



MAGICFALLS[®]

WATER EFFECTS



INSTALLATION AND USER'S GUIDE

IMPORTANT SAFETY INSTRUCTIONS
READ AND FOLLOW ALL INSTRUCTIONS
SAVE THESE INSTRUCTIONS

Overview

Perhaps no other feature contributes more to the beauty and tranquility of your poolscape than the sight and sound of falling water. Built to the highest standard of quality, and “wet tested” to ensure that your water effect will be soothing and beautiful, the MagicFalls® Water Effects will transform your pool into a romantic oasis, and a breathtaking focal point.

Please read and follow the MagicFalls® Water Effects installation instructions carefully.

⚠ WARNING! Failure to follow the recommended installation guidelines could void the warranty, and may result in injury.

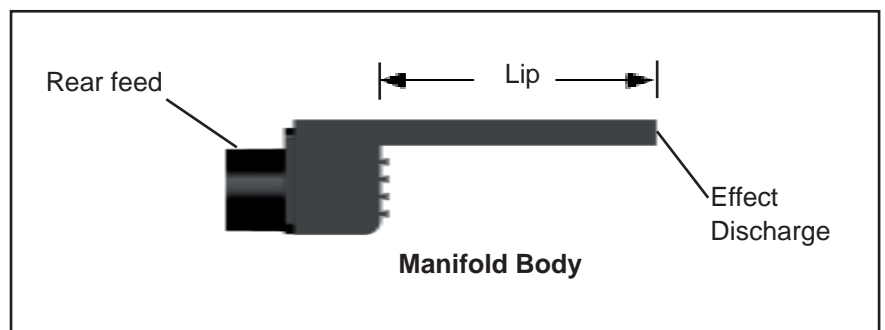


MagicFalls® Curved Rain Water Effect

Design Guidelines for Waterfalls

The following lists the design considerations when selecting a waterfall project:

1. Water effect.
2. Waterfall length.
3. Lip length (this depends on how and where the waterfall is mounted).
4. The desired color.
5. Water supply location:
Rear (standard) or Bottom (optional).
6. Curved water effects cannot be field cut, they must be factory cut for a nominal charge. Convex or concave curves can be cut. There must be at least 1” of lip in front of the manifold body, or the water effect will not work.
7. Waterfalls that are ordered in a color other than white are painted with high quality automotive paint. The paint is applied to the front and extends approximately 3 in. into the lip for the 6 in. and 13 in. lip waterfalls. For the 1 in. lip waterfalls, the entire lip is painted.



Important Facts

- The Waterfall sheet effect is thin, sensitive to wind, and the width of the sheet narrows the farther it falls. At fall heights above 3', the sheet effect begins to break apart and to produce an annoying buffeting noise. A maximum mounting height of 3 ft. for sheet effect is recommended.
- The rain effect is less affected by wind than are sheet effects. The effect does not narrow as the fall height increases. A maximum mounting height of 6 ft for rain effect is recommended.
- Waterfalls are typically installed in the bond beam, just above the tile line, or in a raised wall above the bond beam. Three important considerations include: wall thickness, tile or stone thickness, and the weight of the covering concrete or stone.
- Use a 20 micron cartridge filter to supply clean, filtered water to the waterfall. Do not use a DE or Sand filter.
- You should plan to supply approximately 15 GPM per foot. The waterfall can operate on lower flow rates (10 GPM/ft minimum), but may not achieve the desired effect. Each waterfall should be equipped with a flow control valve, located downstream from the filter, to adjust the flow to each waterfall. It is recommended to use an energy saving IntelliFlo® and IntelliPro® Pump to allow you to easily vary the flow to the waterfall.
- The maximum head loss for any waterfall is 6 ft. Calculate and add the loss of your piping to determine your pump requirement.
- Use 1½ in diameter supply piping for each waterfall 1 ft. and under. Use 2 in diameter supply piping for 18 in to 4 ft waterfalls. Use 3 in diameter supply piping for all waterfalls 5 ft. and over. Be sure to calculate the total head loss. **Note: Be sure to keep all debris out of the piping during installation.**
- The rear connection to the waterfalls is a 1½ in pipe. This allows installation of a standard 1½ in diameter Sch40 elbow directly on the connection. Waterfalls 5' and over have two 1½ in rear connections. All MagicFalls Water Effects 5 ft. and over include pre-cut parts for a 2 in manifold.
- The optional bottom connection is a 1½ in. slip coupling, designed to be glued directly to a Sch40 pipe.
- Note: The water connections on the waterfall use PVC and ABS. Use a pool industry standard brand PVC cement for PVC connections and ABS transition Glue (green) for the ABS to PVC connections to glue the water supply line. **See page 5 for PVC and ABS pipe assembly illustration.**
- For installation subject to heavy debris, install the optional rock trap (P/N 580004). This requires 2 in plumbing.

NOTE: The incoming water supply line and the Water Baffle/Water Channel must be completely supported and should not hang off the waterfall lip. An unsupported waterline and or Water Baffle/Water Channel could cause the joints to fail and ultimately leak. This will void the warranty.

The following chart indicates the combinations of effect, length, and other specifications used to define the choice of waterfall. Note: For more information, see “Waterfall Assembly Configuration and Dimensions” on page 8.



Sheet



Curtain



Rain



Arc Sheet



Arc Rain

MagicFalls® Water Effects Configurations

Water Effect		WATERFALL			ARC	
		Sheet	Curtain	Rain	Sheet	Rain
Width	8"	•	•	•		
	1'	•	•	•	•	•
	18"	•	•	•	•	•
	2'	•	•	•	•	•
	3'	•	•	•		•
	4'	•	•	•		•
	5'	•	•	•		•
	6'	•	•	•		•
Lip Length	1" – 11 Series	•				
	6" – 12 Series	•	•	•	•	•
	13" – 14 Series	•	•	•	•	•
Curved Water Effect	Factory Cut Radius, 12 Series*	•		•		
	Factory Cut Radius, 14 Series*	•		•		
	Custom Curve Shape, 14 Series**	•				
Color	Brass	•	•	•	•	•
	Bronze	•	•	•	•	•
	Copper	•	•	•	•	•
	Gray	•	•	•	•	•
	Silver	•	•	•	•	•
	White	•	•	•	•	•
Water Feed	Rear (standard)	•	•	•	•	•
	Bottom Feed (optional)		8" through 4' lengths only			
Recommended Maximum Installed Height		3'	3'	6'	3'	6'
Flow Requirements		15 GPM per foot; maximum head 6'				
Pipe Sizing	From Pump	1½" for effect 1' length and under 2" for 18" to 4' – 3" for 5' length and over				
	Rear Connection	(1) 1½" for 4' length and under (2) 1½" for 5' length and over				
	Optional Bottom Connection (8" to 4')	1½" slip coupling glued directly to Sch40 pipe				

NOTES TO INSTALLERS:

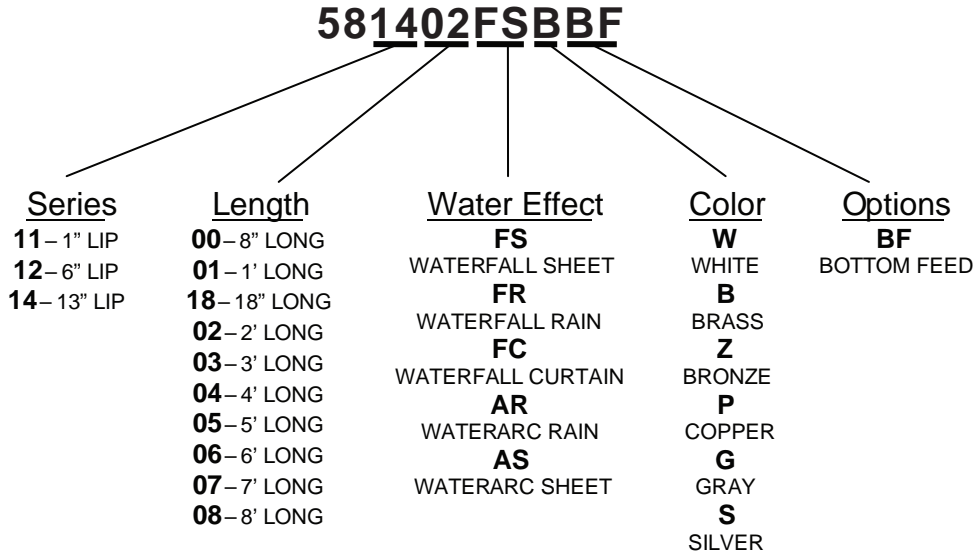
*To order a factory radius curve shape, follow these steps:

1. Specify the radius in feet and inches (example: 6'6").
2. Determine the MagicFalls series by using the Lip Series Selection Chart above.
3. Factory Radius Cut Charge 12 & 14 Series—Part Number 5890001.
4. Specify if the radius is Concave or Convex.

**To order a custom curve shape, a rigid template created by the installer must be sent to the factory from your distributor.

Contact your distributor for information. Custom Curve Cut Charge 14 Series—Part Number 5890002.

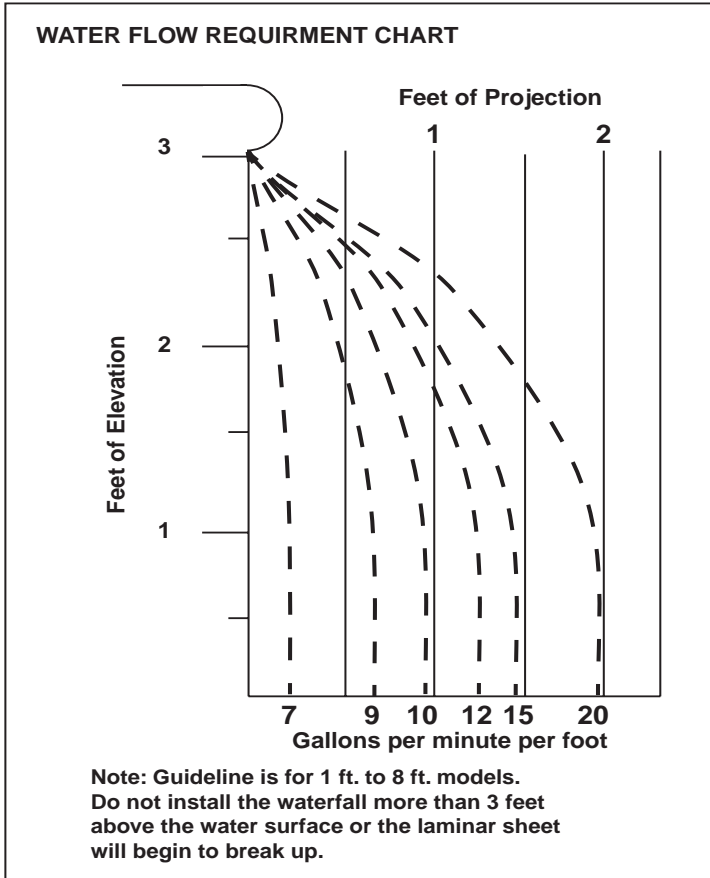
The following waterfall part number represent the different available waterfall effects.



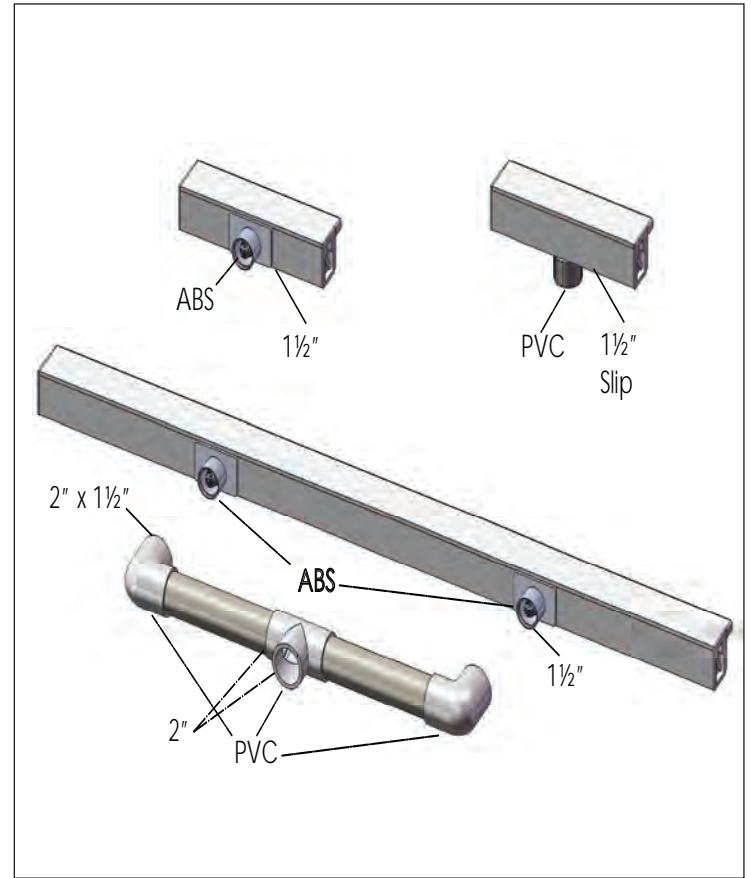
Use the Waterfall Radius Chart to select the MagicFalls® Water Effects series (6 in. or 13 in. lip) for a particular radius.

WATERFALL RADIUS CHART									
RADIUS	WALLFALL LENGTH								
	1'	18"	2'	3'	4'	5'	6'	7'	8'
1'	12								
1.5'	12	12							
2'	12	12	12	14					
2.5'	12	12	12	14					
3'	12	12	12	14	14				
3.5'	12	12	12	14	14				
4'	12	12	12	12	14				
4.5'	12	12	12	12	14	14			
5'	12	12	12	12	14	14			
5.5'	12	12	12	12	14	14			
6'	12	12	12	12	12	14	14		
6.5'	12	12	12	12	12	14	14		
7'	12	12	12	12	12	14	14		
7.5'	12	12	12	12	12	14	14		
8'	12	12	12	12	12	14	14		
8.5'	12	12	12	12	12	14	14	14	
9'	12	12	12	12	12	14	14	14	
9.5'	12	12	12	12	12	12	14	14	
10'	12	12	12	12	12	12	14	14	
10.5'	12	12	12	12	12	12	14	14	
11'	12	12	12	12	12	12	14	14	
11.5'	12	12	12	12	12	12	14	14	
12'	12	12	12	12	12	12	14	14	
12.5'	12	12	12	12	12	12	12	14	14
13'	12	12	12	12	12	12	12	14	14

Use the Water Flow Requirement Chart below to determine the waterfall effect projection for 1 ft. to 8 ft. models.



For waterfalls greater than 5 ft. in length, a prefabricated PVC pipe assembly is provided. See PVC and ABS Pipe Assembly illustration below.



PVC and ABS Pipe Assembly

Installation

1. Preparing the Niche for the MagicFalls® Water Effects

Notch the bond beam as shown (Figure 1). Attach a board to the side of the pool as shown. Make sure this board is level. The board will be used to set the level of the waterfall and create a dam for the mortar bed.

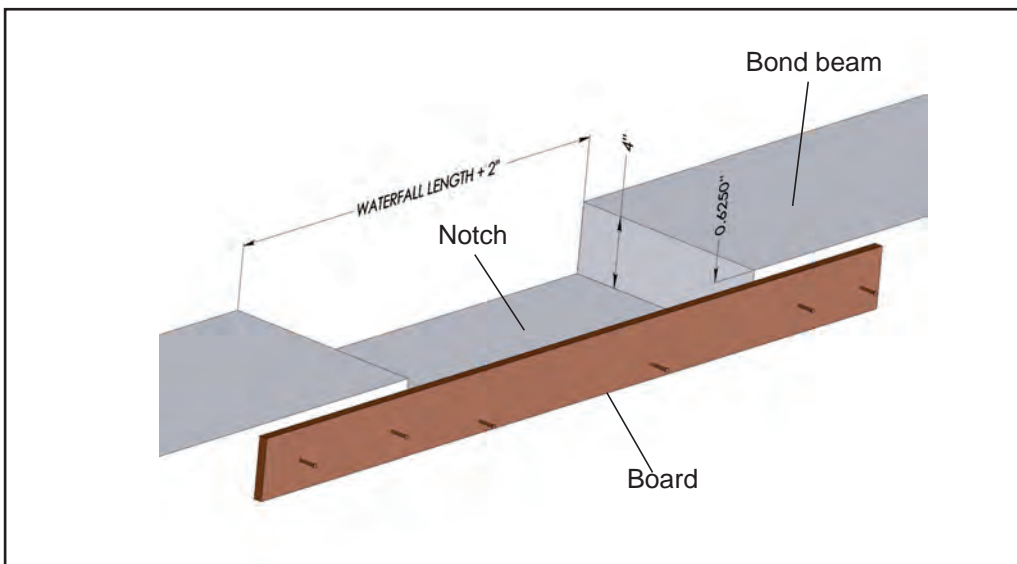



Figure 1

Prepare the Niche

2. Setting the Waterfall

Create a bed of mortar in the notch in the bond beam and press the waterfall unit into the mortar until the bottom of the lip is flush with the board (Figure 2). Be sure the lip support is pressed into the slot to prevent debris from getting into the waterfall. When the supply pipe from the filter is clear of all debris, solvent weld the supply pipe to the waterfall.

 **NOTE: CLEAN THE SUPPLY PIPE:** Waterfalls are sensitive to debris. Flush the supply pipe completely before attaching it to the waterfall.

Critical considerations

1. The area under the lip must be completely supported by mortar. If not, the coping will warp the waterfall.
2. The leading edge of the waterfall edge (the edge from which the water spills) needs to clear the face of the tile line by at least $\frac{3}{4}$ ".
3. When installing an arc effect, like rain or sheet, be sure the water effect clears the overhanging coping (Figure 3). The arc of the water effect rises out of the waterfall at 45° .

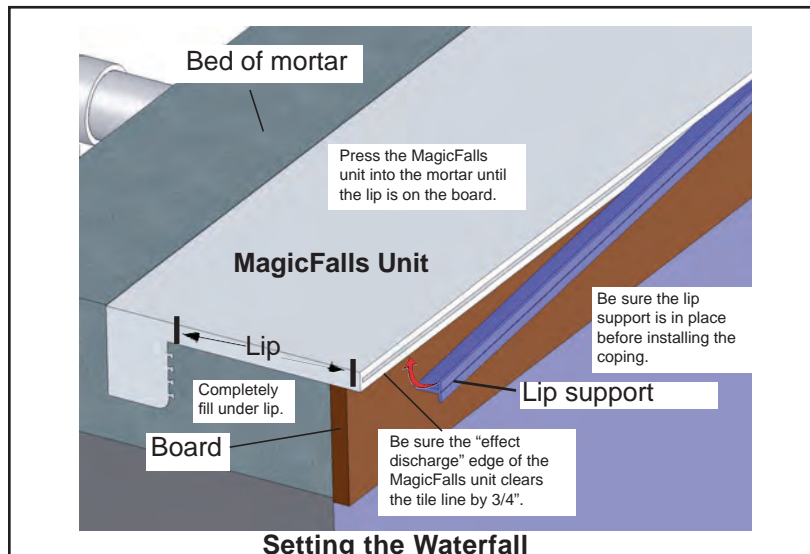


Figure 2

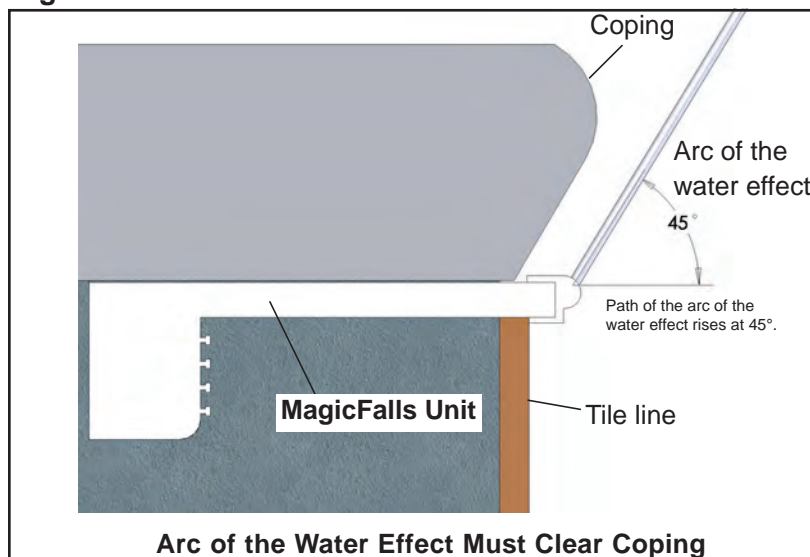


Figure 3

3. Finishing the Waterfall

After the mortar bed is cured, remove the board. Be sure the lip protector is in place before installing the coping (Figure 4).

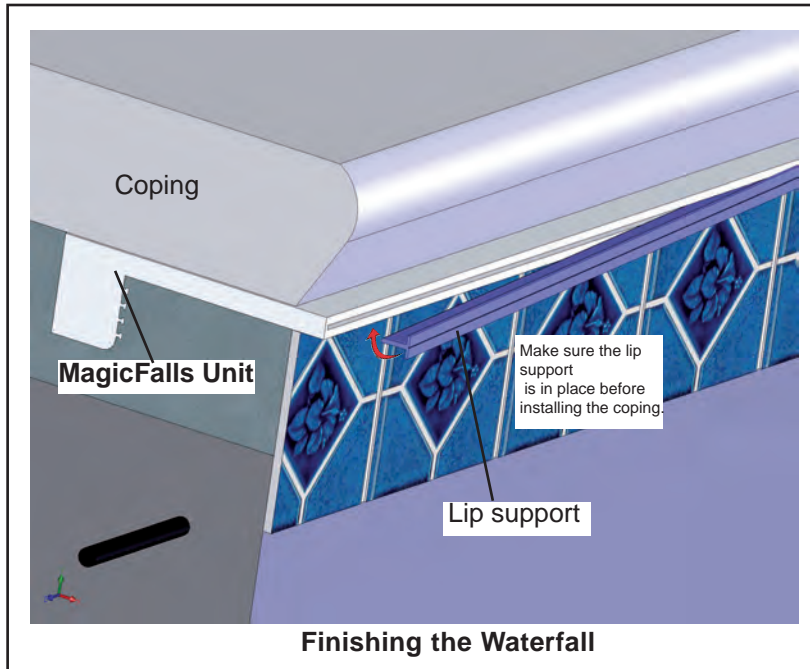


Figure 4

4. Removing the Lip Protector Support

After the waterfall is completely installed, remove the lip support (Figure 4).

If the waterfall does not produce a smooth sheet of water, internal lip supports may be removed by breaking them off with the supplied tool (Figure 5).



NOTE: After the internal lip supports are removed, they can not be replaced. **Use caution when removing the internal lip supports.**

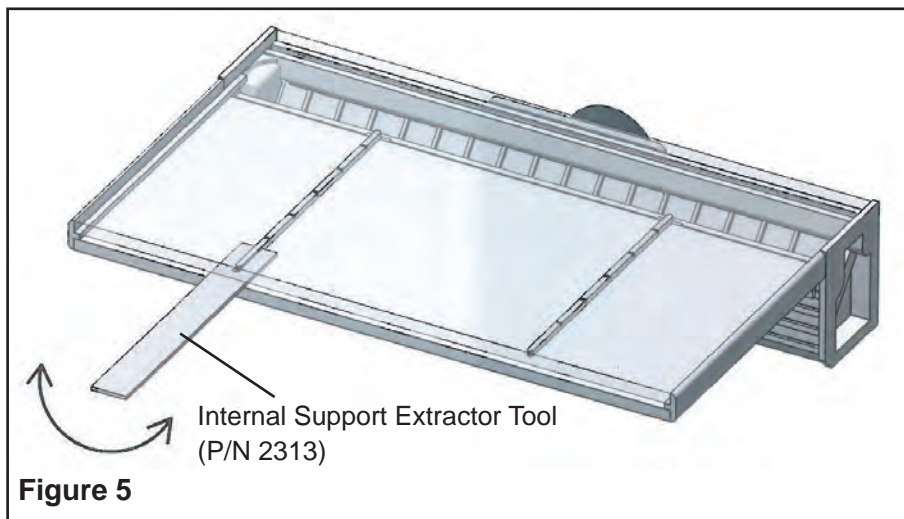
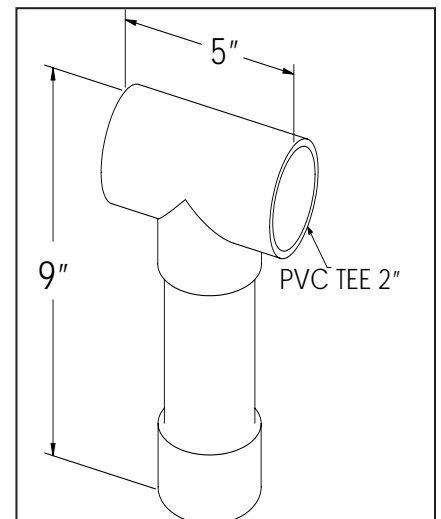
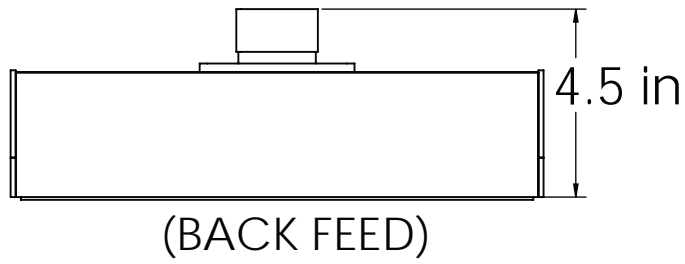
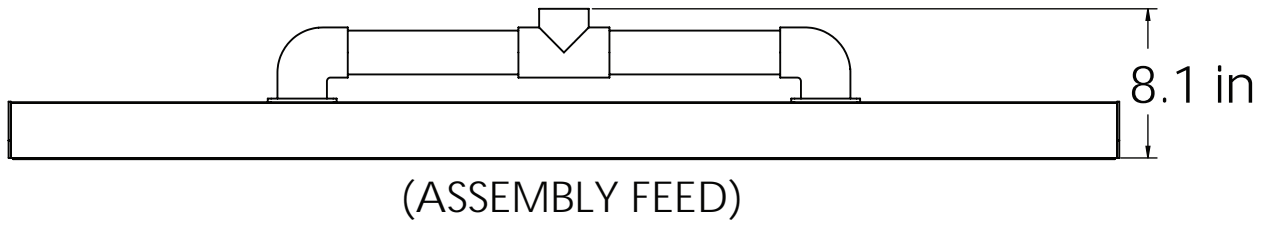


Figure 5

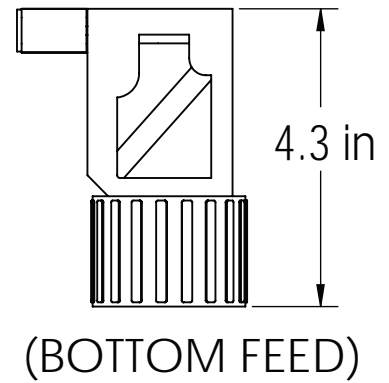
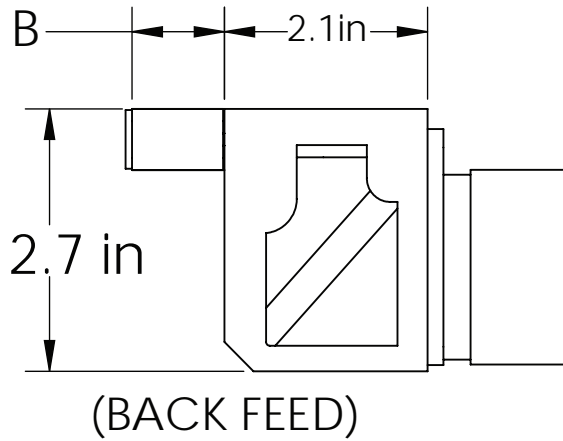


Rocktrap (P/N 580004)

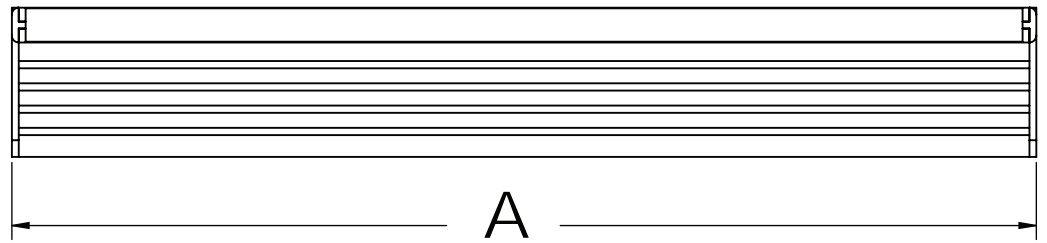
Waterfall Assembly Configuration and Dimensions



Lip	Dim B
1 in	1.0 in
6 in	6.0 in
13 in	13.8 in



Length	Dim A
8 in	8.6 in
1 ft	13 in
18 in	18.6 in
2 ft	25 in
3 ft	37 in
4 ft	49 in
5 ft	61 in
6 ft	73 in
7 ft	85 in
8 ft	97 in



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