Liebert® EFC Indirect Evaporative Freecooling System: Setting Records for Thermal Performance

VERTIV

Colocation and cloud hosting data center managers are seeking cooling solutions that help them save money, reduce risks and make it easier to manage their facilities. With the Liebert® EFC 400kW system, Vertiv™ has taken freecooling innovation to the highest level, setting new records for cooling performance.

Advanced Controls

Teamwork algorithms to coordinate operation of multiple units for maximum efficiency and protection

Self-healing control routines to avoid reaching dangerous thresholds

Cost saving advanced control algorithms that automatically selects the best combination of water and electricity usage based on input costs

Independent control of capacity and temperature for optimal annual effciency

Highly Efficient Heat Exchanger

Air leakage less than 0.1%, greatly reducing need for extra capacity for makeup air

Up to 85% effective heat transfer in dry mode for less annual water consumption

Mechanical PUE as low as 1.03

Cooling to within 3 degree of wet bulb temperature to maximize economization hours and minimize or eliminate the need for mechanical refrigeration

Fun Facts About The Liebert EFC

1 Total area of the enhanced heat exchanger surface of the Liebert EFC, which helps to drive its efficiency
26,000 square feet – more area than five professional basketball courts

Amount of air saved over the 10-year life of a 1 MW data center thanks to lower air leakage, compared to air loss by a heat wheel. **Enough to fill about 15,500 Goodyear® blimps** **2**

3 Energy savings from lower air leakage of the Liebert EFC, compared to a heat wheel, for a 1 MW data center at 8 cents/kWh (due to lower fan energy and lower make-up air). **$13,600 or 14% of total operating budget**

Annual amount of CO_2 saved by not having to add capacity to make up for leaked air
96 tons **4**

5 Number of average-sized autos producing the amount of CO2 saved annually by the Liebert EFC
20