KOI CLEAR OPTIONS
The Koi Clear is available through Matala in two different packages.

1- Tank and lid only. (no fittings, no media, no stand)
2- Tank and lid with 3 layers of Matala media. Rigid black 1.5" thick on bottom, 6 inch green roll in middle and 6 inch blue Matala on top. (no fittings, no stand)

Outside Tank Dimensions:
41.34" Top diameter x 40.16" tall. Tank Tapers to an approx. 16" x 16" square bottom.

Complete Media Optional Package includes:
1 x Black Matala Support Grid approx. 33"diameter x 2" thick.
1 x Green Matala Mechanical Filter Layer approx. 35" diameter x 6" thick.
1 x Blue Matala Biological Filter Layer approx. 38" diameter x 6" thick.

Stand is sold separately. If the Koi Clear is buried or back filled in earth you may not need the stand.

In some cases even when the Koi Clear is buried or back filled you may install the filter on top of a concrete slab for extra stability depending on your earth and soil type and conditions. Be aware that any filter which is buried or back filled has a risk of lifting out of the ground when empty if the ground has a high water table such as after a heavy rain. If you drain the filter with a high water level in the earth the hydrostatic pressure can lift the tank out of the ground. It is important to consider the hydrostatic pressure in your earth. If your property is in a low elevation compared to local area or if you are at the bottom of a hillside, then you could have a much higher water table. Try to provide adequate drainage of ground water away from your buried or back filled Koi Clear. Installing the Koi Clear in a vault with a drain will alleviate this potential risk. Koi Clear tanks which are installed above grade or above your water table are not at risk.

If the Koi Clear is installed above grade then the stand is recommended for extra stability.

Connectors and fittings are not supplied by Matala. Fittings must be supplied by end user or the dealer. Typically you will need three fittings.

One inlet from the pump or from the pond to feed water to the filter.

-If gravity flow to the filter you will need a 3inch or 4 inch inlet.
    *A single 4 inch pipe can handle up to 3500 gph by gravity flow to the filter.
    *A single 3 inch pipe can handle only 1800 gph by gravity flow.
-If pumping to the filter you will need a 2 inch inlet.

One outlet returns water to the pond.

-if gravity flow back to the pond you will need a 4 inch outlet. If the return to pond is gravity flow, you can increase flow rate to 4500 gallons per hour only if your 4 inch pipe is less than 5 feet and definitely draining downhill.
- if pumping back to the pond you will need a 2 inch outlet. * See above flow rates.

One drain to clean out the dirty water from bottom of filter tank.

- if the bottom of the Koi Clear is above grade or in a position where it can drain downhill then you can use a 2" or 3" drain fitting with a ball valve or knife valve on outside. Just open the valve and the dirty water will drain downhill.
- if the bottom of Koi Clear is below grade or in a position where it cannot drain downhill then you

must use a sludge pump in the bottom of the Koi Clear to pump out the waste. In many cases you can install the sludge pump permanently at the bottom of the Koi Clear and just plug it in to pump out the waste. The pipe from the sludge pump should rise above the water level so that you do not have a leak when sludge pump is not in use.

The Koi Clear holds approx. 150 gallons. If it will be free standing then you need the stand for security. It will stand by itself but not safe for long term.
If you bury it with solid back fill even 18" to 24" then you do not need the stand.
The tank has no holes drilled in it. You must provide holes and fittings. You may use bulkheads or Uni-seals.

If used as a vortex the Koi Clear tank would normally be positioned with top of tank just a few inches above the water level of the pond and the bottom drain pipe from pond would flow by gravity to the vortex. Use 2 x 3" pipe or 1 x 4" pipe for gravity feed from bottom. Maximum flow for vortex action is approx. 50 gallons per minute. If you add a black R- Matala at the top of tank then you can increase your flow to 75 gpm. If flow is too fast then solids will get pulled through.

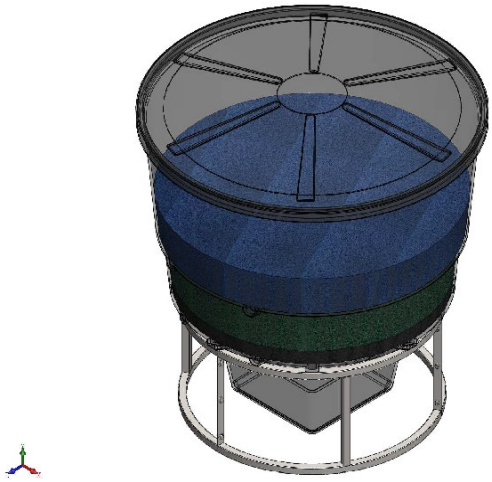
If used above water level then you must pump the water to the Koi Clear. You may use 2 inch pipe if pump fed. If pump fed and used for solids only then you should use a black R-Matala at the top of tank to catch solids. Max flow is 75 gpm for good solids removal.

If used for mechanical/biological filtration then get all 3 Matala layers. Black pad on bottom, green R-Matala in middle and blue R-Matala at top.
This will become the dominant filter. Most waterfall filters on the market are too small to be good filters. You can send the dirty water to the Koi Clear and then gravity flow to the biofalls so as to keep existing pond design intact. The biofalls will not have to deal with heavy solids in this manner and the overall combination will give very good results if used on ponds smaller than 5000 gallons.

It all comes down to turnover flow rate through the system and overall filter capacity to handle solids and biological load. You must provide an easy and simple process for cleaning the Koi Clear. Access to the tank should be clear of obstacles. Use a bottom drain for backwashing debris from the Koi Clear.
If using Matala media in the Koi Clear, set up the cleaning process so that you do not have to remove the Matala media. It is too heavy with dirt and is cumbersome to lift out. Instead set up a portable sump pump (at least 3000 gph) to take pond water and flush down through the media with high volume. Leave the media in the tank during cleaning process. You may also use your existing filter pump in some cases to divert water with a valve and flexible hose to use pond water to flush out the media.

There are many possible plumbing combinations that can be achieved with the Koi Clear.
Actual positions of inlet and outlet pipes and pipe sizes will depend on the application you intend.
The tank can be used as a vortex solids filter only or as a mechanical biological filter only. The Koi Clear can be used as a stand-alone filter or together with multiple Koi Clear or other filter tanks to create a multi-chamber filter system. Pay attention to water levels in the tank and how your pipe position will affect the water level in the tank. Leave yourself some margin for safety to prevent overflow of the tank. If you need system design you may contact your local koi pond filter expert or contact us at Matala USA.

More below.



Example plumbing only.

Options below.

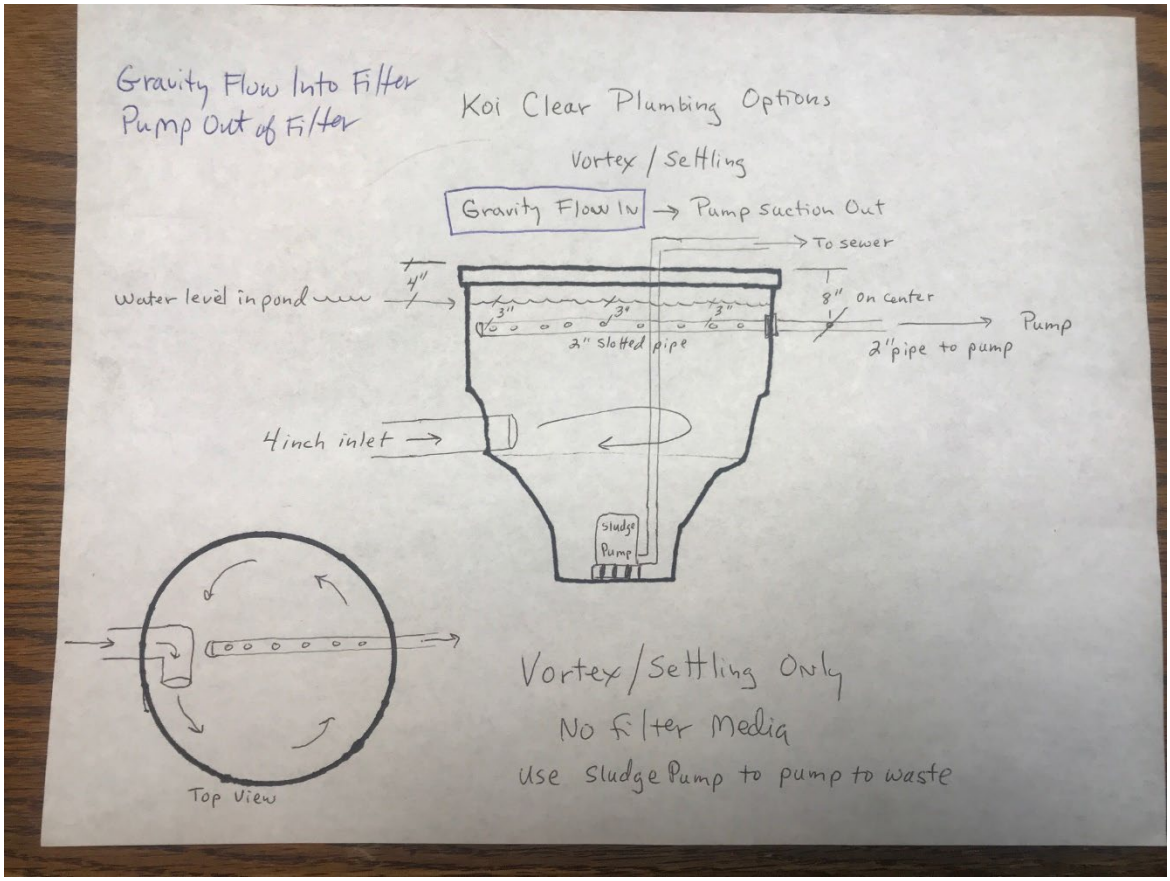
Vortex/Settling Option. Tank and Lid only no media.

Gravity Inlet.

Gravity Flow in with 4” pipe from Bottom Drain of Pond.

2” Outlet connects directly to Pump at top of tank with 2” pipe.

If you are connecting to a second filter tank the Outlet Pipe should be 4” to Second Tank.



More options below.

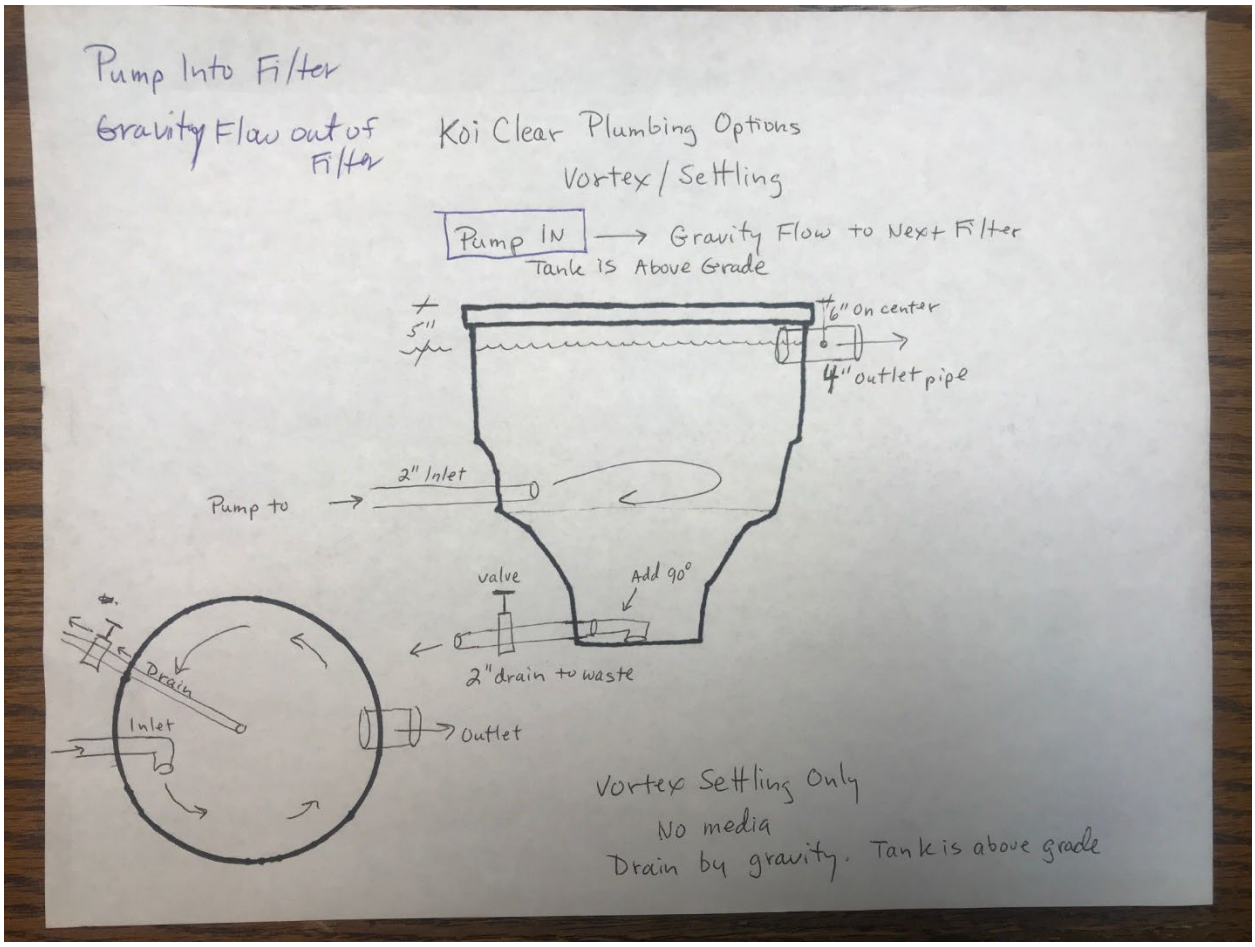
Vortex/Settling Option. Tank and Lid only no media.

Pump Inlet

Pump Flow in with 2” pipe directly from pump.

Outlet returns directly to the pond or waterfall with a 4” outlet pipe..

If you are connecting to a second filter tank the Outlet Pipe should be 4” to Second Tank.



More options below.

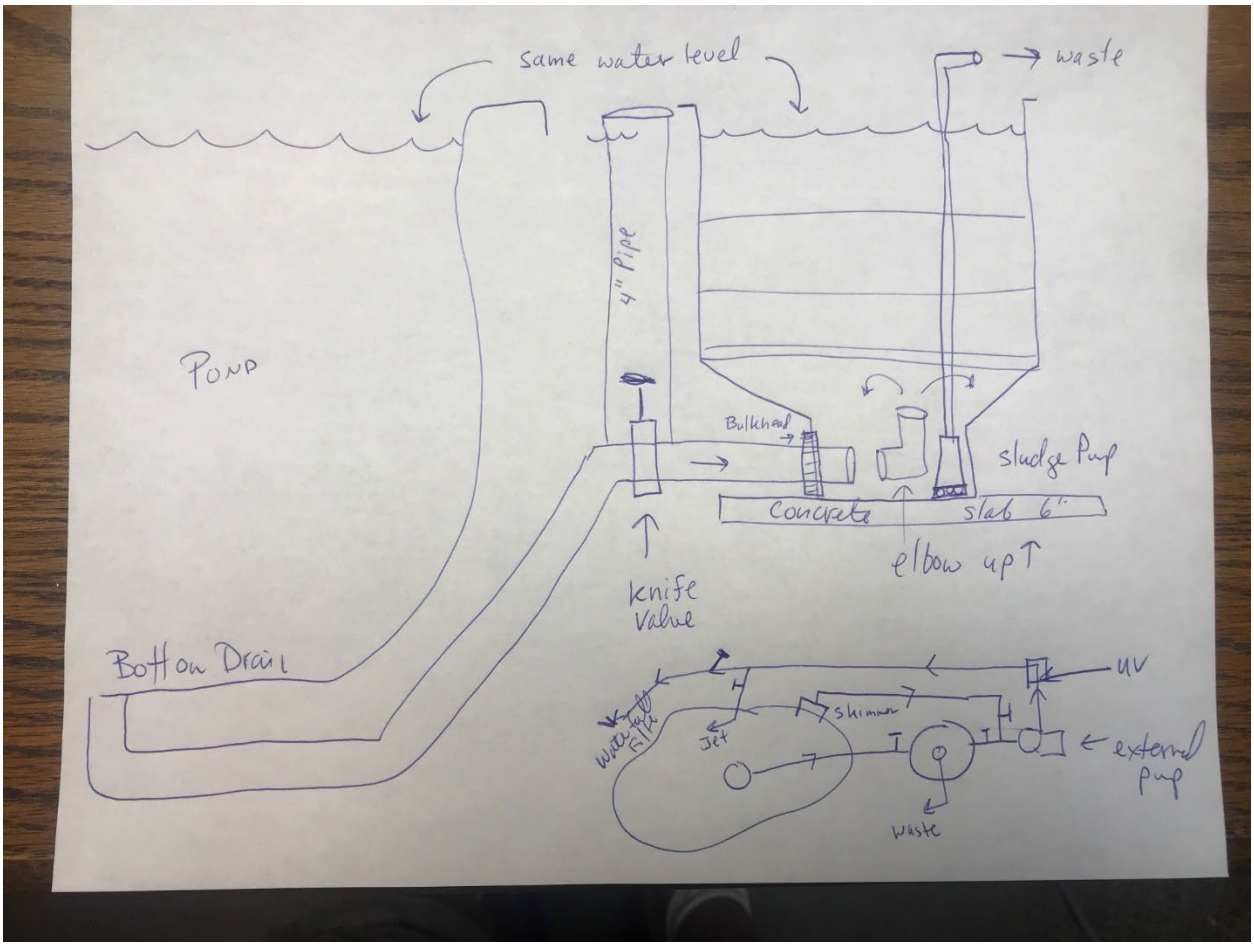
Koi Clear Tank and Lid as a Mechanical/Biological Filter complete with Matala Media.

Gravity Inlet

Gravity Inlet is 4” pipe directly from bottom drain of pond. Use a 4” knife valve to turn off flow to the filter during cleaning and backwash. Install a 4” pipe vertically as an access hole to reach the knife valve. Filter outlet may connect directly to the filter pump with 2” pipe as in top view of the pond and filter in drawing below. This drawing also shows how to connect your skimmer directly to the water pump essentially bypassing the Koi Clear.

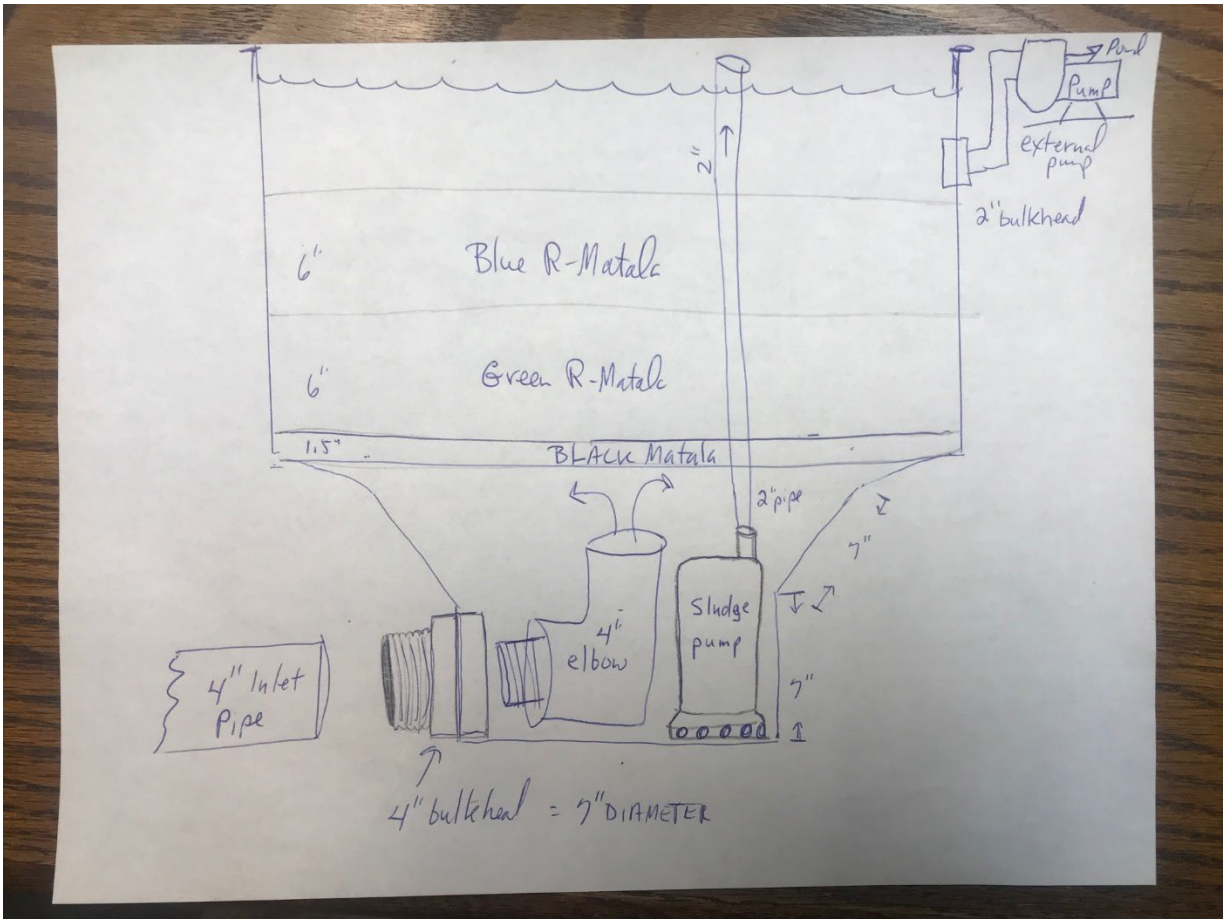
(If you will connect Koi Clear to a second filter you must use 4” pipe to the second filter by gravity.)

Permanently install a Sludge Pump in bottom of the Koi Clear in order to pump waste water to the sewer or garden.



More options below.

Close Up View Gravity Flow in from Bottom Drain to Koi Clear.
Koi clear connects to pump or second Koi Clear.

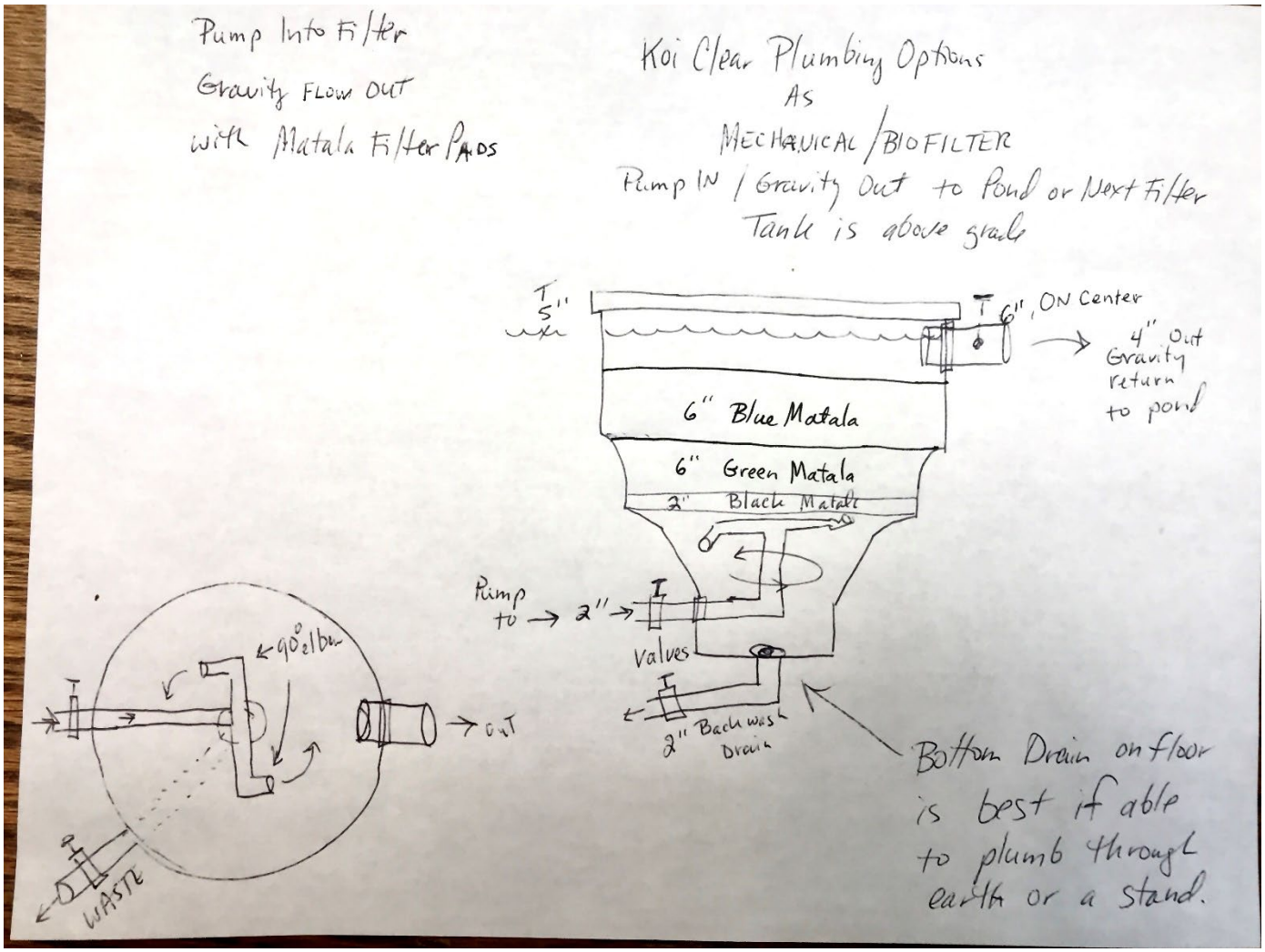


More options below.

Koi Clear as Mechanical / Biofilter with Matala pads.

PUMP INLET

Pump in and gravity out to pond. Inlet connects through the lower square area but is elbowed up to a Tee with 2 elbows on each end to create a spin to distribute water flow. This also helps in flushing the bottom sediment out of the tank during backwash.



End