

# LIEBERT® EC FAN UPGRADES

Energy Efficient Solutions



## BENEFITS

### EC Plug Fans

- Most energy efficient fan option
- Available in new or existing models
- Direct drive systems
- Backward curved impeller
- Speed control (0-10VDC)
- 20% speed reduction = 50% savings

### Available for Downflow Models

- Liebert Deluxe System/3 (Chilled Water) 302, 376, 422, 529, 600, 740
- Liebert Deluxe System/3 (DX-Air Cooled) DH199, DH245, DH290, DH380
- Liebert CW 051, 060, 076, 084, 106, 114
- Liebert DS (Air/Water/Glycol Cooled) 053, 070, 077,105

### Ideally Suited for

- Small & Large Data Centers
- Telecommunications Facilities
- Process Control Centers
- Sensitive Electronics Applications

## Upgrade your Liebert® unit with EC Fans today!

The innovative energy efficient EC fans integrated with continuous speed control will provide great value within your existing precision cooling units. EC Fans offer a simple and cost effective way of introducing energy efficient technology by regulating airflow and reducing the fan input power.

Managed through Liebert iCOM™ controls, EC fans deliver airflow for the optimal operating conditions for IT equipment. This is an effective method for improving energy efficiency by controlling the fan speed. The efficiency gains come from decreasing the input power. These devices allow fan speed and power draw to be reduced to match the load. Fan power is directly proportional to the cube of fan RPM. A 20% reduction in fan speed provides almost 50 percent savings in fan power consumption.

In addition to energy savings provided through reduced fan speed, EC plug fans are also more efficient than centrifugal blowers when operating at 100% fan speed. They are more efficient due to difference in wheel design, and because direct drive systems eliminate belt losses, which account for losses of approximately 5%. There may be some applications or specifications that will not warrant the use of EC fans, so contact your local Liebert representative for other variable fan speed solutions.



*Electronically Commutated (EC) plug fans are direct drive systems that use a brushless motorized impeller (plug fan).*

## Add Liebert iCOM Controls to Optimize System Performance!



*Liebert iCOM controls required for Liebert DX units*

## Convert Your Existing Units Today!



### Acknowledging Harmonics

EC Motors create current harmonics that will distort the voltage waveform of their supply and may affect other equipment on the same power source. The degree of distortion is dependent on the impedance of the supply power source and the total current distortion caused by all non-linear loads on the system. It may or may not be necessary to address current harmonics within your facility. If applicable, refer to IEEE Std 519 for details regarding harmonic distortion definitions and guidelines.

### Why Upgrade to EC Fans

- Exceed your energy efficiency goals
- Reduce maintenance costs as no belt replacement(s)
- Eliminate belt dust
- Enjoy higher reliability
- Backward curved, corrosion resistant aluminum fan impeller
- True soft start with inrush current lower than full load current
- Adjustable fan speed with no VFD
- Specifically designed to retrofit Liebert Deluxe System/3
- 2- and 3- fan configurations available
- No changes required to the existing infrastructure or floor tile configuration
- 10-30% less energy than average standard AC motor
- Average payback is less than two years
- Virtual Back Draft Damper Capable\*

\*When equipped with Liebert iCOM Controls