

FlowMark Model Mark-III-CT Installation Operation Manual

EPA Est. #: 92852-FL-1

Record Information About Your System

Date Purchased: _____

Date Installed: _____

Serial Number: _____

Local Representative: _____

For assistance please call your local representative or call (386)453-5091

Check Contents:

Please inspect the package for the following contents and any damage that may have occurred during shipping.

1. FlowMark Controller x 1
2. Treatment Pads x 2
3. Coil Cable Extension 20 feet x 1
4. Cable Tie Wraps x 6
5. PVC Pipe Cover x 1
6. Weather Stripping x 2
7. Installation Manual x 1
8. Warranty Card x 1



Power Requirement

All FlowMark Systems are fitted with a auto-switching power supply that can accept 110 or 220 VAC power input. Systems are supplied with a molded 110 VAC Power Cord that can be plugged in to any 110 VAC wall outlet. If you choose to run the unit on 220 VAC simply cut the male plug off the power cord and wire the three wires accordingly:

White: Neutral

Black: Hot Leg

Green: Ground

Choosing The Correct Treatment Location

Re-Circulating Systems: Install after the circulation pump. Minimum 4 times the pipe diameter after the pump. Example: (4" pipe = minimum 16" after the pump).

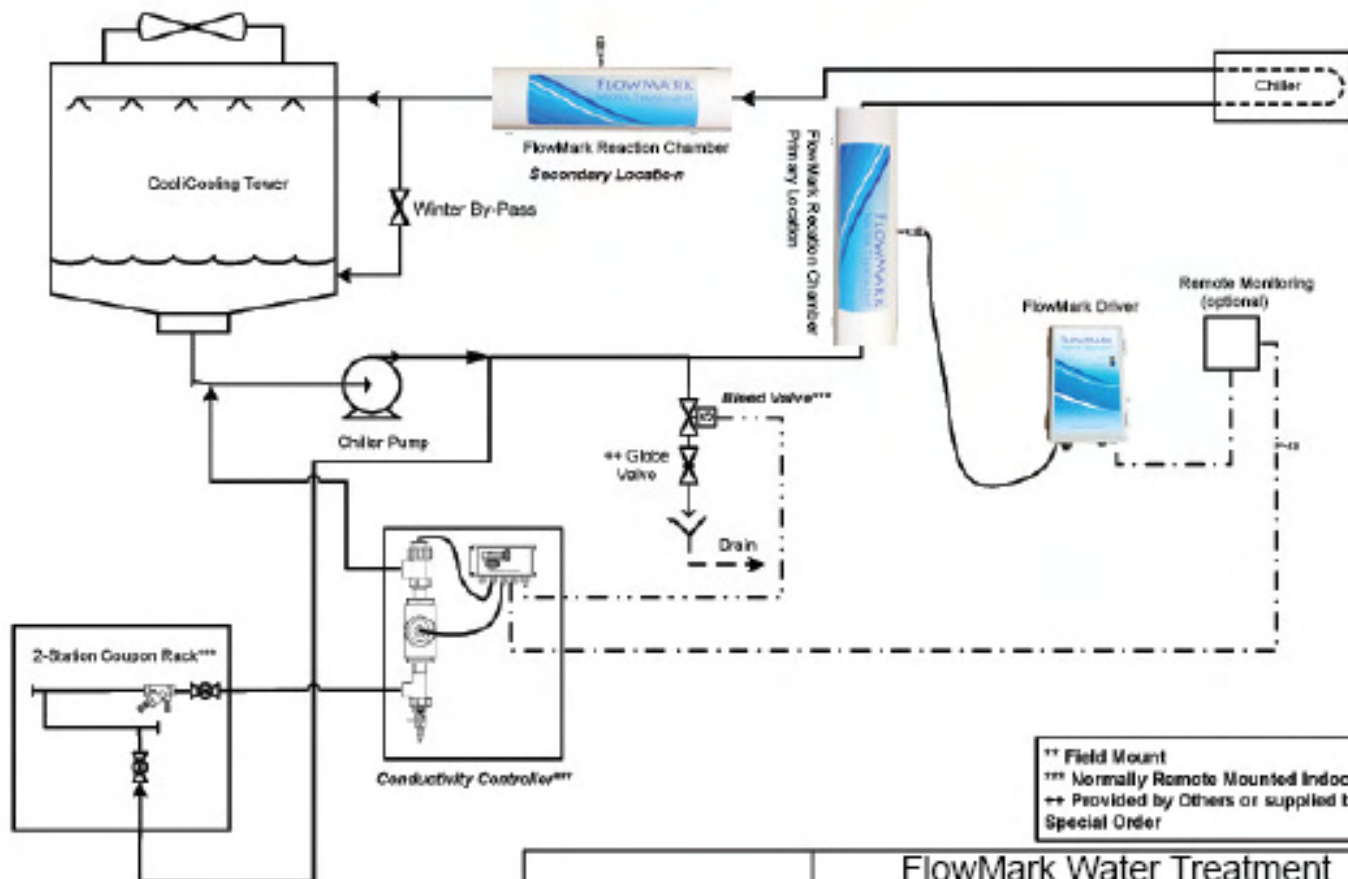
*****Note:** It is always better to choose an area of laminar flow when selecting the treatment location. When possible avoid installing at elbows, T's, before pumps, etc.

*****Warning:** The FlowMark treatment pads may interfere with magnetic flow-meter operation. Maintain a minimum of 5 feet clearance from magnetic flow-meter pick-up.

Cooling Tower & Chiller Installation Location

1. **Primary Location:** Install the FlowMark System on the condenser water pipe feeding the chiller, after the pump and before the chiller.
2. **Secondary Location:** If there is no convenient location for the Primary suggestion then install the FlowMark system on the condenser water pipe going to the top of the cooling tower.

Note: This FlowMark system is rated Nema-4X so it is water resistant and can be safely installed outdoors but whenever possible it is recommended to install the FlowMark system indoors to reduce the possibility of lightning damage which is not covered by the 3 year limited warranty. The Primary Location suggestion can usually be installed indoors.

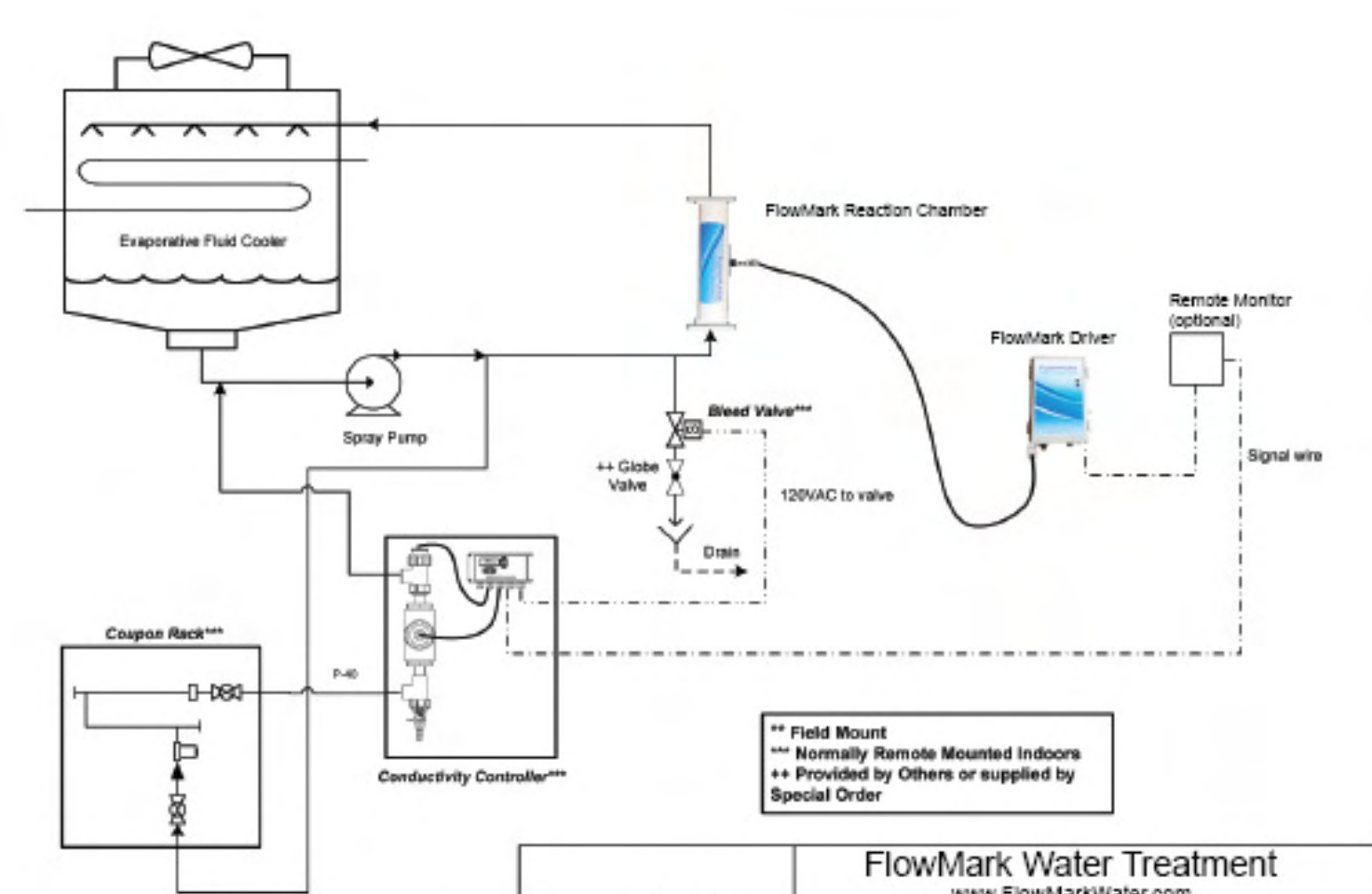


Notes:
For outdoor installations, the Bleed Valve will require a weather shield.
The Conductivity Controller needs to be protected from direct sunlight.

Cooling Tower FlowMark System Installation		FlowMark Water Treatment www.flowmarkwater.com		
		Typical FlowMark Installation		
Piping and Instrumentation	SIZE A	PG. NO.	DWG. NO.	REV.
12/18/13	SCALE	NONE	SHEET	1 OF 1

Evaporative Condenser Installation Location

Install the FlowMark system on the condenser water riser pipe feeding the top of the condenser. Allow 4 pipe diameters down stream of the circulation pump.



Notes:
For outdoor installations, the Bleed Valve will require a weather shield.
The Conductivity Controller needs to be protected from direct sunlight.

Evaporative Condenser or Fluid Cooler	FlowMark Water Treatment www.FlowMarkWater.com			
	Typical FlowMark Installation			
Piping and Instrumentation	SIZE A	FGM NO	DWG NO	REV A
12/18/2013	SCALE NONE	SHEET		1 OF 1

Installing Your FlowMark Treatment Pads on 6" Pipe:

The treatment pads can be installed on horizontal or vertical piping.

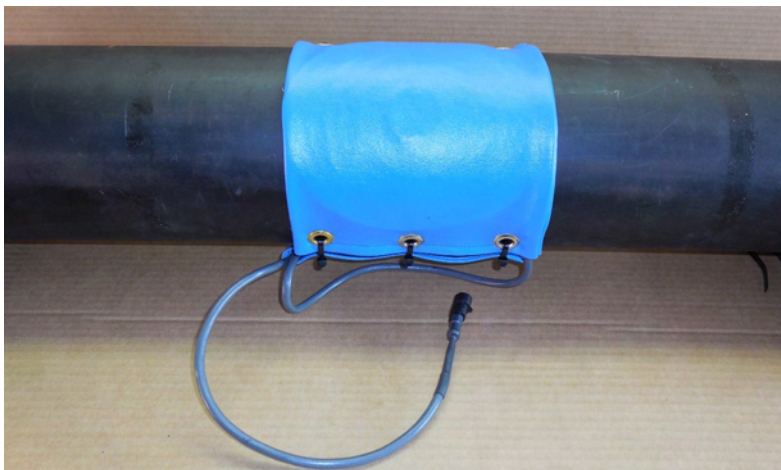
Two treatment pads are included with this model FlowMark system.

1. One side of each Treatment Pad is marked "To Pipe". This side should be placed toward the pipe to be treated.
2. The Treatment Pads should be installed opposing each other by connecting the grommets of one pad to the grommets of the other pad as seen in the photo below.
3. Form the shape of the treatment pad to the pipe shape by squeezing the pad with both hands into the position you have selected
4. Insert cable ties through the grommets at each end of the pad.
5. Center the pads so they directly oppose each other before tightening the cable ties.
6. Gradually tighten the cable ties to hold the treatment pads firmly in place. Do not over tighten the cable ties as the grommets may tear the cover material.



Treatment Pads

6" Pipe



Install with pads opposing each other on 6" pipe.

Installing the Pipe Cover on 6" Pipe Application:

The white PVC pipe cover with the FlowMark label is included to provide a finished look to the installation and to protect the pads from ultraviolet light and water exposure.

1. Hold the pipe cover up to the area where the treatment pads have been installed and mark the pipe where the ends will be.
2. Install one piece of weather stripping around the pipe inside the lines at each end previously marked on the pipe.
3. Open the pipe cover and install it over your treatment pad installation with the label facing you. Make sure you have routed the connectors outside the area so they are exposed for connections.
4. Remove adhesive strip from the pipe cover to seal the installation.

Note: You may experience difficulty installing the pipe cover. A second person holding the cover tightly in place helps as the other person removes the adhesive strip and seals the installation.



Mark pipe where cover will be installed and install one piece of weather stripping just inside the line at each end. Route connector wire through the space where ends meet.

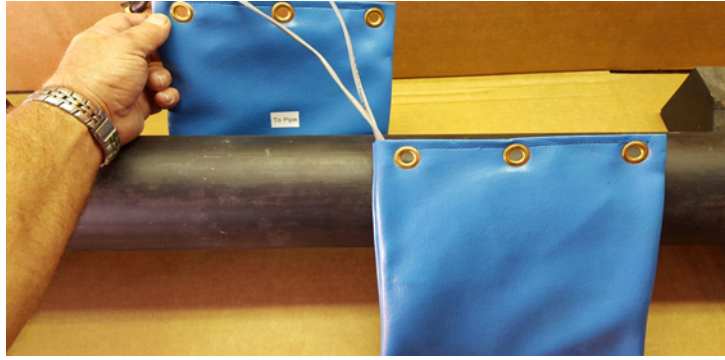


Install the pipe cover with the adhesive tape at the top. Use two people to tighten the cover as much as possible before you seal the cover. Remove the adhesive strip and seal the cover in place.

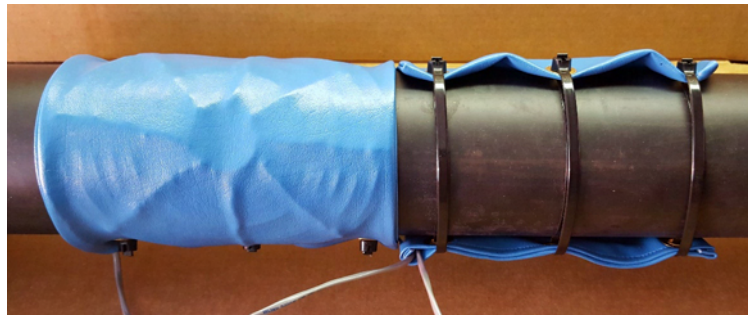
Installing the Treatment Pads on 4" Pipe Application

The treatment pads are too large to form a tight fit on 4" pipe. Follow the photo instructions below for 4" pipe diameter off-set pad installation.

4" Pipe



Align the Treatment Pads side by side with the labels "To Pipe" facing the pipe.



Use 3 cable ties for each treatment so the installation looks like the picture above.



Cut the weather stripping provided to fit the diameter of the pipe. Remove tape and secure the weather stripping to the pipe as close as you can to the pad installation. Overlapping the pads slightly will provide more space to accept the PVC Cover.

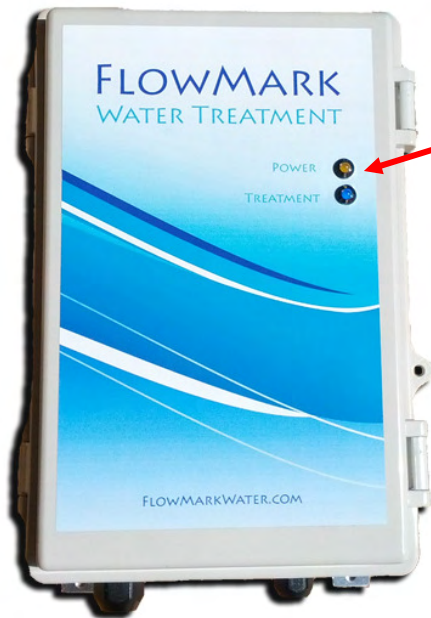


Wrap the PVC Cover around the installation and tighten. Remove the adhesive tape and secure the pipe wrap.

Mounting the Control Panel:

Choose a solid wall for mounting the control panel within 20 feet of the treatment pad location.

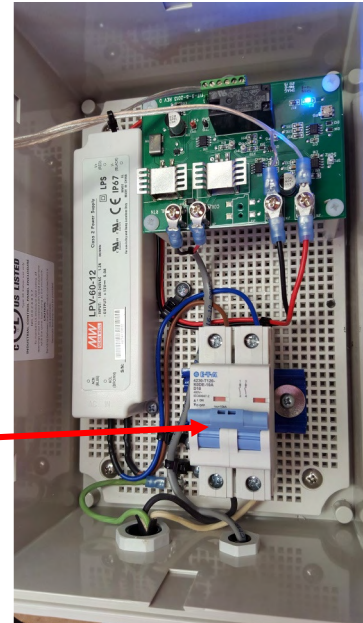
Use lag bolts or tap cons and secure four mounting brackets to the wall.



Yellow Light = Power

Blue Light = Signal

**ON / OFF Switch
Circuit Breaker**



Connecting and Powering the Unit:

Connect the signal cable to the treatment pad installation by inserting the male connectors into the female connectors. Push together until a click is heard to lock the connector.

Be sure to neatly route the signal cable between the Controller and the Treatment Pads to avoid damage.

Plug the FlowMark Controller into a 110 VAC outlet and turn ON the ble circuit breaker inside the control box. Observe the yellow and blue lights.

YELLOW LIGHT ON= Power to the Controller

BLUE LIGHT ON = Treatment Active.

Trouble Shooting:

Both Yellow and Blue Lights OFF...

Check GFI or Circuit Breaker and reset.

Yellow Light ON and Blue Light OFF...

Check signal cable connection or find damage to signal cable and repair.

Relay Connections for Remote Monitoring

The circuit board is fitted with a relay that can accept wiring to a remote alarm or indicator light. This relay can be wired normally open or normally closed. The signal will coincide with the Blue Treatment Lights. An additional seal-tight is provided at the bottom of the enclosure to accept remote monitoring wiring. Wire as per the illustration below.

Switching Voltage - 250VAC, 30VDC - Max

Contact Rating (Current) - 5A

