

Liebert® EconoPhase™

Pumped Refrigerant Economizer

The first ever pumped refrigerant economizer system for enhanced energy savings

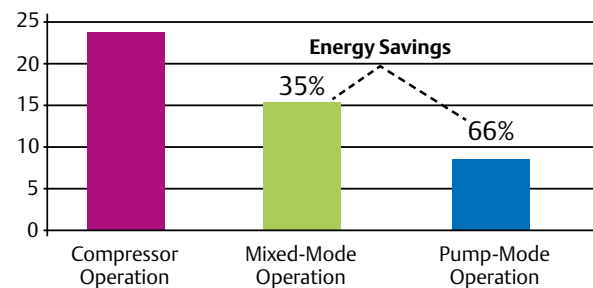
- Industry-leading efficiency
- Simplified operation
- Next generation iCOM™ Control

Industry-Leading Efficiency

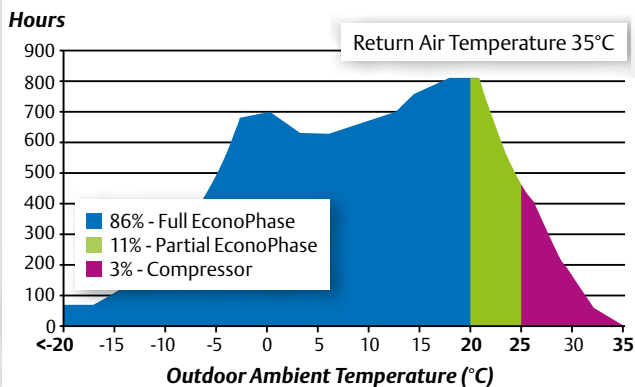
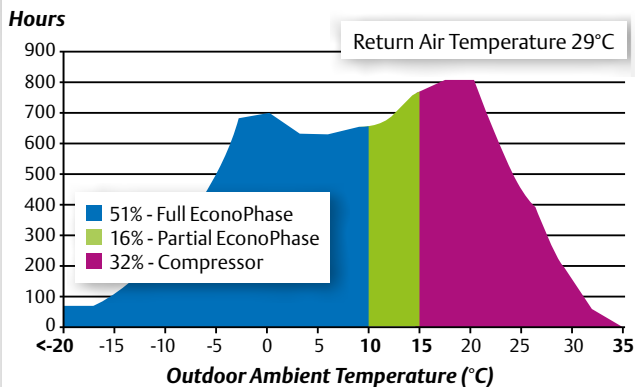
- First ever pumped refrigerant economizer
- Refrigerant carries 2x as much heat as water and 40x as much heat as air

	Air	Water	Pumped Refrigerant
Fluid Heat Density	18.65 kJ/m ³	1,722 kJ/m ³	3,466 kJ/m ³
Heat Removal Coefficient of Performance (COP)	29.5 kW/kW	591 kW/kW	1,188 kW/kW
Increase in Heat Removal Efficiency compared to air	Base %	+2,000 %	+4,023 %

- Freecooling is available to reduce or eliminate compressor usage



Gains in Freecooling with Temperature Increase



Liebert EconoPhase™ usage increases significantly as return air temperatures increase, providing more cost-effective cooling.

- pPUE as low as 1.05 in full EconoPhase mode



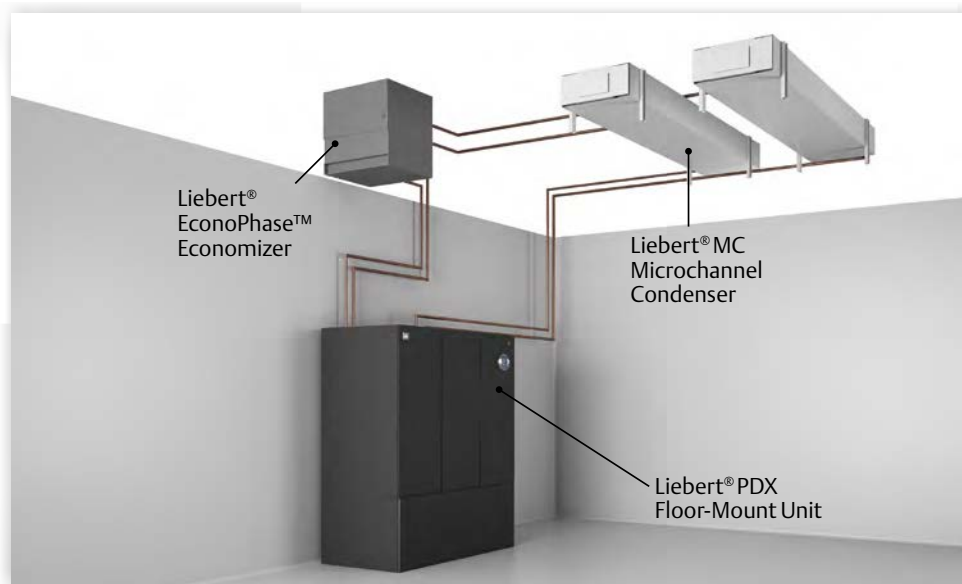
The Liebert EconoPhase automatically switches to economizer operation to **reduce or eliminate compressor run time** during periods of lower outdoor temperatures.

Liebert® EconoPhase™

Pumped Refrigerant Economizer

Simplified Operation

- Functions without water.
- Free from outside air contamination, no dampers nor louvers to maintain.
- Instant changeover to economizer mode, even for short time periods.
- Automatic failure diagnostics; pump unit serviceable without loss of cooling.



The Liebert EconoPhase pumped refrigerant economizer is compatible with the Liebert PDX and Liebert MC to improve thermal management and control, while drastically cutting energy costs and lowering pPUE.

Next Generation iCOM™ Control

- Seamless, automatic changeover between Direct Expansion (DX) and economizer mode.
- Constantly monitors load, room and outdoor conditions to adjust system operation to most efficient operating mode.
- Mechanical systems networked together to optimize component performance and increase system reliability.
- Automatic failure diagnostics and pump unit serviceable without loss of cooling.

Room Temperature

Unit Load %

Outdoor Temperature



iCOM Control

Operating Mode

Locations

Emerson Network Power Global Headquarters

1050 Dearborn Drive
P.O. Box 29186
Columbus, OH 43229, USA
Tel: +1 614 8880246

Emerson Network Power Thermal Management EMEA

Via Leonardo Da Vinci, 16/18
Zona Industriale Tognana
35028 Piove di Sacco (PD) Italy
Tel: +39 049 9719 111
Fax: +39 049 5841 257

Emerson Network Power United Kingdom

George Curl Way
Southampton
SO18 2RY, UK
Tel: +44 (0)23 8061 0311
Fax: +44 (0)23 8061 0852

Globe Park
Fourth Avenue
Marlow Bucks
SL7 1YG
Tel: +44 1628 403200
Fax: +44 1628 403203

While every precaution has been taken to ensure accuracy and completeness herein, Emerson assumes no responsibility, and disclaims all liability, for damages resulting from use of this information or for any errors or omissions.
Specifications subject to change without notice.

Follow us on Social Media:

Emerson, Liebert®, iCOM™ and Emerson Network Power are trademarks of Emerson Electric Co. or one of its affiliated companies.

©2015 Emerson Electric Co.

MKA4L0UKECOF Rev. 1-05/2015