycle is referred to as the Nitrogen Cycle.*



Place and level the bottom drain at the lowest point in the pond. It is best to provide a slight slope in the floor of the pond towards the bottom drain. Trench the tubing below grade and run to the skimmer box location.

Do not back fill the trench until the tubing has been connected to the skimmer. Then recheck level of the bottom drain – frequently - as you back fill the tubing trench. Once you have completed backfilling the trench and around the bottom drain, use a tamper and compact the soil till firm.



Using a bottom drain kit, connect the tubing, usually to the front of the skimmer box. Although in this application it was connected on the side panel.

At this point the underlayment and liner can be installed.



Center ring and line up with screw hole guide marks. Press firmly to spread silicone evenly. Excess should squeeze to all edges.



In the center of the bottom drain cut a hole just big enough for your hand to fit through.



You may use a power tool to start the screws but do not tighten yet. Alternate starts. 12-6, then 3-9. Then the rest.



With one hand locate the inner edge of the bottom drain. Then using scissors cut slits from the center to the inner edge.



Hand tighten with a screw driver. Do Not over tighten and strip the screws. Again, alternate tightening as above.



With a clean cloth remove any debris in the drain, on the drain lip, and underside of the liner. This must be clean.



Trim excess liner inside the ring. Apply a final coating of silicone on the edges and wipe smooth.



Apply silicone to the top of the bottom drain face place. Cover screw holes and along the inner edge to insure a good seal.



Place cap. Let the silicone seal cure a day or two before adding water. Congratulation. You'll Love That Bottom Drain.