



ELECTRIC WATER LEVEL CONTROL SYSTEM

Electric Water Level Control Systems are available for Cooling Towers, Closed Circuit Fluid Coolers, Evaporative Condensers and Remote Sumps.

■ Control Packages

Water level is accomplished utilizing a 3 or 5 probe sensor mounted external to the unit in a vertical stand-pipe. The 3 probe sensor monitors high water, low water and includes a ground electrode. The 5 probe sensor also includes high and low water alarms.

■ Accurate Water Level Control / No Adjustment

The electric water level control provides very accurate control for the basin water level and does not require field adjustment.

■ Water and Chemical Savings

Worn or faulty mechanical make-up valves allow valuable water and chemicals to be lost down the drain. Replace mechanical make-up valves with electric water level controls to save water and chemicals.

■ No Freeze-ups

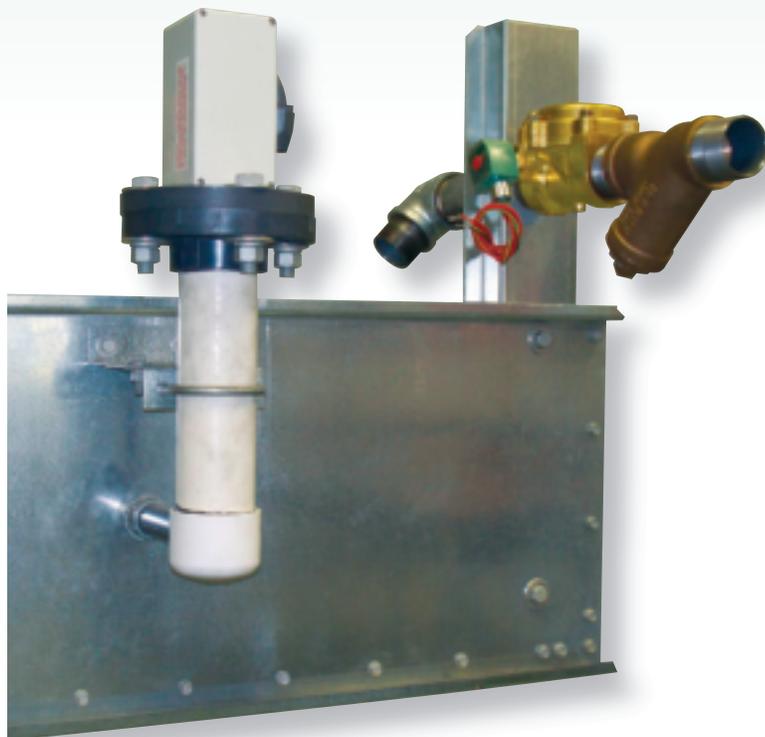
Leaking mechanical valves can freeze-up in cold weather climates causing operational problems. The electric water level control will not freeze-up during winter operation.

■ Slow Closing Solenoid Valve

Electric water level control utilizes a slow closing electronic solenoid valve with positive closure to prevent water hammer.

■ Easy Installation

Standpipe assembly with probes easily mounts to the side of the tower sump. See inside for mounting options.



Call your local Mr. GoodTower® Service Center for a FREE Unit Inspection regardless of the original equipment manufacturer.



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Control System Package

Components:

Water level sensor, PVC standpipe with sump connections, relay, solenoid valve, y-strainer and mounting bracket are supplied by EVAPCO. All wiring is by others. Relay can be mounted indoors or outdoors. Do not mount relay on unit or anything that is subject to vibration.

Location:

Standpipe must be located so that the midpoint between the shortest and middle length probes is at the same elevation as desired operating water level (see figure 2 on following page). Specific installation instructions will be supplied with the package.

Winter Operation:

Standpipe must be heat traced and insulated to prevent water from freezing if unit is operated in cold weather.

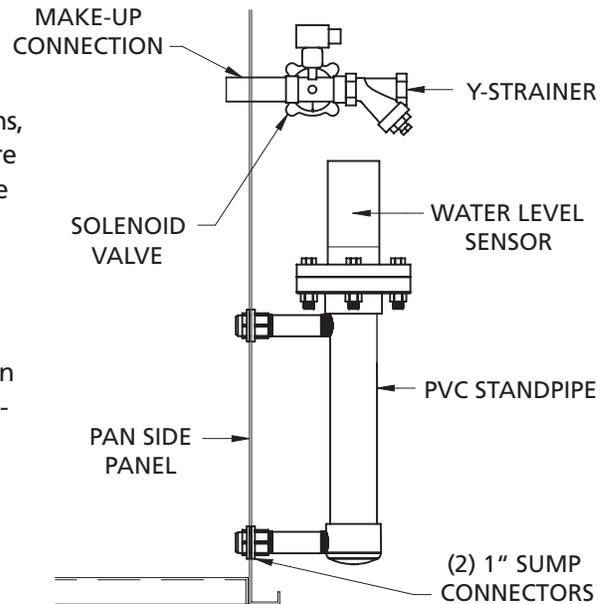
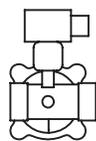


Figure 1

Forced Draft Standpipe
(two sump connections required)

Solenoid Valve:

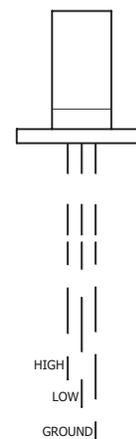
Slow closing solenoid valve prevents water hammer. Valve size is based on 3 gpm per 100 ton water consumption due to evaporation and 3 gpm per 100 ton due to bleed. Sizing assumes a 25 psig minimum and 125 psig maximum water pressure.



Solenoid Valve

Water Level Sensor:

Controls are mounted in a NEMA 4 polycarbonate enclosure with a 90 degree compression type fitting, mounted vertically on a 2-1/2" PVC blind flange. LED located within the enclosure will illuminate when its corresponding relay is energized. Probes are 1/4" diameter stainless steel, fully insulated except for 1" of the tip.

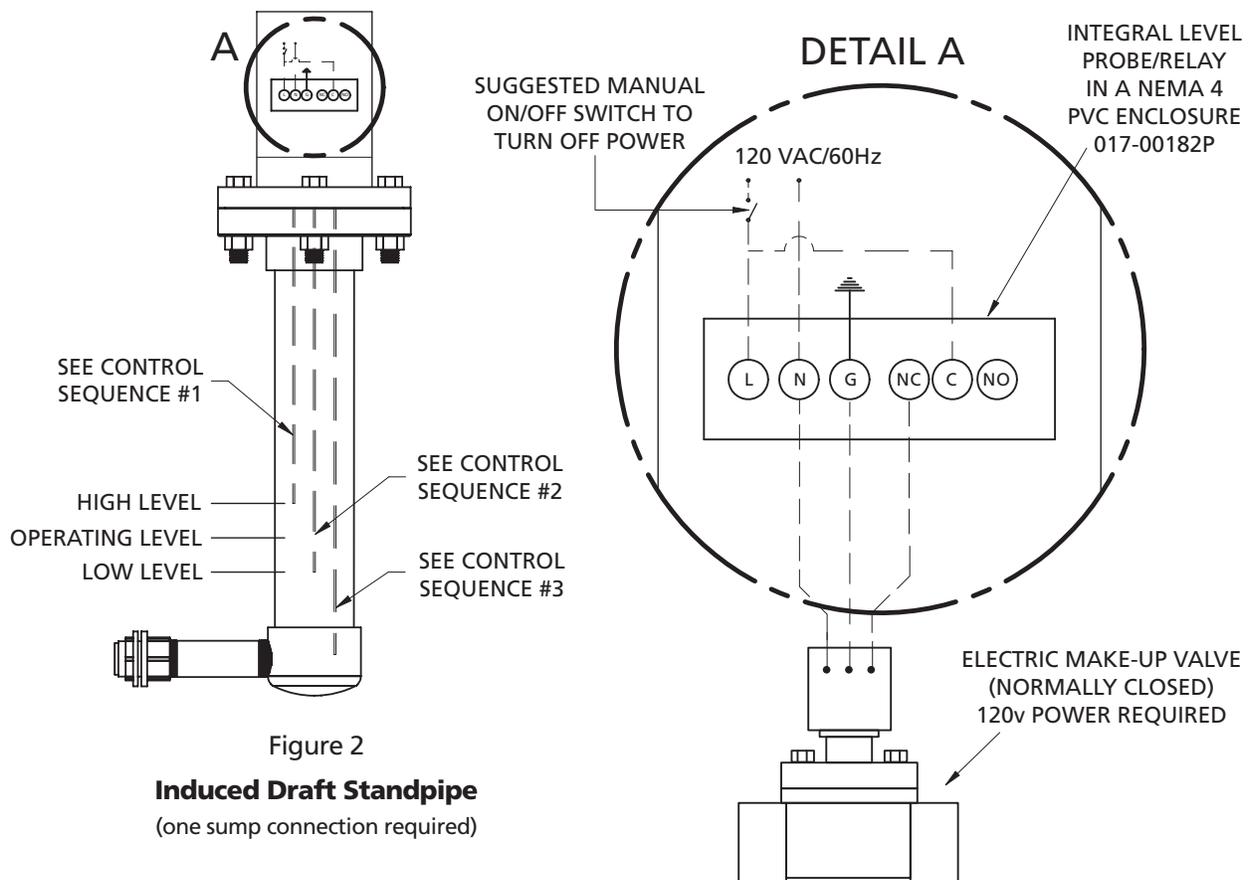


Water Level Sensor

Control System Sequence of Operation

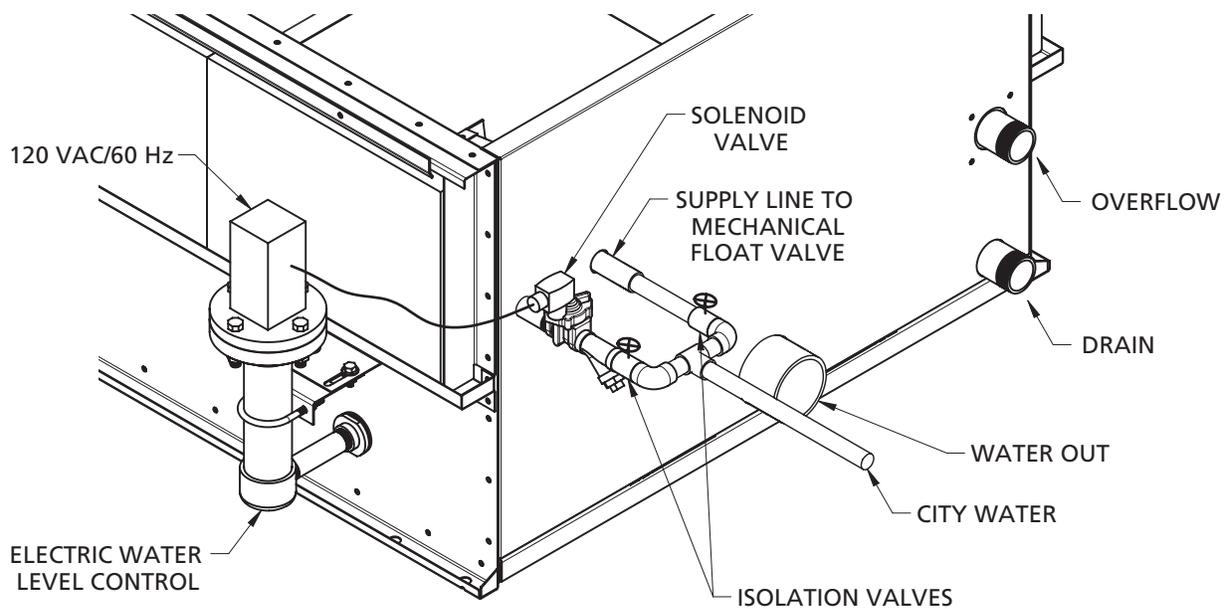
Control Sequence:

1. As water rises to the high electrode, the control energizes changing the state of the load contacts. The NC contact is then opened which de-energizes the solenoid valve and shuts off make-up water to the tower.
2. The control remains energized until the water recedes below the low electrode. The control then de-energizes returning load contacts to original state. The solenoid contact is then closed which energizes the solenoid valve and opens up make-up water to the tower.
3. The ground electrode is a ground probe and is always below water.



Electric Solenoid Valve Installed in Bypass

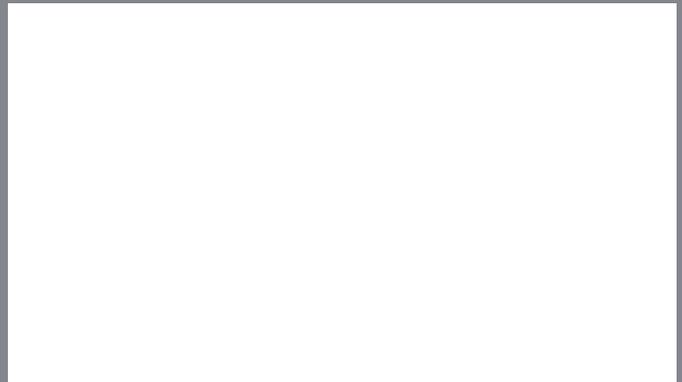
- Maintain mechanical make-up as a back-up.
- Install with isolation valves to operate with electric water level control or mechanical make-up valve.
- Should the electric water level control need servicing the tower make-up system can remain operational with the bypass to the mechanical make-up valve.



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Mr. GoodTower® Service Center or Representative at:**



Call EVAPCO at 410-756-2600 for the Mr. GoodTower® Service Center or Representative near you.