

# CHEMICAL DOSING SYSTEM FOR CT

Water Engineering Technologies WETCHEM CT ranges of dosing systems is the result of many years' experience in the development of treatment for cooling towers and chiller systems. Cooling Tower Dosing System is engrossed with bleed off control that is used for controlling the accumulation of dissolved solids present in water. This controls a bleed off valve required for draining water from the system. Inhibitor dosage is another part of this system acting as corrosion and scale inhibitor required for proportional dosing, maintaining set level in the water. A water meter is used along with inhibitor dosage for operating chemical dosage pump. Diaphragm pump is operated with the help of an electromagnetic solenoid operator or motor and hence, are proficient of injecting into high pressures.



**Bleed-off control** - Controls the accumulation or buildup of dissolved solids in the recirculating water caused by the evaporation. The bleed-off control operates a bleed-off valve to drain water from the system, allowing additional make-up to dilute the system water and reduce the dissolved solids level.

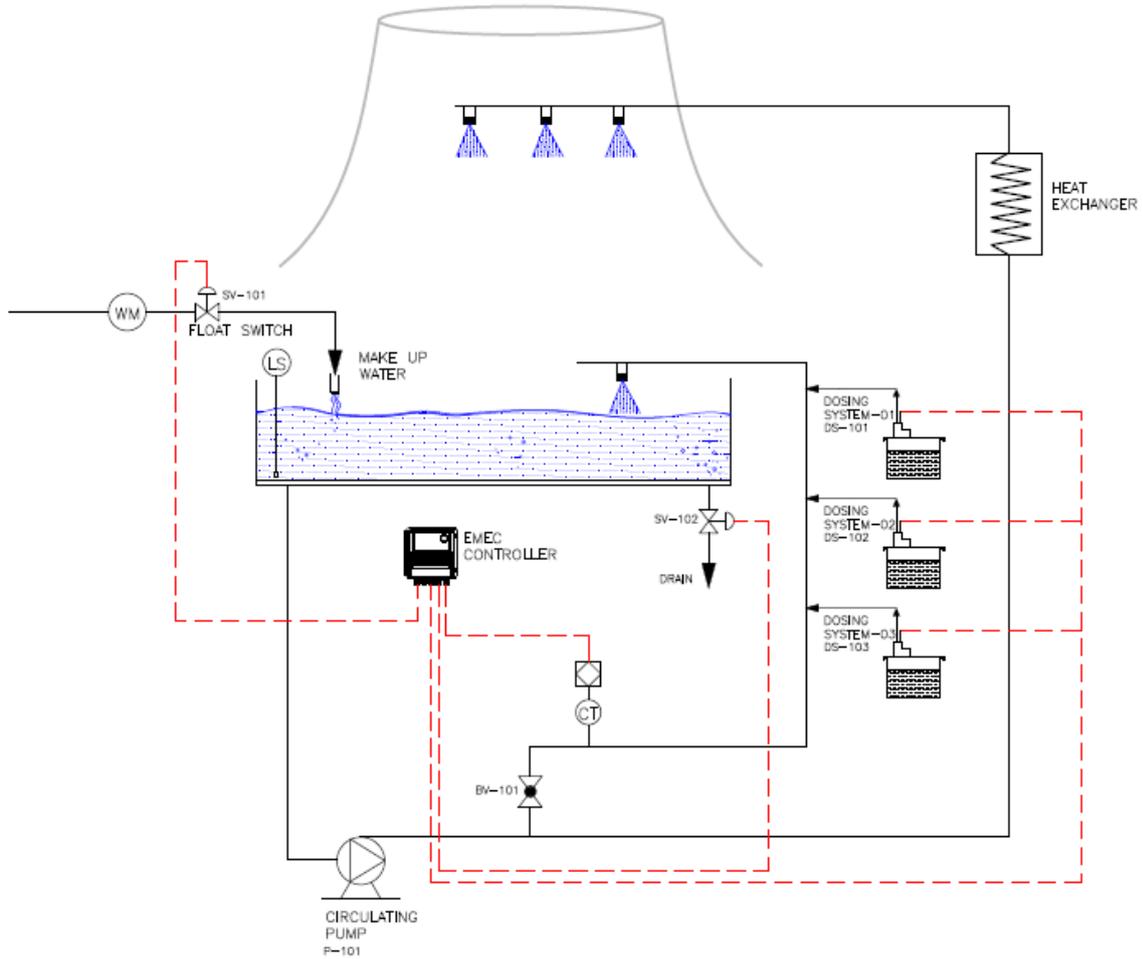
**Inhibitor dosage** - Corrosion and scale inhibitors are dosed in proportion to the make-up to maintain a set level in the recirculating water. Inhibitor dosage systems therefore use a water meter in the make-up supply to the cooling tower to operate chemical dosing pumps to add chemicals in direct proportion to the make-up water flow.

**Biocide dosage** - Non-Oxidizing Biocides - Normally shot dosed on an alternating basis, usually once or twice per week using timer controlled dosing pumps. Typically, non-oxidizing biocides require a contact time of 4 hours at a set concentration to destroy bacteria. As previously indicated, where conductivity bleed-off systems are fitted a bleed lockout system is required to prevent dilution and loss of biocide to bleed-off.

Oxidizing biocides - Chlorine or Bromine. Chlorine should only be used where pH levels are between 6.5 and 7.8. At higher pH, chlorine is relatively unreactive and a poor biocide. Its use is therefore confined to industrial cooling towers incorporating pH control. Bromine is effective at pH levels up to 9.0, above which its biocidal effect drops significantly requiring excessive dosage rates.

Oxidizing biocides are normally dosed continuously at a low level to maintain a set disinfectant level in the recirculating water. The level of disinfectant can be monitored electrically using Redox (Oxidation Reduction Potential - ORP) or a specific chlorine monitor. Because of their cost and sensitivity to contamination specific chlorine or bromine monitors are rarely used.

Redox (ORP) control measures the oxidation and reduction potential in millivolts in the water over a range of 0 to 1000 mV. This is related to the level of bromine oxidant present and uses simple technology similar to pH measurement. Whilst Redox is affected by changes in pH this has no significant effect on their performance in cooling water treatment as most cooling towers operate at a stable pH level.



#### Features:

- Efficient Performance
- Offer high durability
- Cost effective
- Accurate dosing
- Simple in Operation
- No Man intervention except chemical preparation
- Fully Automatic System
- Dosing Pumps in PVDF Material

