STABILIZE YOUR DATA CENTER COOLING CAPACITY

Liebert® iCOM™ Autotuning For Steady, High-Efficiency Performance

VERTIV™

BENEFITS

- Provides constant, stable and tightly controlled supply air temperature into your mission critical operation

- Reduces energy usage by up to 15%

- Reduces start-up times

- Eliminates expensive and time-consuming manual tuning

- Removes human error in tuning cooling systems

- Ensures stability and consistency of cooling capacity across your data center

- Eliminates chilled water system valve "hunting"

- Eliminates short cycling in DX systems

- Reduces system wear and tear

The Innovation: Cooling System Autotuning

Whether it's a chilled water cooling system "hunting" for the right valve position, or a DX compressor short cycling because of low load, these irregular changes in operation waste energy, increase system wear and produce inconsistent temperatures across the data center.

Now, Liebert® iCOM™ Autotuning controls can eliminate these problems – simply, quickly and cost effectively.

The Problem

Typical datacenter cooling systems have multiple control systems for individual mechanical components, such as chillers, CRAC units, economizers and others. These controls generally are not coordinated and often fight each other.

The problem is compounded when equipment is added, controls are modified, loads are changed or other modifications are made. Tuning the controls for one component often results in oscillation of other components that had previously been stable.

The traditional fix for this problem has been to manually tune components controls, a time-consuming and costly practice that might work for initial conditions but becomes ineffective as conditions change.

The Solution

Liebert iCOM Autotuning resolves that dilemma. It applies machine learning and advanced algorithms to regulate DX compressors or chilled water valves in a way that brings the rest of the system components into balance and stabilizes cooling capacity. For DX systems, it means harmonizing compressors, fans and condensers to eliminate costly short cycling. For chilled water systems, that means eliminating valve hunting to balance fan speeds, water temperature and flow rates.

And it does this in real-time, responding to changes in set points, data center loads, outdoor temperatures and other conditions.

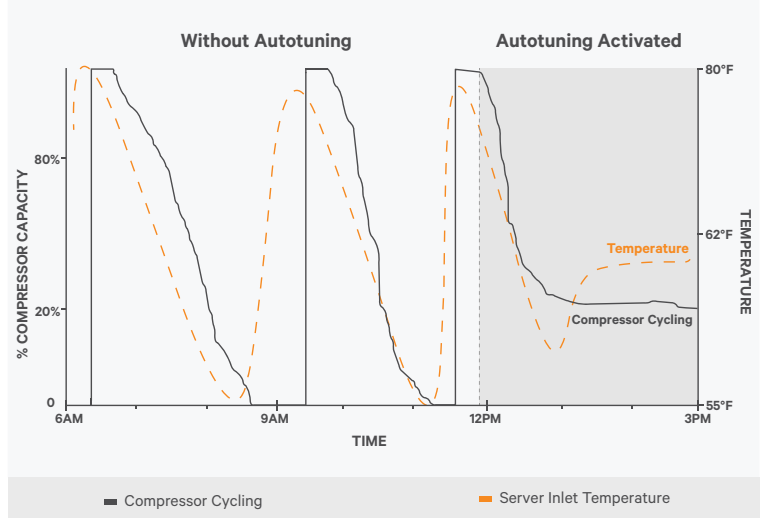**Optimizing Data Center Cooling Performance**

Liebert iCOM Autotuning continually monitors temperature, humidity and airflow sensors, and uses machine learning and advanced algorithms to fine-tune cooling

Liebert® iCOM™ Autotuning for Chiller Water Systems
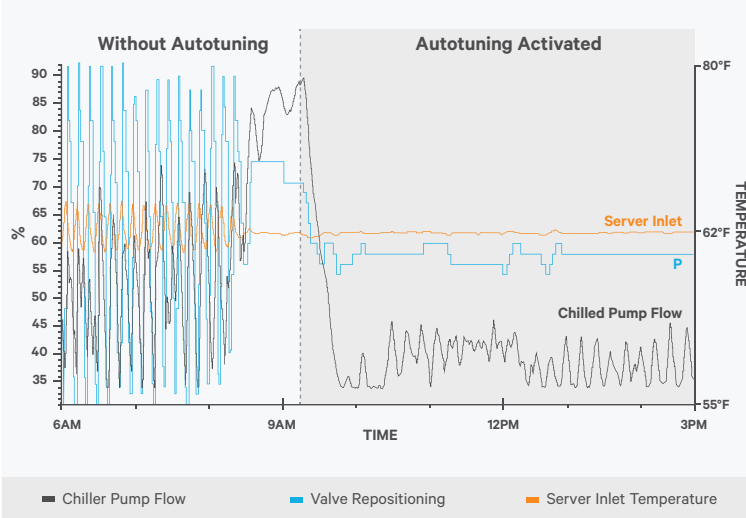
Liebert® iCOM™ Autotuning for DX Systems

Featuring machine learning and self-optimizing algorithms, Liebert iCOM Autotuning replaces a cooling system's wild fluctuations with steady, high-efficiency performance

Achieving Steady-State Performance

Liebert® iCOM™ Autotuning provides just the right amount of tuning to accommodate different environments when loads and other conditions change.

In small data centers, when loads change quickly, cooling controls often react too fast, and compressors or chilled water valves overshoot optimal positions.

Conversely, in large rooms with slowly changing loads, cooling controls may not react fast enough, causing compressors or valves to take too long to adjust to new conditions.

Liebert iCOM Autotuning recognizes when to respond aggressively or slowly by using inputs from hundreds of component and environmental sensors to adjust compressor or valve operations and achieve a steady-state condition for

setpoints. It also uses historical data from multiple internal and external sensors to automate re-tuning and the speed at which it performs the re-tuning.

Liebert iCOM Autotuning ensures the cooling system is properly re-tuned automatically and accurately without requiring human intervention, knowledge or cost.

VertivCo.com | **Vertiv Headquarters,** 1050 Dearborn Drive, Columbus, OH, 43085, USA