

— **Instruction Manual** —

KoiTek Fluidized FilterFalls Installation

Bulkhead Drill Point

First determine which side of the Fluidized FilterFalls the piping will run. The falls assembly will have drill points on both sides to indicate proper height to drill for the bulkhead fitting. Drilling the hole for the bulkhead fitting will require a 3" hole saw attached to a drill. Once drilled remove the retaining nut from the bulkhead fitting and insert the threaded side through the hole from the inside. The rubber gasket will remain on the fitting and provide a watertight seal between the flange of the bulkhead fitting and the inside wall of the waterfall filter. Install the nut and tighten with a wrench.



Drill-points for the 2" bulhead fitting have been provided on both sides of the waterfall filter. Requires a 3" hole saw.

Air Pipe and Basket Installation

The air pipe has been pre-assembled for ease of installation. Remove the retaining nut leaving the rubber gasket on the bulk-head fitting. Insert the threaded part through the predrilled hole from the inside. Install the retaining nut and hand tighten making sure the female threaded side of the elbow on the opposite end is facing up. Next install the media basket in the waterfall filter with the center hole in the bottom of the basket over the pipe. The female threads should be level with the media basket. You may have to twist the pipe from the outside slightly to level. Loosen the retaining nut slightly if necessary to twist the pipe. Install the air diffuser by installing the male threaded part into the pipe and turning clockwise. Tighten the air diffuser by hand being careful not to over tighten. Next tighten the retaining nut with a wrench while keeping the air diffuser level.



Setting the Fluidized FilterFall

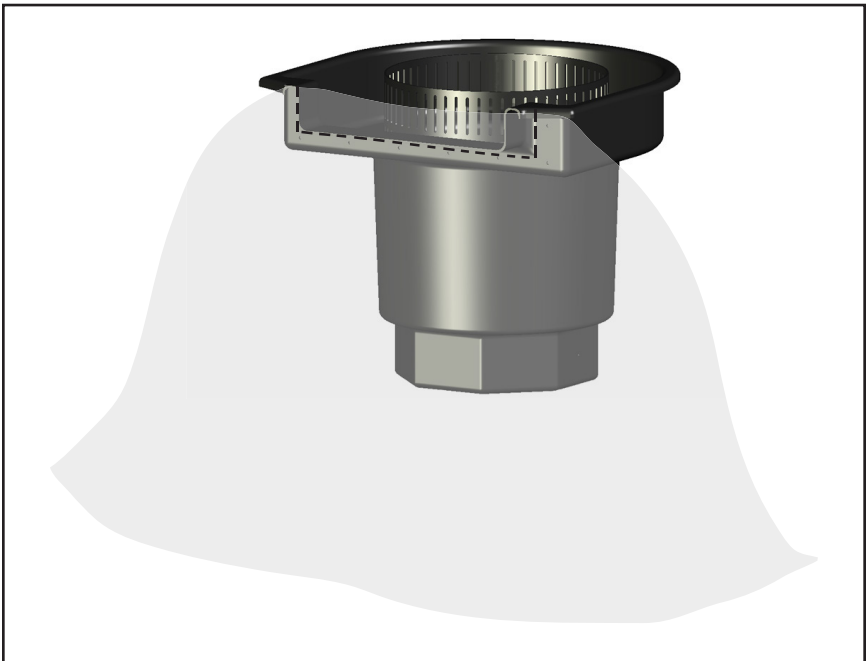
It is recommended that the Fluidized FilterFalls be placed on undisturbed level soil if possible. The ideal solution to assure the waterfall filter remains level over time is to pour a concrete pad 24" x 24" x 2". If the waterfall filter is to be elevated use bricks or cinder blocks to raise the unit up to the desired level. The waterfall filter can be placed adjacent to the pond edge or moved back for a stream bed affect. If using a stream bed allow at least 2 feet of liner on each side of the stream bed to catch the splatter from the waterfall filter. A small pool underneath the waterfall filter will cause less splatter than if the water hits rocks directly.

Once the Fluidized FilterFalls has been placed make sure it is level from side to side. It should always be installed tilted slightly forward about 1/4". This will assure the water always goes over the spillway at maximum flow rates.

Liner Attachment

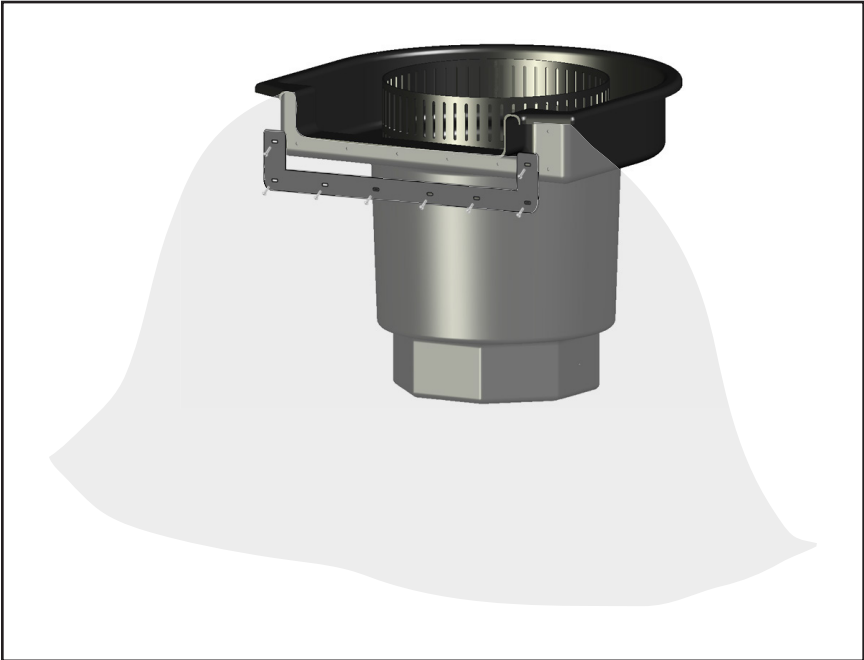
Hold the liner up against the front of the waterfall filter and drape a minimum of 6" of liner over the top of the enclosure leaving plenty of slack in the liner below the spillway (see figure 1). This will avoid any strain on the liner due to settling. While holding the liner firmly in place, use a sharp razor knife to cut the spillway opening in the liner using the inside of the spillway opening as a guide. The liner can be held in place with duct tape if needed. Clean the liner with alcohol or the duct tape may not stick. Once the spillway opening is cut pull the liner away from the front of the enclosure. Make sure the front of the waterfall filter and the back of the liner is clean. Alcohol can be used to clean the surfaces. Apply a consistent bead of the supplied sealant to the face of the waterfall filter just inside the nut inserts.

FIGURE 1



Return the liner to the face of the waterfall filter and hold in place. Attach the liner flange to the waterfall filter starting with the center screw first and then work outward toward the sides of the spillway (see figure 2). You should pierce the liner with a nail or awl before inserting the screw. Do not tighten the screws until all the screws have been installed. Only hand tighten the screws. Once completed you can trim away any excess liner. The sealant dries in 1 hour and fully cures in 24 hours.

FIGURE 2



Final Steps

It is always best to test for leaks before installing the filter media and rocks to camouflage the Fluidized FilterFalls. Before running water through the waterfall filter install the air pump using the supplied air tubing and clamps. When running the water test for leaks around the bulkhead fittings and behind the liner. Run the air pump to ensure it is working properly. If all checks ok, pour the Kaldnes K1 filter media into the media basket. Next attach the lid to the top of the basket using the supplied tie straps. The lid will keep the filter media inside the basket. Now the Fluidized FilterFalls can be camouflaged with rocks.

Maturing Process

In the beginning, the filter media is more boyant and will actually cause the basket to float slightly. As the bacteria colonizes the media it will become heavier and will circulate better throughout the basket. Usually after a period of six weeks, beneficial bacteria will have colonized the Kaldnes filter media to a satisfactory level to deal with the waste produced by your fish. In cooler climates this can take longer. To speed up this process bacteria can be added directly to the waterfall filter. When mature the filter media will turn from a pure white in color to dark brown.

Maintenance

The Kaldnes K1 filter media never has to be cleaned. Because the Kaldnes K1 media is always in motion the process is self-cleaning and requires no maintenance. Periodically the media basket slots on the side may have to be cleaned. This can be done with a small brush such as a hand brush and can be accomplished without turning off the pump. Only the outside will have to be cleaned since the movement of the filter media will keep the inside of the slots clean.

Warranty

KoiTek, LLC provides a manufacturer's limited warranty of 5 years from original purchase date. Warranty is non-transferable. Within the warranty period KoiTek will repair or replace any materials with manufacturing defects. This warranty does not cover any faults caused by improper use, installation and handling of the device. KoiTek does not assume liability for consequential damage caused by the failure of the KoiTek Fluidized FilterFalls. Warranty is void if the product is not used in accordance with instructions. The Hakko Air Pump has a 3 year manufacture warranty. For warranty claims contact us at sales@koitekfilters.com.



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