



# BEST PRACTICES *installations*

## Cooling Tower Basin Cleaning HVAC New Build and Aftermarket Filtration Solutions



### Save Money • Save Energy • Save Water

When particulates have accumulated in your cooling tower basin, it leads to loss of efficiency in the condenser water system. Periodic manual cleaning is an option, but it is expensive, and fouling exponentially decreases the heat transfer efficiency. As the dirt builds up on heat transfer surfaces, energy is diverted to cooling DIRT and not system water. Continuous basin cleaning using LAKOS Filtration Solutions prevents this problem and maintains maximum system efficiency.

### The LAKOS Solution: Continuous Basin Cleaning



A complete LAKOS basin cleaning filtration system includes a centrifugal separator, pump package, and HydroBooster spray nozzles strategically placed in the tower basin to direct the flow of dirt to the separator.

Piping and nozzle layouts for factory installed or field erected cooling towers are available.



**QUIT  
COOLING  
DIRT™**

**LAKOS**

Separators and Filtration Solutions

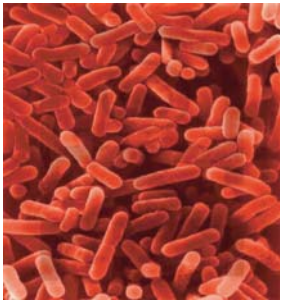
# Key Features and Benefits

## Significant Water Savings



Could result in 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.

## Reduced Health Risks



ASHRAE Guideline 12 notes that cooling towers 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."

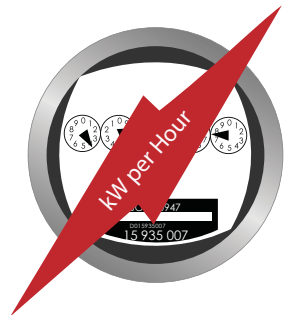
## Reduced Maintenance and Labor



By automating the cleaning of the cooling tower basin, two key benefits are: (1) reduced MANPOWER hours and (2) REDUCED EMPLOYEE RISK.

- Eliminate basin cleaning and free up significant man hours of maintenance personnel.
- Clean chiller tubes every 4-5 years versus annually.
- Employee safety is improved, since this slippery and difficult job is eliminated.
- Minimize the exposure to a confined space environment.

## Energy Savings



Energy savings are achieved by keeping the water distribution system operating at maximum capacity, since the mud or silt will not exist in large enough quantities to plug strainers and spray nozzles or build up on heat transfer surfaces. This translates into energy savings by keeping head pressures lower, allowing compressors and condensers to operate more efficiently.

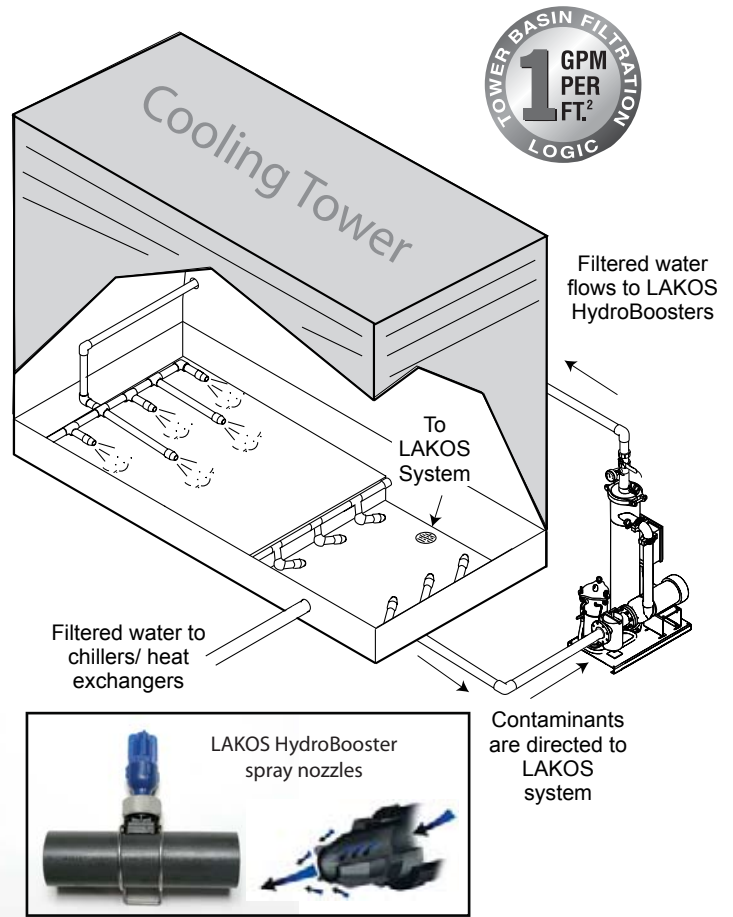
## Decreased Annual Chemical Costs

Since the basin will always be free of debris which can adhere to 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 contaminants from the basin floor, your water treatment program will optimize the life of your tower. Additional benefits include allowing downstream equipment to operate at design parameters.

# Typical Installation



# LAKOS

Separators and Filtration Solutions®

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