

# CMP

## NATURAL WONDERS WATERFALLS

CMP 25577-XXX-XXX

# NATURAL WONDERS

This waterfall MUST be installed as specified by these instructions. Please follow ALL of the instructions enclosed with this waterfall. It is recommended to keep the unit in its original packaging until the site is prepared for installation. NOTE: Only use with filtered water.

The Natural Wonders line of CMP waterfalls is available in varying sizes. The units use 1 gallon of water per inch of waterfall per minute - please size the pump accordingly. Note: Natural Wonders Waterfalls are available in white, gray, and tan in most sizes. Each waterfall comes with a protective tongue for the water outlet (Fig. 1) and also a protective cap for the water inlet. These prevent debris from entering the unit during the installation process. These caps are not to be removed from the unit until the equipment is ready to run. Failure to do so can cause permanent damage to the waterfall. In addition, each unit comes with an optional screen that can snap into the water inlet for additional filtration if desired. We do not recommend using the screen due to hair or debris build-up which can affect the performance of the waterfall.

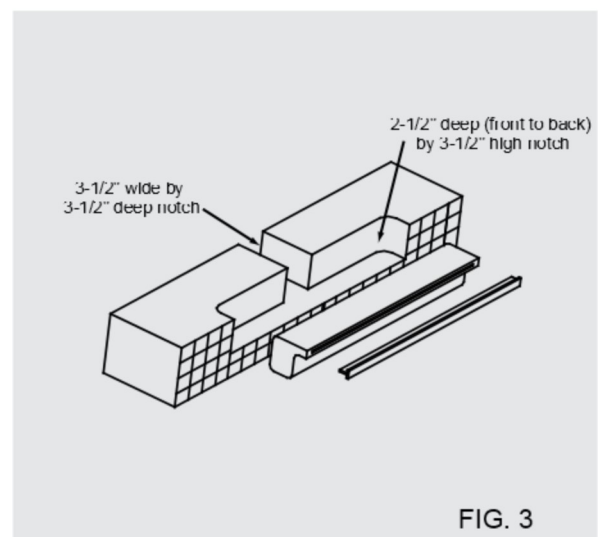
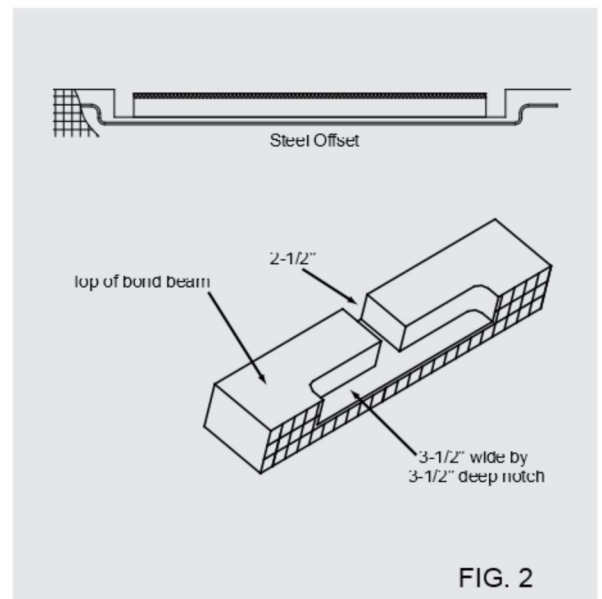
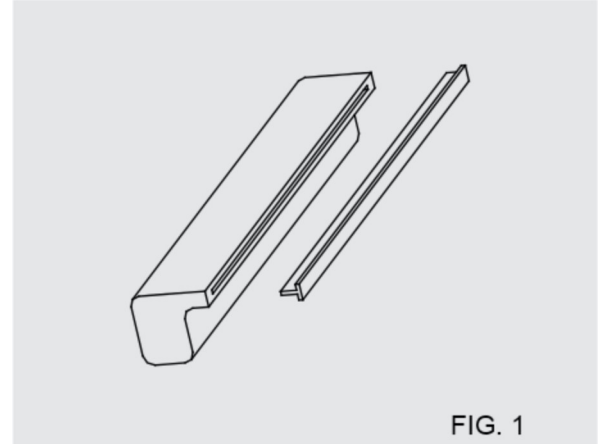
Once the area of installation is determined, mark the area with stakes, ribbon, or string prior to construction. When ready for rebar, mark the exact location of the waterfall. The steel pattern should be offset by 3" to the bottom and by 1" outside the length of the waterfall (if the waterfall is 24" long, the steel pattern should offset to 3" down from the top and 26" in length - see Fig. 2).

NOTE: Do not stand on, drop, or step on waterfall.

A notch must be cut in the inner edge of the bond beam in the area of the offset. The notch should be cut 3-1/2" deep by 2-1/2" wide and 2" longer than the length of the waterfall - 1" longer on either side. An additional notch must be cut perpendicular to the first. It must be located in the center of the first notch to allow for the waterfall to be plumbed to the 1-1/2" water line. The perpendicular notch for plumbing should be 3-1/2" wide by 3-1/2" deep. Once the beam is marked, cut the notches to the correct sizes (Fig 3).

NOTE: Flush the pipe line before installing the waterfall.

To assist in securing the waterfall until the concrete cures, cover the finished setting with a piece of plywood (1/2" or 3/4" thick). Then place heavy blocks evenly across the top of the plywood. This will also protect the waterfall from heat and sunlight which may cause warping.



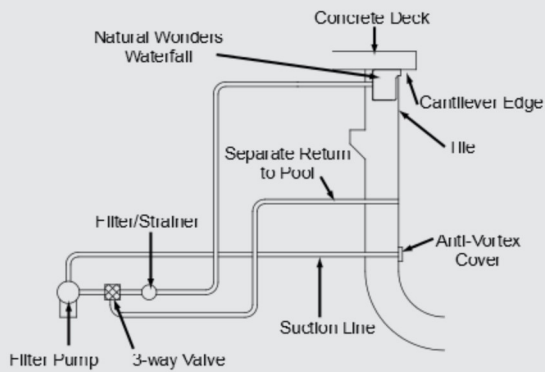


FIG. 4

### PLUMBING GUIDELINE CHART

Use a min. of 1-1/2" pipe  
 Use a min. of 2" pipe for runs over than 60' or for waterfalls over 5'  
 Dedicated plumbing lines are recommended  
 Maximum recommended flow:  
 1-1/2" pipe for 60 GPM  
 2" pipe for 100 GPM  
 2-1/2" pipe for 140 GPM  
 3" pipe for 225 GPM

### TYPICAL PERFORMANCE AT 50' OF HEAD

1/2 HP	=	26 GPM
3/4 HP	=	58 GPM
1 HP	=	68 GPM
1-1/2	=	93 GPM
2 HP	=	106 GPM
3 HP	=	140 GPM

If multiple waterfalls are installed, a separate pump is recommended. This will also require a separate suction line to be plumbed. The dedicated pump and suction should be plumbed with a minimum of 2" schedule 40 pipe. At least two anti-vortex suction cover must be used to prevent possible entrapment. It is recommended to mount the anti-vortex cover 18" above the bottom of the pool. A filter/strainer is also required between the pump and the waterfall in this plumbing situation. Installations requiring more than 60 gallons per minute may require two or more filters plumbed in parallel. A separate line with a 3-way valve must be used to balance the water between the waterfalls (Fig. 4).

The water feed line from the pump should use a minimum of 1-1/2" PVC pipe. The feed line should terminate near the center of the waterfall at the back of the bond beam. The Plumbing Guideline Chart to the left on this page will aid in the plumbing of the waterfalls.

It is recommended to use a 3-way valve as a "T" from the return line of the pool to the waterfall to allow the flow to be regulated. The recommended location for this valve is after the filter near the equipment pad (Fig. 5). All water to the waterfalls must be filtered.

When plumbing two or more waterfalls, follow all of the previous instructions with the addition of a 2-way ball valve for each waterfall. The valve is necessary to balance the water flow between the units. Proper placement of the valve is shown in Fig. 6. CMP ball valve part numbers are 25800-151-000 for 1-1/2" and 25800-210-000 for 2".

The waterfall must be installed before the deck and coping. Place the waterfall in the notch cut in the bond beam. Using shims of tile, make sure the top of the waterfall is level with the upper edge of the bond beam. Fill gaps around the unit and coat the face of the waterfall with concrete or similar material in preparation for the tiles. Cut the tile to fit under the lip of the waterfall using thin set or similar substance to secure in place (Fig. 7).

**NOTE: IT IS ALWAYS RECOMMENDED TO PLUMB THE NATURAL WONDERS WATERFALLS WITH A ROCK TRAP JUST BEFORE THE LINE REACHES THE WATERFALL.**

Once the pool construction is complete and the pool is filled with water remove the protective tongue. Next check the spillway for debris and activate the waterfall. If the waterfall is plumbed with the main filter pump turn on the pump and let in run for 5 about minutes to clear the lines of air and debris. Open the regulating valve to slowly to adjust the flow of the water until the sheeted water reaches the desired location on the pool surface. If the waterfall is plumbed with a separate pump first open all the valves and make sure all the lines are free and clear of debris. Start the dedicated pump and let the water circulate through the system for about 5 minutes to clear the lines of air and debris. Adjust the valve to each waterfall slowly to the desired setting.

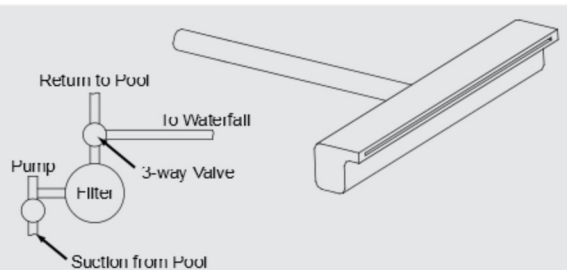


FIG. 5

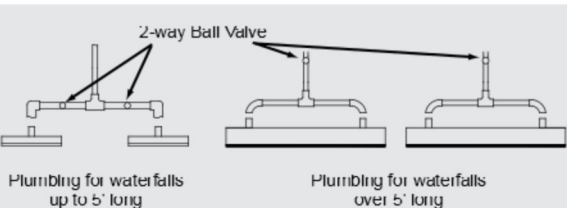


FIG. 6

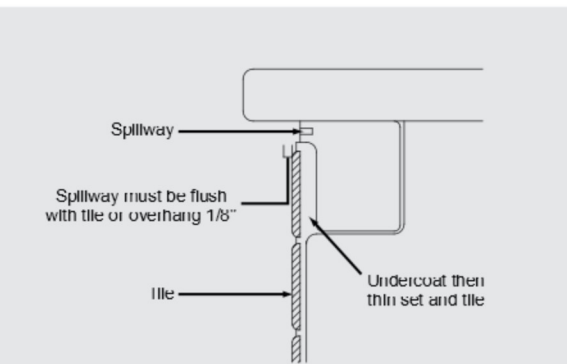


FIG. 7