Installation Instructions for Just-A-Falls with UWD spillways

"Just-A-Falls" kits are easy to install. Unlike a pond where plant ledges and shape are a concern, a "Just-A-Falls" pond area is simply a large hole in the ground which, after the underlayment and liner are installed, gets filled with Res-Cubes and rock.

Res-Cubes create a high volume of water storage and rocks are used to fill in around the Res-Cubes. Water is pumped to the spillway at the top of the stream to create a recirculating water feature.

JUST-A-FALLS UWD KITS INCLUDE:

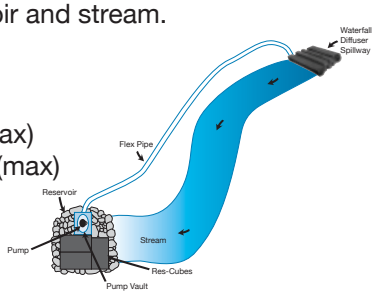
Kit Part #	Reservoir Liner Size	Stream Liner Size	Pump Vault	Spillway	Flexible PVC Pipe	Pump	Plumbing Assembly	Res-Cubes	Accessories
JAF8W	10' x 10'	7' x 10'	JAFM	23" UWD23	1¼" x 25'	EP2200	PDA125	3 - HSC44	PVC Glue & Foam
JAF16W	10' x 12'	10' x 10'	JAFM	23" UWD23	2" x 25'	TH250	PDA20TH	5 - HSC44	PVC Glue & Foam
JAF24W	12' x 15'	12' x 15'	JAFM	23" UWD23	2" x 50'	TH400	PDA20TH	7 - HSC44	PVC Glue & Foam
JAF28W	15' x 15'	15' x 15'	JAFM	2 - 23" UWD23	2" x 50'	TH750	PDA20TH	7 - HSC44/7-HSC22	PVC Glue & Foam

EXCAVATING THE RESERVOIR AND STREAM

The first step in building your "Just-A-Falls" kit is to determine the shape and layout of the reservoir and stream.

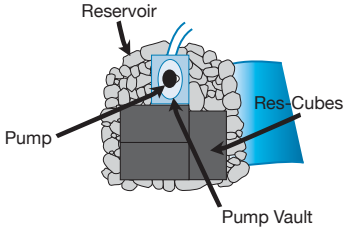
Often times spray paint is used to mark the outline of the area once the final shape is chosen. The basic reservoir and stream size of the kits is as follows:

JAF8W: 4' x 4' x 2' Deep; 7' long stream (max) **JAF16W:** 5' x 5' x 2' Deep; 16' long stream (max)
JAF24W:6' x 6' x 2' Deep; 24' long stream (max) **JAF28W:** 6' x 6' x 2½' Deep; 28' long stream (max)

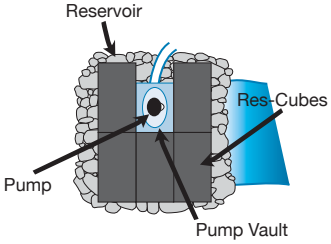


Actual hole excavation should be larger to accommodate the equipment used in the reservoir. By the time the proper depth is achieved, the bottom of the hole should be slightly larger than these sizes.

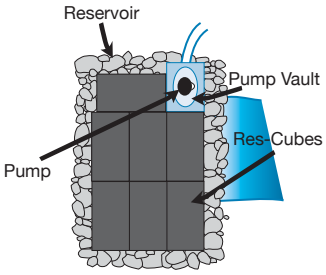
The surface size of the reservoir is determined by what size and length the waterfall/stream is going to be. A long stream will require a larger reservoir since more water will be needed to fill the stream. The vault is a couple inches shorter than the depth shown to allow for 1"-2" of stone over the cover to conceal it from view. For the JAF28W kit the excavation where the vault sits should be 24" deep and 30" deep where the Res-Cubes will sit.



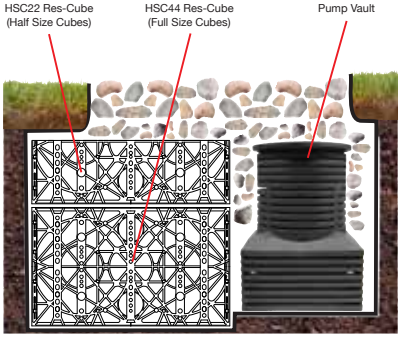
Suggested Res-Cube layout for JAF8W



Suggested Res-Cube layout for JAF16W



Suggested Res-Cube layout for JAF24W



Suggested Res-Cube layout for JAF28W
Same layout as 24W with 2 layers of Res-Cubes

EXCAVATING THE RESERVOIR AND STREAM (CONT)

The dirt from the reservoir can be used to build up a berm around the top of the waterfall if needed. If the waterfall area is already elevated (on a hillside) the dirt will not be needed and can be discarded.

Use leftover dirt from reservoir to build up berm around top of waterfall if needed

The stream and waterfall area is sculpted next. Be sure your stream has some character to it. Streams that twist and turn and get wider in some areas and narrower in others are much more realistic than simple straight streams. Be sure not to make stream wider than provided liner. If you are planning on using large rocks in the stream to add dimension, dig out some pockets where these rocks will sit. When the liner is placed over these pockets the large rocks will nest in the "dimple" or pocket, this will keep them from moving and also create a more natural look. A distinct drop/waterfall should be included where the stream meets the reservoir. If this is not part of the design, some seam tape (sold separately) should be used to join the stream liner to the reservoir liner to ensure water tight seal.

Sculpt and compact dirt in stream area before installing liner

The waterfall spillway will sit inside the liner at the beginning of the stream. Be sure the area where the spillway(s) will sit is compacted and level.

INSTALLING THE UNDERLAYMENT AND LINER

Once you have sculpted the reservoir, stream and waterfall area - carefully check for any rocks, roots or sharp objects in the soil. After ensuring the area is free from objects install the underlayment through the reservoir and stream area. After installing the underlayment, install the liner in the reservoir. Do not be concerned with a few wrinkles in the liner since the whole area will be filled in with rock and covered. Be sure to pull any extra liner in the reservoir towards the waterfall area. **The stream liner will need to adequately overlap the reservoir liner. This will ensure water does not leak between the two pieces of liner. Be sure the liner is not stretched or under tension.**

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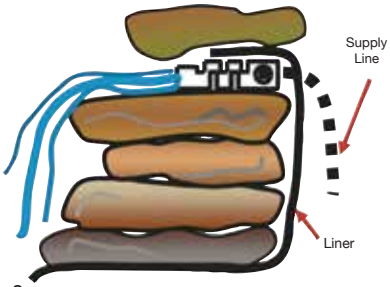
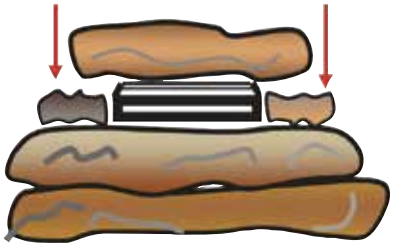
INSTALLING THE SPILLWAY

- Double check soil under spillway is compacted and level to ensure even flow of water over outlet of spillway.
- Lay the liner for the stream in place.
- Choose the opening on the spillway for entry of water. Install PVC male adaptor in opening for water entry and PVC plug in opposite side to seal waterfall diffuser. Use Teflon tape on threads for water tight seal.

- For the JAF28W only: Two spillways are included. They can be placed side by side or have a second waterfall elsewhere in the stream. A PVC tee and ball valves are included for placement options.
- Make sure liner goes behind all the stones and over the top of the spillway.
- Glue the flex PVC into the male adaptor (or reducer bushing on JAF8W). Hold in place for at least 30 seconds for a solid bond.
- If large stones are placed on the diffuser, use smaller stones to level them and help support the load.

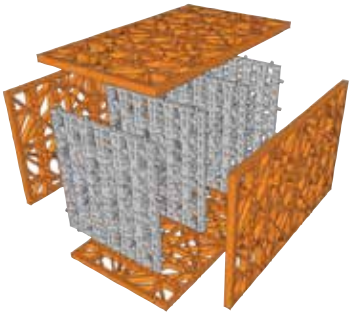




INSTALLING THE PUMP VAULT AND RES-CUBES

After the underlayment and liner have been installed, install the pump vault and Res-Cubes in the reservoir.

- Assemble the Res-Cubes. Use the illustration for reference on assembly.
- Use the chart on page 1 for placement guidance of pump vault and Res-Cubes. These are only guides for placement of reservoir items; other placement options are acceptable and depend on variations of the project.



Assemble as shown

- Be sure the outlet hole of the vault faces the direction of the PVC tubing.
- Once the vault and Res-Cubes are in place, use 6" to 12" rock for filling voids in the reservoir to within 3" to 4" of the top of the vault.
- Run the flexible PVC pipe into discharge hole of the pump vault before filling the remainder of the reservoir with rock.

INSTALLING THE PUMP AND PLUMBING

Do not overtighten discharge assembly while installing pump into vault.

- Install the pump discharge assembly into the outlet of the pump by threading it in. Be careful not to over tighten.
- Place pump with discharge assembly into the pump vault.
- Line up the rubber coupler with the PVC pipe.
- Insert flex PVC into the coupler. Ideally the flex PVC will be up against the pump discharge assembly fitting. Secure by tightening clamp of rubber coupling. Check both clamps are tight.
- Install lid on pump vault to keep out rocks while finishing.

- Most times the power supply for the pump is nearby. In freezing climates the pump will need to be removed from the vault and stored during winter months. Be sure to consider this when deciding the method of concealing the power cord of the pump.

BUILDING THE WATERFALL AND STREAM

You should have the general layout of your stream already determined from the shaping and sculpting done before placing the liner. There are many different types of rock that can be used in streams. Be sure to use a mixture of sizes through your stream. Once you have placed all the large rocks, you can use black expanding foam to fill in any voids between the rocks. This will keep the water from going under or in between them and make it go over the rocks so you can enjoy the flow. You do not need to foam every rock in the stream, about every 4' - 5' in the stream do a section. Also foam any areas where the water makes a vertical drop should be foamed.

Use expanding foam to fill in voids between rocks

Once large rocks are placed and any foam work is done, sprinkle 1" - 2" stone over stream rocks to fill in voids and cracks.

FINISHING UP

Your “Just-A-Falls” is now complete and landscaping around the feature can be done as desired. With a little creativity in rock work and plantings, you can completely hide the spillway, tubing and other components. An optional auto fill can be installed in the vault or Water Fill Box (sold separately part #WFB). This will replace water lost to evaporation or splash. The auto fill can be connected to an existing irrigation system (consult an irrigation specialist) or to a garden hose with the correct fittings.

OPERATION & MAINTENANCE

Since your “Just-A-Falls” is a water feature and not an ecosystem like a pond, which has fish and plants, maintenance is easy. Water can be treated with strong algaecides designed for fountains or water garden algaecides like Algaefix or GreenClean can be used for string algae that can grow in the stream. EasyPro Rock and Waterfall Cleaner can also be used to lift debris from rocks in the stream. EasyPro All Season Liquid Pond Bacteria can be added to the water to help control odors should this occur.

Also, unlike a pond where pumps typically run 24 hours a day, your “Just-A-Falls” can be shut off at night for electrical savings.

Be sure that the water level in the reservoir always is high enough for proper operation of the pumps which require full submergence. Float switches can be installed to shut the pump off in low water situations. For more information on float switches please see our website.

In order to winterize the system in freezing climates, the pump should be removed during winter months. Be sure to account for removal by covering the lid of the pump vault with a movable landscape object (stone, driftwood, decorative stone, etc).

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