WET WALL
EVAPORATIVE COOLING SYSTEM

10'' X 8'' TEE

INSTALLATION INSTRUCTIONS
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DESCRIPTION OF SYSTEM

Reservoir  The reservoir is constructed of very high UV PVC pipe. The pipe is solid, requiring no cutting. Our unique design is unequaled in the industry.

Supply Line  Our supply line pipe is made of 2" schedule 40 PVC pipe, designed to deliver maximum water supply to the system.

Pump Kit  Our system consists of a Gould sump pump, appropriate for use in many different system configurations. Pumps are available in 110 or 220 volts.

Spray Line  The spray line is constructed of 1-1/4" PVC pipe with holes drilled in line along the top. When water is pumped to the spray line, water shoots out of the holes onto the distribution panel, then onto the pads.

Pads  Constructed of cellulose fibers with built-in anti-rot agents. When water flows down the pad and air is drawn through the pad, the air evaporates some of the water and becomes much cooler. When the water reaches the bottom of the pad it drips back into the reservoir.
Tools Required for Installation

CORDLESS OR CORDED DRILL
- 1/4" SOCKET
- 5/16" SOCKET
- 7/16" SOCKET
- NUT DRIVER

TAPE MEASURE

CAULKING GUN

LEVEL

HACKSAW

CHALK LINE MARKER

HAND SAW

TIN SNIPS
### TOP OF SYSTEM

- **Top Back Panel** #RC-TPA-BPNSS
- **Ball Valve** #107-636
- **1/4" x 1-1/2" Lag Bolt**
- **1/4-20 Wing Nut**
- **1/4" SS Washer**
- **1-1/4" PVC Coupling** #429-015
- **1-1/4" x 2" Tee (Center Dist. Only)**

### BOTTOM OF SYSTEM

- **8" Pipe Bracket** #RC-PB-8EXN-SS
- **Half Moon End Cap Support** #RC-ECS-8
- **8 x 1" Screw** #RC-8-1
- **End Cap** #RC-EC-8
- **Polyurethane Sealant**
- **8" Pipe with Blank Ends**
- **8" Pipe with Inside Coupling**
- **Center Tee** #401-250 (Center Dist. Only)
- **1/4" x 1-1/2" Lag Bolt** #1424CH188
- **SS Hose Clamp**
- **1/4" x 5/8" SS Washer**

### TEE, PUMP, WATER SUPPLY

- **10" x 8" Single Tee** #RC-ST
- **10" x 8" Double Tee (Center Dist. Only)** #RC-DT
- **Rubber Coupling** #RC-RBC
- **Ball Valve 2"** #107-638
- **2" x 10' PVC Pipe** #RC-1-PR-2
- **Rubber Coupling** #RC-RBC
- **Union** #164-608
- **Check all parts with packing list. If any parts are short, you must notify within 10 days after ship date.**
IN-GROUND TEE LAYOUT (END DISTRIBUTION)

IN-GROUND TEE LAYOUT (CENTER DISTRIBUTION)

PADS NOT SHOWN

GROUND LEVEL
Minimum required sidewall dimensions are measured from the bottom of the 8" pipe bracket to the top of the deflector plate.
A lumber frame must be built around the perimeter of the wet wall system to support the components. Use a good grade of pressure treated lumber that is straight and true. The frame is composed of a 2" x 12" on the bottom and a 2" x 6" on the top. In addition, a 2" x 4" is required at each end to provide a mounting surface and to seal off air gaps where the end panels are installed. The bottom board is installed first, then the top, then the end.

The bottom board must be installed so that it is level across the entire surface. Once the bottom board is installed, snap a chalk line the entire length of the pad area, approximately 3" down from the top of the board. This line indicates where to mount the support brackets for the 8" pipes.

Install 2" x 6" pressure treated boards at the top of the system. Refer to the diagram below to determine the spacing between the bottom (2" x 12") boards and top (2" x 6") boards.

Install 2" x 4" pressure treated boards at both ends of the system to provide a mounting surface for the end panels. The face of the 2" x 4" boards should be flush with the faces of the 2" x 12" boards on the bottom and the 2" x 6" boards on the top.
Framing for Wood Truss Houses - Direct Mount (Dog House) Design

2" x 12" board is necessary to secure the bottom 8" pipe brackets.

Fit 2" x 12" boards between posts and flush with front of posts.

The 2" x 12" boards can also be mounted in front of the 4" x 4" posts; this will require a 2" x 4" filler on each end of the system.

In-line pump location will vary depending on setup option.

Pads are available in 4 ft., 5 ft. and 6 ft. heights, and in 4" and 6" thicknesses.

You must use a good grade of pressure treated boards; be sure boards are straight.

Make opening in wall equal to the length of the pad system.

2" x 6" and 2" x 12" boards can be attached inside of the 4" x 4" posts and flush with the front of the posts OR they can be mounted on the front of the posts. If you attach on the front of the posts you will need a 2" x 4" between top and bottom on each end so the end panels can be secured without creating an air gap.
Using 1/4" x 1-1/2" lag bolts (supplied), install 8" brackets with top of bracket on chalk line. Install three brackets per 10 ft. section of pipe.

Mount the first bracket 1 ft. from the end of the opening, 3" below the top of the 2" x 12" board to allow for the seal plate. Mount the second bracket 4 ft. from the first, and the third bracket 4 ft. from the second.

There are three brackets per 10 ft. section of pipe. Brackets should be mounted 2 ft. apart at each pipe seam. Refer to the diagram below for spacing of bottom brackets.

Be sure the brackets are mounted level over the entire length of the system.
At the bottom framing fasten the pipe support bracket to the 2" x 12" at each post or to the 2" x 12" where there is no post. Make sure that you have enough room at the top of the bracket so that the seal plate can be mounted at a slight angle. Each hole of the support bracket requires a 1/4" x 1-1/2" lag bolt (supplied).

**FRAMING MUST BE ABLE TO SUPPORT 300 LBS PER BRACKET.**

Brackets can be installed on 4 ft. or 5 ft. centers. Layout on this page is on 4 ft. centers.
Installation - Top Assembly

1/4-20 Wing Nut

Deflector Plate
#RC-TPA-DFPSS

Top Pipe Bracket
#RC-TPA-SBSS

Cover Plate
#RC-TPA-CPSS

Back Panel
#RC-TPA-BPSS

Side View
Using 1/4" x 1-1/2" lag bolts, mount the first bracket 1 ft. from the beginning of system opening, and even with the bottom of the 2" x 6" board.

Mount the second bracket 4 ft. from the first bracket and the third bracket 4 ft. from the second. Continue mounting brackets to the end of the system, three brackets per 10 ft. section. This is the same pattern as used for the bottom brackets.
After installing all top distribution pipe brackets, align holes in back panel with the 1/4-20 screws on the bottom of the pipe brackets and secure with 1/4-20 wing nuts.

Be sure to overlap each back panel 1". All back panels should line up with the 1/4-20 screws on the pipe brackets.
After all back panels are installed, align elongated holes at the back of the deflector plate with the 1/4-20 screws at the top of the distribution pipe bracket.

Secure the deflector plate to the bracket with 1/4-20 wing nuts. Be sure the wing nuts are tight.
Lay water distribution pipe into distribution pipe brackets.

Glue each end of the 1-1/4" pipe coupling. BE SURE THE HOLES IN EACH SECTION OF DISTRIBUTION PIPE ARE IN LINE OVER THE ENTIRE LENGTH OF THE PIPE BEFORE THE GLUE SETS. When gluing is complete, be sure that the holes in the distribution pipe are pointed at the peak of the deflector plate. Drill an 1/8" hole in each coupling, in line with other holes, for even water distribution.

Allow approximately 2" from the end for the 1-1/4" ball valve and 2" for the 2" x 1-1/4" PVC elbow.
10 ft. pipes are supplied with blank ends (Figure A) and with inside couplings on one end (Figure B).

After pipe brackets are installed, lay pipes into brackets on their side (Figure C).

Starting on the left side of the system, lay the first 10 ft. pipe that is blank on both ends into the bracket. Lay it on its side as shown in Figure C.

Lay the second pipe, with an inside coupling, into the bracket and slide it into the first pipe.

Continue with the third and fourth pipes to the middle of the system.
Your kit includes an outside coupling seal for the 8" collection pipe.

After joining all 10 ft. pipes together over the entire length of the system, begin installing the EPDM pipe coupling seals.

Snap the metal hanger over the back lip of the pipe. Stretch the coupling seal around the pipe and snap the front metal hanger into the front lip of the pipe.

The outside coupling seal is made of EPDM, a high quality material that is designed to last for many years. The temperature range of the seal is from -25 degrees to 220 degrees F and has a tensile strength of 1000 PSI.

To keep the coupling from coming off during installation, secure to pipe using a #8 x 1" screw (supplied). Drill an 1/8" pilot hole into end of metal coupling (as shown), secure with screw.

When all of the coupling seals have been installed, rotate the 8" pipe assembly into position on the support brackets.
After installing all 8" pipes and outside couplings you can install the seal plate.

Lay seal plate inside the back lip of the 8" pipe. Be sure the seal plate is angled so that the front lip of the seal plate is against the back lip of the 8" pipe. Angle the seal plate so that water from the pad can run down into the 8" collection pipe.

Secure seal plate to 2" x 12" board using the #8 x 1" screws supplied.
After installing the 8" PVC pipe, install the end cap on the pipe at the end of the house first.

Place the half-moon insert on the top end of the 8" pipe as shown.

Hold the half-moon insert and press the end cap over the pipe and the insert.

Secure with the stainless steel clamp.
Insert pads into pad tray of 8" pipe before installing cover plate.

After four or five pads have been installed, check to be sure they are plumb.

Continue to install pads until end of system is reached.
Cover plates can be installed after pads are inserted.

Align holes in top cover plate with rivet nuts in top pipe bracket.

Install 1/4-20 wing nuts until tight, overlap next panel 1" and continue until all cover plates are attached.

CENTER FEED SYSTEMS:
MIDDLE COVER PLATE WILL NEED TO BE MODIFIED
USING A TIN SNIP, NOTCH OUT COVER PLATE TO
ALLOW FOR 2" WATER DISTRIBUTION PIPE
USE A HACK SAW TO CUT A SLOT IN BACK LIP OF 8" PIPE SO END PANEL FITS DOWN TO PAD TRAY.

IF END PANELS ARE LONG ENOUGH TO CONTACT WATER DISTRIBUTION PIPE, USE A GOOD TIN SNIP TO ELIMINATE CONTACT BETWEEN THE TWO.
After installing the 10” x 8” tee in the ground or on a flat surface you can attach the pipe to it.

Loosen the stainless clamp enough for the rubber coupling to slide over 8” nipple on tee. Tighten clamp to seal.

Loosen the opposite clamp, slide 8” pipe into rubber coupling, slide half-moon under rubber coupling, tighten clamp to seal.
1. Parts #436-131, #406-007 and #436-007 ship as one assembly.

2. Screw #436-131 into the float valve.

3. Slip #436-007 into hole in top of 10" x 8" tee.

4. Secure float valve assembly to tee using #435-007.
The pump sits at the bottom of the 10" x 8" tee and reservoir sections submersed in water. Water is pumped up through the 2" PVC pipe into the filter and through the ball valve before it makes a 90° turn into the water distribution pipe.

To connect the pump to the water distribution pipe:
1. Connect the pump to the 2" PVC pipe using the reducer supplied in the box of fittings.
2. Cut a section of 2" PVC pipe to connect the 1-1/4" reducer on the top of the pump with the 2" union outside the 10" cap at the top of the tee. This union provides a convenient way to detach the pump from the rest of the plumbing after all the components are glued together.
3. Cut and glue short sections of 2" PVC pipe to accommodate the filter, ball valve and 2" x 1-1/4" elbow that connects to the distribution pipe as shown here.
The pump and 10" reservoir is designed to be installed below ground level.

To connect the pump to the water distribution pipe:
1. Cut pieces of 2" PVC pipe (supplied) to lengths as needed and glue together with appropriate fittings as shown below. Note the pump supply line must rest in slotted pipe and align with 8" pipe as shown.

2. Assemble remaining supply line pieces as shown below, using 2" PVC pipe and fittings (supplied).
Add ball valve to end of system. Glue 1-1/4” ball valve to the end of the distribution pipe.

If a center mount system is being installed, a ball valve must be added to both ends.

Be sure you install the ball valves so that they are easy to turn on and off for periodic flushing of the system.
After filling the tank and 8" pipe to water level the system can be turned on:

Turn the 2" ball valve OFF.

Turn the sump pump ON.

Open the ball valve approximately 1/4 turn. See if water from the distribution pipe is wetting the pads over the entire length of the system.

If water is not wetting the pads over the entire length, open the ball valve until it does.

If the ball valve is open too far, too much water will run over the front of the pads. Adjust ball valve until water wets the pads evenly.

Run system for six hours and clean filter before restarting. Check filter after another six hours of operation and verify that the amount of contaminants flushed from the system is diminishing. Continue to operate the system in short bursts and clean filter each time until the system has been purged of contaminants and dust from manufacturing.
<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>SOLUTION</th>
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<tbody>
<tr>
<td>Water in tee running dry</td>
<td>Adjust 2&quot; ball valve back until water level catches up.</td>
</tr>
<tr>
<td>Not enough water going to the pads</td>
<td>Clean filter. If pads have too much dust, filter may need to be cleaned several times during start up.</td>
</tr>
<tr>
<td>Pad foaming</td>
<td>Because the paper is impregnated with several different resins, the pads may foam during start up. De-foaming agent can be purchased at any pool supplier.</td>
</tr>
<tr>
<td>Pads are sitting in water</td>
<td>Water level is too high. Be sure system is level. System must be level with tee or tank.</td>
</tr>
<tr>
<td>Pads are clogged with dirt</td>
<td>Remove pads, clean with water hose.</td>
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