

PULSAtrol[®] Controller Specification Sheet

MPT250AHR1 Inhibitor Dosing, Bleed and Dual 28 day biocide control

PULSAtrol Controllers are microprocessor based units specifically designed for a wide range of water treatment control and monitoring options.

MPT250AHR1 is designed to dose inhibitor, control bleed – both on a timed or proportional basis and dose two biocides to a cooling tower on a variable timed basis.

The controller allows the optimum dosage regime to be maintained.

Inhibitor or bleed is effected via a Selectable Timer which has “Percent”, and “Pulse” options.

Biocide dosage can be activated on any specific day or combination of days weekly, or any combination of weeks in a 28 day cycle.

The standard unit has a number of upgrade options to enable it to perform additional functions.

Key Features

- Microprocessor based for accurate and reliable control
- Wall mounted unit for ease of operation
- Easily programmable via display and menu activated keypad
- Keypad activated hand/off/auto control of all really outputs
- Modular hardware and software for easy access and servicing
- IP65 High Impact Resistant PVC enclosure for protection against harsh environments



Operation

- Two independent **selectable timers** are incorporated in the Controller, each with choice of;
 - **percent**; also referred to as a cycle timer. The timer runs continuously on an adjustable time cycle, such as ten minutes, with the output being activated for an adjustable percentage of the time cycle. The timer is adjustable in increments up to 100% and the cycle time is adjustable from one to 120 minutes.
 - **pulse with accumulator**; also referred to as water meter or reset timer. The timer accepts pulses from a water meter to actuate the inhibitor metering pump. The timer has an adjustable feed time (Run Time) in one second increments up to 59 minutes and 59 seconds with an elapsed time display. It has a built in accumulator that can count pulses up to 255 before activating the out put with an elapsed pulse counter. Also incorporated into the timer is a pulse totaliser that keeps an on-going count of the number of pulses received by the timer.
- **Scale and corrosion inhibiting chemical** can be dosed in one of two ways.
 - i) On a **timed** basis; in which case the **percent** option would be selected.
 - ii) On a **proportional** basis; in which case the **pulse with accumulator** option would be selected and an impulse water meter installed in the make up line to the cooling tower.
- **Blowdown** via the solenoid valve can also be achieved in the same two ways via the second timer.
 - i) On a **timed** basis; in which case the **percent** option would be selected.
 - ii) On a **proportional** basis; in which case the **pulse with accumulator** option would be selected and an impulse water meter installed in the make up line to the cooling tower.
- Two independent **biocide dosage timers** are incorporated in the controller to provide a dual biocide dosing facility.

Each timer provides the ability to dose a biocide on a 28 day programme cycle *via* four individual programmes with a wide range of day and week setting combinations.

The duration of operation for each biocide metering pump is adjustable in one minute increments up to 23 hours 59 minutes. (factory set at 1 hour 30 minutes).

The time when actuation occurs can be varied as follows;

Biocide Settings			
Week		Day	
*No Week	4 th Week	Sunday	Thursday
1 st Week	Even Week	Monday	Friday
2 nd Week	Odd Week	Tuesday	Saturday
3 rd Week	Every Week	Wednesday	Every Day

If these options are selected, no biocide addition will occur.

Additional Equipment Requirements

The **MCT250 Controller** is a stand alone unit. To operate as a complete system the following equipment must be in place – either existing or supplied in addition to the controller.

- **Dosage Pumps**
 - ◇ Three dosage pumps will be required, one for the inhibitor, two for the biocides. Care must be taken to ensure that the pumps are capable of delivering the chemical requirements specified by the controller.
- **Chemical Storage**
 - ◇ Treatment chemicals will normally be stored in a chemical storage tank. Dosage can be from the container that the chemical is supplied in, but it should be ensured that a means of monitoring usage is available.
- **Solenoid Valve**
 - ◇ A normally closed solenoid valve will be required for bleed control.
- **Impulse Water Meter**
 - ◇ If proportional inhibitor dosage or bleed control is required, an impulse water meter will be required, for the cooling tower make up line, to monitor the rate of make up flow into the cooling tower. The “K” factor, i.e. the volume of water passing through the water meter between impulses generated, will depend on the individual operating parameters.

Options

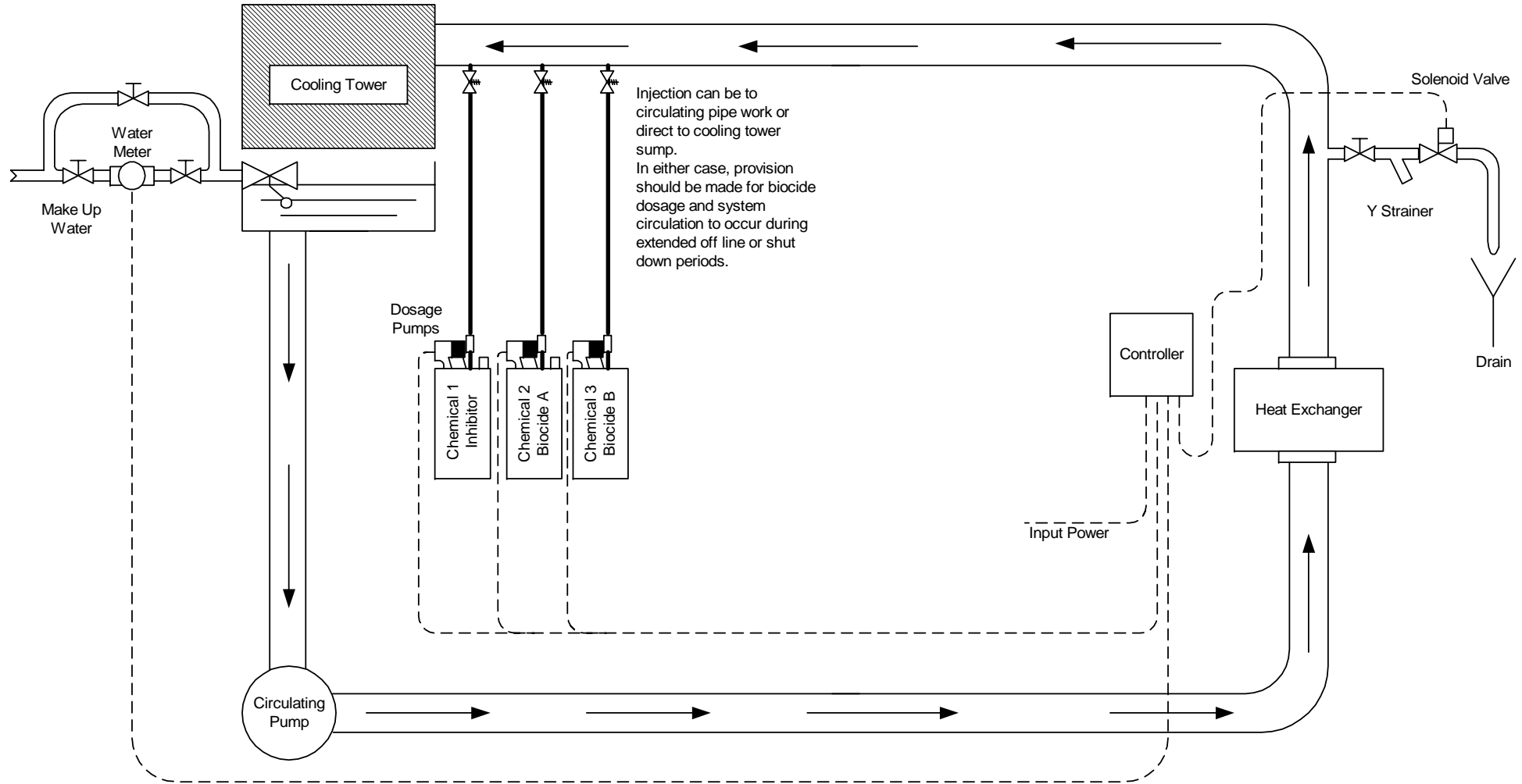
The MCT250AHR1 is the standard control unit to perform the tasks defined above. If additional features are required, the following options are available at additional cost.

- An alarm output relay can be fitted to give an external signal of any alarm conditions.
- One volt free contact can be incorporated to provide a signal of timer activation.
- The PULSAworks communications package can be employed to provide remote or local accountability.

Specification

Feature	MPT250AHR1
MPT250	Dual Selectable Timers
A	“Conduit” which signifies cable gland connections on base of controller.
HH	Two 28 day timers with a 24 hour bleed lockout facility
R1	CE approval
Power input	90 to 250 VAC @ 50/60 Hz 100 VA
Control Output	Line Voltage @ 600 VA
Display	2 x 16 Alpha Numeric, Back Lit Display
Electronic Environment	-17.8 to + 52°C, 100% Humidity
Controller Weight (kg)	3.7
Shipping Weight (kg)	4.6
Maximum Width (mm)	254.0
Fixing Hole Centres (mm)	228.3
Controller Width (mm)	220.0
Depth (mm)	179.8

Schematic Illustrating Typical Installation Arrangement for PULSAtrol MPT250AHHR1 Inhibitor Dosing, Bleed and Dual 28 Day Biocide Controller - Cooling Tower Application



Not all items shown will be present in every application

Electrical Schematic Detailing Connections for MPT250AHR1

