

BENEFITS

Improve Thermal Performance and Energy Efficiency

With energy costs on the rise, improving efficiency has been elevated from a strategy for generating greater computing capacity to a strategy for reducing costs, and upgrading the thermal system is where you will likely make the biggest impact.

Improvements made to a thermal system through variable speed technology, like an electrically commutated (EC) fan upgrade, can save fan energy consumption by nearly 80 percent.

For a typical data center, cooling accounts for nearly 40 percent of total energy consumption, so each percentage point in efficiency improvement translates into thousands of dollars in annual savings.

Benefits

- Improve energy efficiency
- Reduce operating expenses
- Lower maintenance costs
- Realize fewer or delayed capital costs
- Improve availability



Maximize energy savings through EC fan upgrades that regulate airflow and reduce fan input power

Implementing variable speed technology in today's dynamic data centers provides improved thermal management to drive gains in energy efficiency. In fact, with an EC fan upgrade performed by the original equipment manufacturer (OEM), businesses can save thousands of dollars in annual operating expenses. The efficiency gains are achieved by more closely matching cooling to IT load.

Having a fan speed and power draw that can be reduced to match load is critical, especially because data center cooling units are sized for peak demand, which rarely occurs in most applications. A 20 percent reduction in fan speed provides nearly 50 percent savings in fan power consumption.

In addition to energy savings from reduced fan speed, EC fans are also more efficient than centrifugal blowers when operating at 100 percent fan speed because direct drive systems eliminate belt losses of approximately five percent of the fan's total energy consumption.

With EC fans, the absence of belts means no belt replacements, and belt dust is no longer an issue during operation and maintenance.

Our EC fan upgrades include:

- Expert consultation
- Professional installation
- System coordination
- Comprehensive warranty

Expert Consultation

A site visit from a Vertiv™ thermal management expert occurs prior to any installation of EC fans. This on-site consultation allows the service technician to walk through the data center, talk with managers or owners, and get a better understanding of the performance goals and priorities for your thermal infrastructure.

This consultation can help identify air flow issues and inefficiencies in existing room conditions and practices that, when improved, will reduce energy consumption significantly. The technician will also evaluate the return on investment (ROI) for your unique space, which can help justify the cost of the upgrade. In many cases, the energy savings resulting from implementing variable speed technologies can pay for upgrades in less than two years.

Professional Installation

The best approach to achieving optimal airflow through an EC fan upgrade is having Vertiv, the service team for Liebert® products, handle the installation. As the OEM, we have direct access to the engineering group who built the equipment and are specifically trained to optimize the performance of thermal systems.

In addition to having industry-leading expertise, Vertiv knows the importance of using genuine OEM parts that work seamlessly with Liebert products versus aftermarket replacement parts. Our thermal management experts are equipped with the knowledge and parts needed to ensure your business-critical equipment runs efficiently with minimal downtime.

System Coordination

IT systems are critically sensitive to extreme variations in temperature and humidity, so making proper set point adjustments along with an EC fan upgrade is crucial to thermal system operation.

Following installation, our service team will help with system coordination, primarily by adjusting the set points of existing controls. Proper set points help reduce energy consumption, improve compressor life, and reduce “fighting” between units due to excessive humidification or dehumidification.

Comprehensive Warranty

A comprehensive, one-year warranty on all parts and labor is included with the purchase of an EC fan upgrade. Should an issue arise, you can rest easy knowing that your system is covered. We will help you get up and running, utilizing only OEM parts and labor from the industry's best factory-trained thermal experts.

Summary

As organizations like yours respond to demands for more and more IT applications, energy efficiency will remain a top priority, and the best approach to maximizing efficiency in a thermal system is to match needs with load requirements.

Because fans are the biggest energy consumer in computer room air conditioning (CRAC) units, introducing variable speed technology through a seamless EC fan upgrade can save nearly 80 percent in fan energy consumption. This improved efficiency improves overall system performance, availability, and capacity for real impact to your business's bottom line.

Ordering Information

To learn more about this service and other Vertiv solutions, visit VertivCo.com or call 1-800-543-2378.