Liebert[®] DSE™

DX Cooling and Refrigerant Economizer System, 80kW – 150kW



Highest efficiency system

- Economizer system with mechanical PUE as low as 1.05
- 26-53% higher SCOP at full load than ASHRAE
 90.1 standard
- Variable capacity system matches IT load and optimizes energy consumption at partial loads

State-of-the-art mechanical components

- Variable-capacity Digital Scroll compressors and variable-speed direct-drive EC fans controlled to match IT load and provide high efficiency operation at partial load conditions
- Electronic expansion valves increase DX efficiency at lower ambient temperatures
- Industry-first, EconoPhase™ pumped refrigerant economizer
- Liebert MCTM condenser with advanced controls and variable speed components

First ever pumped refrigerant economizer

- No water and no water treatment
- No outside air contamination, and no dampers and louvers to maintain
- Instant changeover to economizer mode, even for short time periods

The Liebert DSE is the world's most efficient DX data center cooling solution

- Highest efficiency system with state of the art mechanical components
- First ever pumped refrigerant economizer highest efficiency, hassle-free
- Next generation Liebert iCOM[™] system controls with auto-economization mode-switching

Next Generation Liebert iCOM System Controls

- Seamless, automatic changeover between DX mode 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



Liebert EconoPhase First ever pumped refrigerant economizer



Liebert DSE Indoor Unit Next generation data center cooling system



Thermal System Manager with Liebert iCOM™



Liebert MC[™] Intelligent, high efficiency condensers





Liebert DSE performance and dimensional data

DA125 efficiency performance

Cooling Mode	Outdoor Temp	Cooling PUE	SCOP kW/kW
Full Compressor	95 °F	1.28	3.6
Partial EconoPhase™	65 °F	1.17	5.9
Full EconoPhase	45 °F	1.09	11.1
Full EconoPhase	< 30 °F	1.05	18.6

Based on 85 °F return air, 80% load

Technical data

		Model			
		DA080	DA085	DA125	DA150
95 °F DB, 52.3 DP	Total Capacity kW (net)	88	100	146	170
	Sensible Capacity kW (net)	84	94	146	170
	Full-load SCOP @ 95 °F ambient	3.2	3.1	3.8	3.2
	SCOP @ 35 °F ambient (kW/kW)*	10.5	10.1	17.5	13.0
85 °F DB, 52.3 DP	Total Capacity kW (pet)	85	۲۵	130	153
		05 77	02	120	155
	Sensible Capacity KVV (net)	11	83	130	153
	Full-load SCOP @ 95 °F ambient	3	2.7	3.4	2.9
	SCOP @ 35 °F ambient (kW/kW)*	9.1	8.7	12.2	12.0

*Economizer mode operating at 100% of DX capacity

Note: Capacity data is rated and factory-certified per ASHRAE 127-2012 with a 5% tolerance



Basic dimensions

Model	Length (A)	Width (B)	Height (C)
DA080	100"	35"	76"
DA085	100"	35"	76"
DA125	144"	47"	76"*
DA150	144"	47"	76"*

*Add minimum 18" height for separate filter plenum, plus floorstand height

Emerson Network Power

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