

## Evaporative Condenser Filtration

### Reasons for installing filtration on the water side of evaporative Condensers:



**LAKOS** 

**Protecting Our #1 Resource**

- SAVE Water
- SAVE Energy and Money
- GO GREEN

#### • Water savings



- Save approx 1200-1500 gallons per month per basin by eliminating the need to empty and clean it manually
- Less frequent blowdown due to lower concentrations of solids. The LAKOS Filtration System will remove 98% of solids down to 40 microns and 90% of solids down to 5 microns.

#### • Reduce environmental risks (like Legionella) that can be caused by dirty basin water



ASHRAE Guideline 12 notes that evaporative condensers are possible sources of Legionnaire's Disease, and that "keeping the system clean reduces nutrients available for Legionella growth...centrifugal gravity-type separators and bag-type separators ...can be used to assist in the removal of debris."

#### • Manpower:



By automating the cleaning of the evaporative condenser, two key benefits are reduced MANPOWER hours and REDUCED EMPLOYEE RISK.

- Free up 4 to 8 man hours per month per basin for maintenance personnel
- Employee safety is improved, since this slippery and difficult job is eliminated.
- Another consideration regarding safety is to minimize the exposure to a confined space environment



#### Energy Savings

Energy savings can be achieved by keeping the water distribution system operating at maximum capacity. This is accomplished because the mud or silt will not exist in large enough quantities to plug strainers and spray nozzles or to build up on heat transfer surfaces. This translates into power savings by keeping head pressures lower which allows compressors to operate more efficiently.

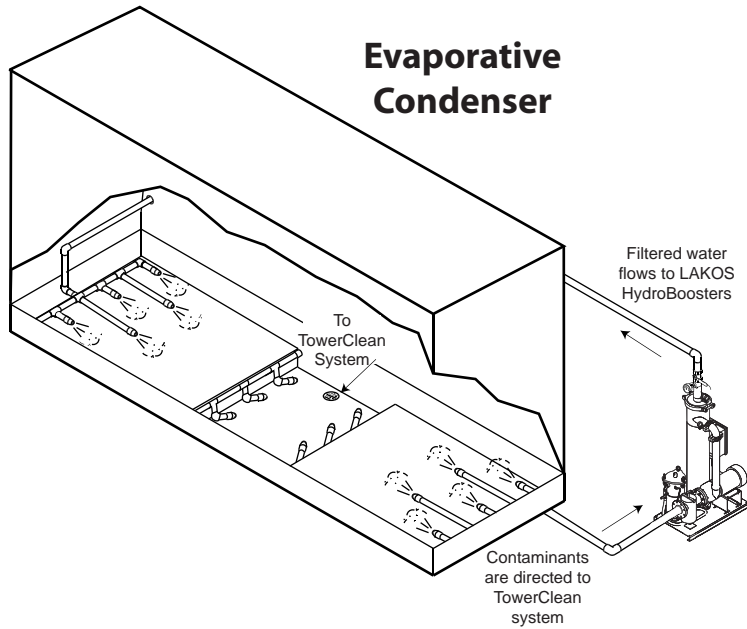
#### • Reduce yearly chemical costs

Since the basin will always be free of debris which can absorb chemicals and shield microbiological organisms, proper filtration maximizes the effectiveness of the chemicals, reducing the amount needed

#### • Extend life of equipment

By removing layers of debris and contaminants from the basin floor, the zinc layer in the steel basin can be maintained longer. If that zinc layer is degraded then corrosion begins, shortening the basin life.

# The LAKOS Solution: TowerClean System with HydroBooster layout



**HydroBooster nozzle**



## **CASE STUDY:**

### **Dairy Product Processing Plant In Central California**

A LAKOS TowerClean System and HydroBooster basin layout are used to keep the basin clean in an environmentally friendly, low maintenance solution.

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