

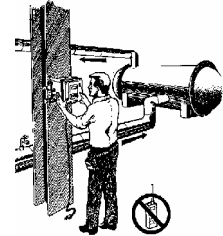
PULSAtrol Controllers - Installation Guide

To be read in conjunction with schematic on page 2.

Location

Select a mounting location convenient to suitably earthed electrical and plumbing connections. Mount the controller on a wall or other vertical surface with adequate lighting at a comfortable level.

Avoid locations where the controller would be subjected to extreme cold or heat (less than -17.8°C or greater than 50°C), direct sunlight, driving rain, vibration, vapours, liquid spills or electromagnetic interference; i.e., strong radio transmission and electric motors.



Electrical

All electrical connections should be undertaken in accordance with local regulations by a suitably qualified engineer.

The controller should be connected to a fused 13-amp isolator. The controller electronic circuitry is fuse protected. In addition, a replaceable plug-in 5-amp fuse on the relay board individually protects each output relay. Use of a surge protector is strongly recommended.

Controllers are factory predrilled with easily accessible connections for hard wiring. Use 1.5-mm² cable for all power and load connections. All signal wires should be run separately from AC power lines.

Water Meter

Always install the water meter with a by pass line as shown in the schematic. Water meters should be sized to make up flow only. Never fill the system via the water meter as damage to the water meter can result.

To ensure correct operation and accuracy, install water meters horizontally with meter face up and in an easily read position. A horizontal length equivalent to at least 12 pipe diameters must precede the water meter inlet and a horizontal pipe length of 6 diameters must follow it.

Flow Assembly

The standard flow assembly is constructed of durable glass filled polypropylene (GFPPPL). Connection to the flow line is 3/4" NPT. Two 3/4" PVC thread to slip adapters are provided to facilitate welded joints as an option.

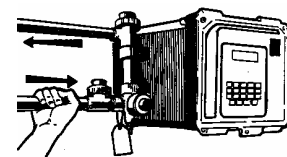
Install the flow assembly at a location prior to chemical injection points.

The probe electrodes must be continuously immersed in system water at all times and must not be allowed to dry out – particularly when the treated water system is off line.

A pressure differential must exist across the flow assembly sufficient to provide a flow rate of between 5 to 20 litres/minute through the assembly to ensure that the probes provide accurate readings at all times.

It is good practice to install a strainer before the flow assembly to collect debris that might affect controller operation. If the treated water is high in suspended solids consider additional filtration to prevent probe fouling and malfunction occurring. Install unions and isolating valves on both the inlet and outlet to facilitate routine maintenance.

Direction of flow must be from the bottom to the top of the flow assembly to operate the flow-monitoring switch correctly.



Solenoid Valve

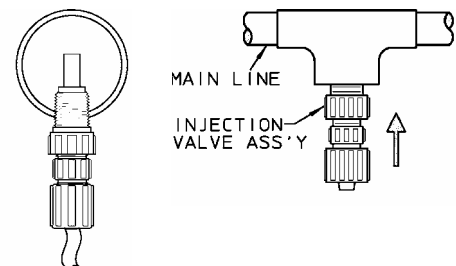
An isolation valve and strainer should be installed prior to the solenoid valve in the blowdown line to enable maintenance of the solenoid valve to be carried out.

Dosage Injection Points

Injection of chemicals should be to a point that will ensure optimum mixing with system water. Do not inject chemicals prior to flow assembly.

If injecting to system circulating pipe work, injection point should be in the pipe midstream as shown in the diagram.

Avoid installing injection points whereby the injection fitting cannot be removed unless system is drained down.

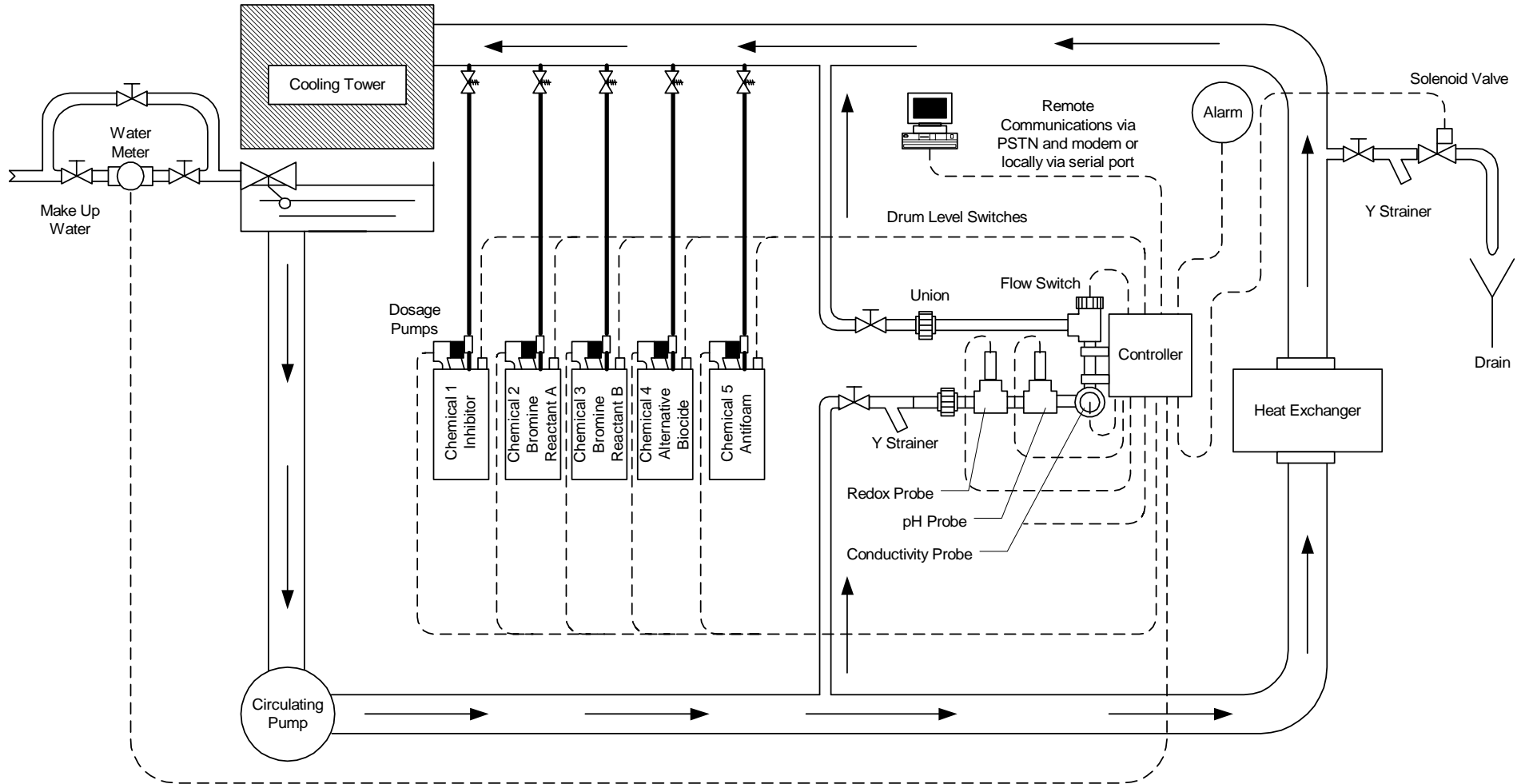


Biocide Dosage

Ensure that the system has the facility to enable biocide to be dosed during prolonged shut down periods. Typically, the treated water system should be circulated on a weekly basis for at least 4 hours.

Alternatively, system should be drained down.

Schematic Illustrating Typical Installation Arrangement for PULSAtrol Controller - Cooling Tower Application



Read in conjunction with notes on page 1

Not all items shown will be present in every application