

The LAKOS Solution

A LAKOS basin cleaning installation will help to prevent the accumulation of bacteria that leads to Legionnaire's Disease.

The LAKOS tower cleaning system, including the use of properly positioned HydroBoosters in the basin (to direct the solids in the basin to the LAKOS system) is a great solution that:

- Has no moving parts to wear out or replace
- Zero liquid loss
- No system down-time after installation
- Biocide agents can be dispersed more evenly and in lesser quantities through the basin sweeper piping using HydroBoosters
- Reduced liability and increased safety for maintenance staff due to less slipping, inhalation, and exposure to the Legionella bacteria.



Legionnaire's Disease: What Is It?

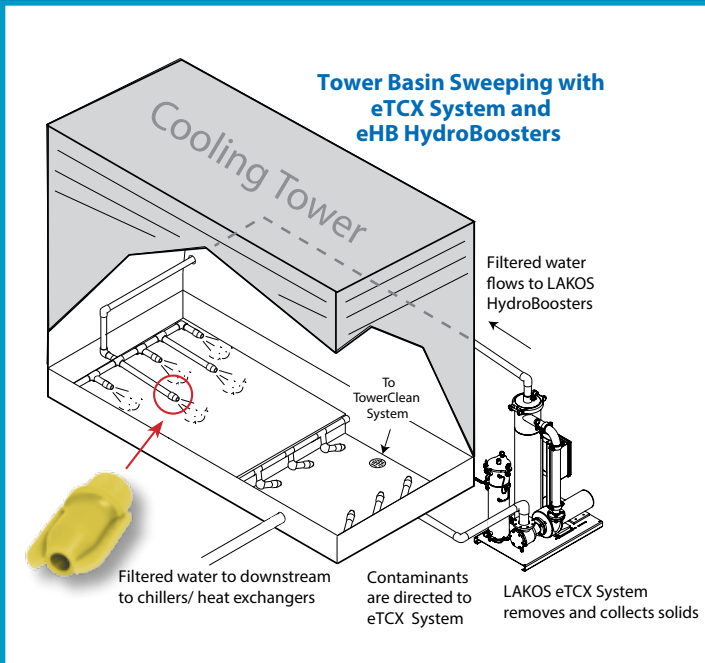
Legionnaire's Disease is a lung infection (pneumonia) caused by a bacterium named Legionella pneumophila (shown above). The name Legionella pneumophila was derived from the original outbreak at the 1976 American Legion Convention in Philadelphia.

Sources and Causes

Legionnaire's Disease is caused by bacteria that belong to the family Legionellaceae. The major source for Legionella is water distribution systems of large buildings such as hotels and hospitals. Cooling towers have been long thought to be a major source of Legionella. Other sources include mist machines, humidifiers, whirlpool spas, and hot springs. Air conditioners are NOT a source for the disease.

Prevention, According to ASHRAE

Legionella is addressed in ASHRAE's Guideline 12, where evaporative heat rejection equipment such as cooling towers and evaporative condensers are noted as possible causes of Legionnaire's Disease, and their recommended solution is given in section 7.6.1, which states "Keeping the system clean reduces nutrients available for Legionella growth... centrifugal gravity-type separators and bag-type filters can be used to assist in removal of debris..."



LAKOS
Separators and Filtration Solutions



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Life Cycle of Legionella In A Building Water System

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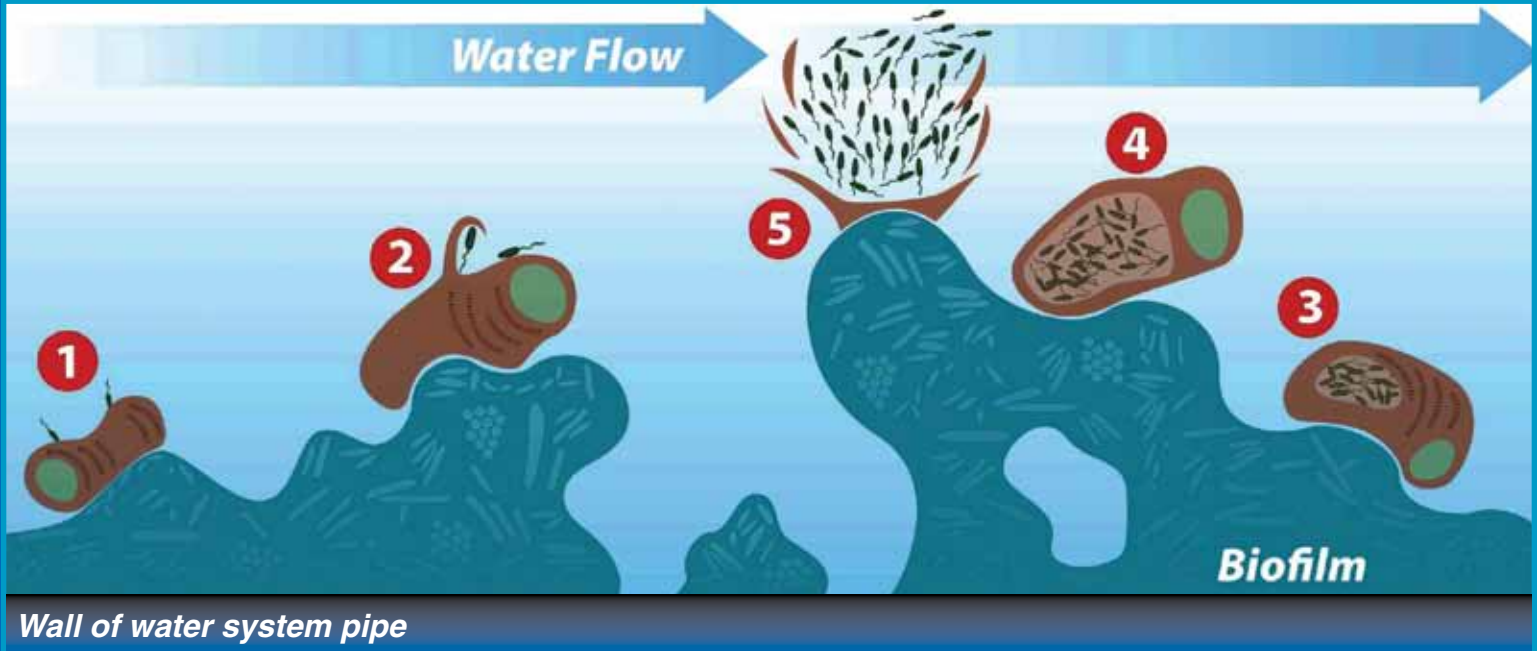
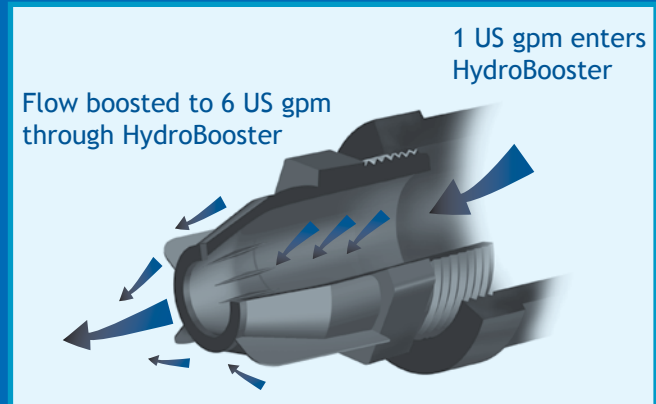
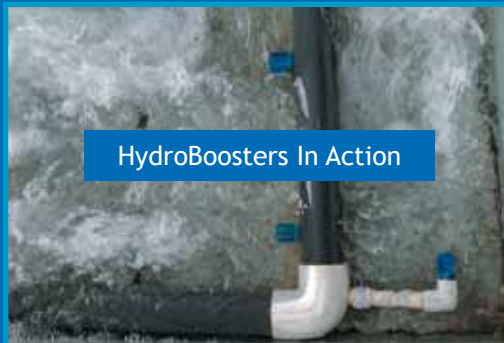


Figure 1: Life cycle of Legionella in a building water system. 1) Amoebae graze on biofilm consuming bacteria for food but are 2) infected by Legionella which 3) grows intracellularly and then 4) overwhelms its protozoan host cell, differentiates into mobile cells and 5) causes lysis of the host cell releasing hundreds or thousands of infective progeny in search of new hosts to infect.

LAKOS HydroBoosters



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