



NATURAL WONDERS RAINFALLS

CMP 2558 7-XXX-XXX



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 RainFalls is available in varying sizes. The units use 6 to 15 gallons of water per foot of waterfall per minute - please size the pump accordingly. Place tape over the face to prevent debris from entering the unit during the installation process. Do not remove from the unit until the equipment is ready to run. Failure to do so can cause permanent damage to the RainFall. 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 RainFall.

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 RainFall. The steel pattern should be offset by 3" to the bottom and by 1" outside the length of the RainFall (if the RainFall 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 RainFall.

A notch must be cut in the inner edge of the bond beam in the area of the offset. The notch should be cut 9-1/2" 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 RainFall to be plumbed to the 1-1/2" water line. The perpendicular notch for plumbing should be 3-1/2" wide by 9-1/2" deep. Once the beam is marked, cut the notches to the correct sizes (Fig 3).

NOTE: Flush the pipe line before installing the RainFall.

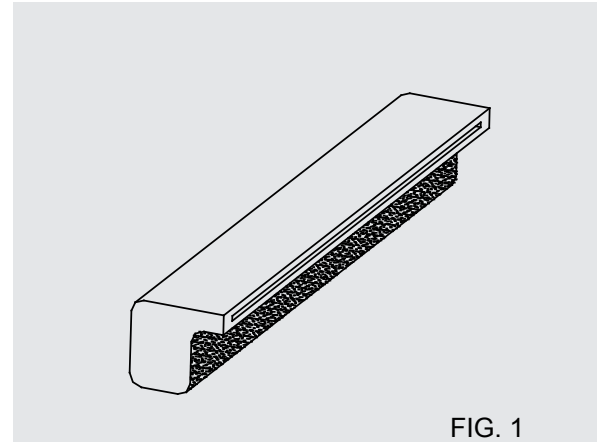


FIG. 1

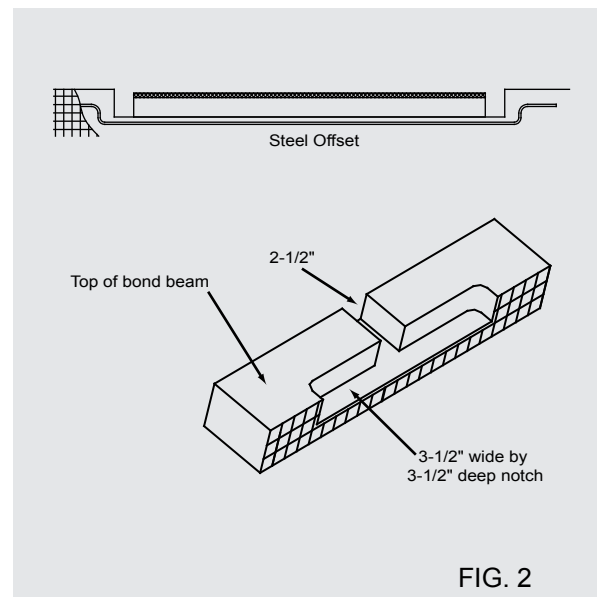


FIG. 2

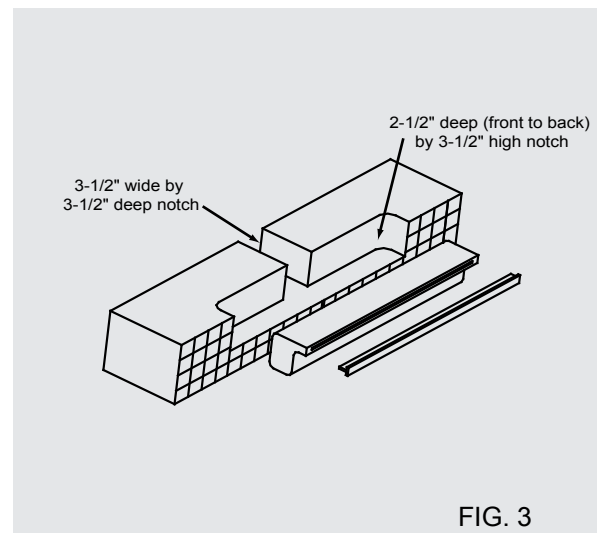
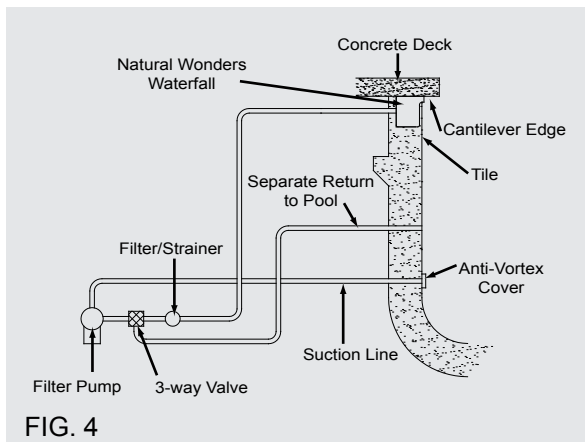


FIG. 3



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

To assist in securing the RainFall 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 RainFall from heat and sunlight which may cause warping.

If multiple RainFalls 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 covers must be used to prevent possible entrapment. It is recommended to mount the anti-vortex cover 18" above the bottom of the pool. We suggest using CMP #25215-000. A filter/strainer is also required between the pump and the RainFall 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 RainFalls (Fig. 4).

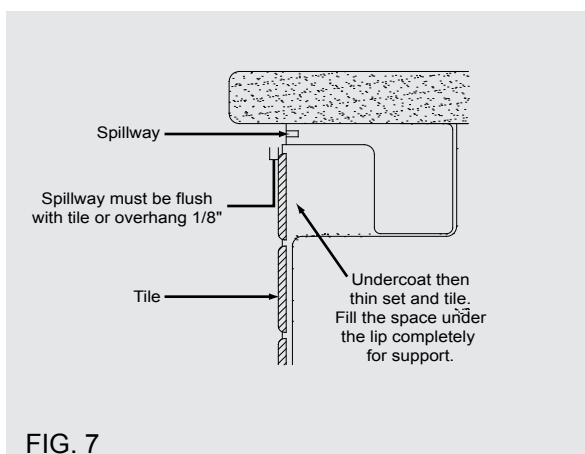
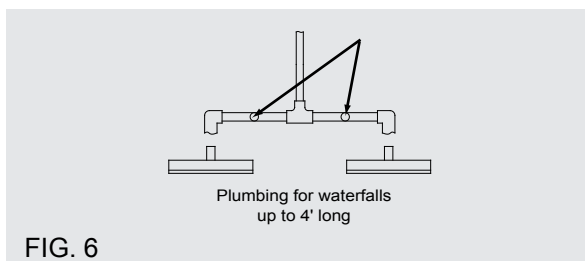
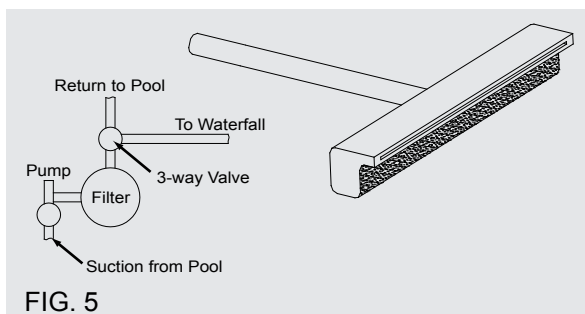
The water feed line from the pump should use a minimum of 1-1/2" PVC pipe. The feed line should terminate near the center of the waterfall at the back of the bond beam. The Plumbing Guideline Chart to the left on this page will aid in the plumbing of the RainFalls.

It is recommended to use a 3-way valve as a "T" from the return line of the pool to the RainFall 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 RainFalls must be filtered.

When plumbing two or more RainFalls, follow all of the previous instructions with the addition of a 2-way ball valve for each RainFall. 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 RainFall must be installed before the deck and coping. Place the RainFall in the notch cut in the bond beam. Using shims of tile, make sure the top of the RainFall is level with the upper edge of the bond beam. Fill gaps around the unit and coat the face of the RainFall with concrete or similar material in preparation for the tiles. Cut the tile to fit under the lip of the RainFall using thin set or similar substance to secure in place (Fig. 7).

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



Once the pool construction is complete and the pool is filled with water remove the protective tape. Next check the spillway for debris and activate the RainFall. If the RainFall 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 water pattern reaches the desired location on the pool surface. If the RainFall 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 RainFall slowly to the desired setting.

The plumbing system must be designed to allow water to easily drain out to prevent damage from freezing. The Natural Wonders RainFalls are designed to minimize the amount of water that remains in the unit when not in use if the system is plumbed correctly. Blow all the lines and follow the standard winterizing procedure when necessary.

Some applications will require the use of the Natural Wonders RainFall with Extended Lip (such as when using brick, blocks, etc.). The standard lip is 6" while the extended version is 9" or 12". Installation of the extended version is the same as outlined in the previous pages of these instructions, but the dimensions of the notch in the bond beam may need to be altered. It must also be noted that the entire span of the extended lip must be supported when installed (Fig. 8). NOTE: Mortar will not adhere to the unit. Please consult a decking or concrete professional to find the appropriate materials for installation.

TROUBLESHOOTING

Before attempting to correct any potential problems, be sure to activate the pump and ensure that all air has been purged from the plumbing lines. **NOTE:** The water must be filtered before being used for the waterfall. If a filter has not been plumbed in the line the waterfall will not work due to the debris.

PROBLEM: The water pattern is not smooth and has gaps in the rain streams.

CAUSE: Debris may be lodged in the opening of the RainFall.

SOLUTION: Use a nail or other pointed tool to clear the openings. Carefully push the tool into the openings to remove any debris that may have accumulated.

PROBLEM: One RainFall has more flow than the other RainFalls installed in the same pool.

CAUSE: The supply of water is not balanced correctly.

SOLUTION: To get equal flow from each RainFall unit, adjust the valves at each RainFall until the desired flow is achieved.

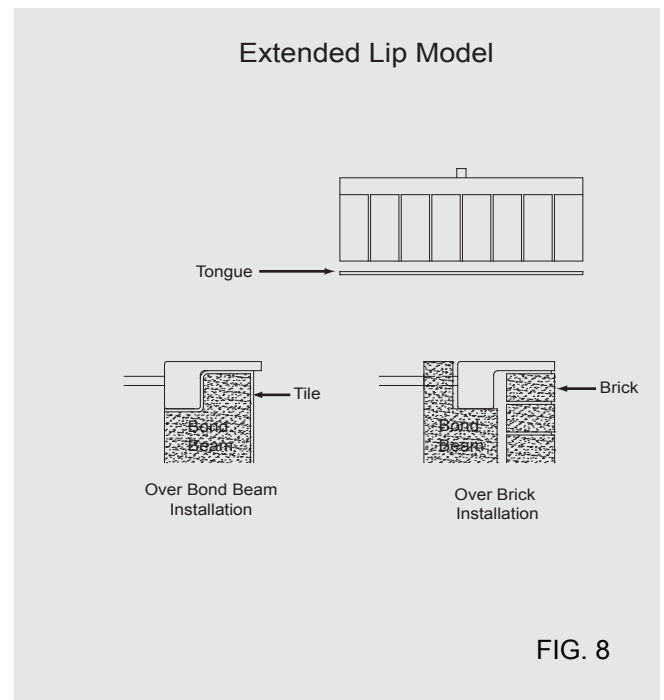


FIG. 8

NATURAL WONDERS™

RAINFALLS

