

■ Precision Cooling for  
Business-Critical Continuity

Liebert HPA and Liebert HPD  
*Condensers and Drycoolers for Top Level Reliability*



 **Liebert**®

  
**EMERSON**™  
Network Power



Emerson Network Power Headquarters EMEA

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Emerson Network Power™ offers a full range of innovative power, precision cooling, connectivity and embedded products and services for computer, communications, healthcare and industrial systems.

Key product brands within the Emerson Network Power family include : Liebert, Knürr, Asco, Astec et Lorain.



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*Business-Critical Continuity Expert™*



### Liebert HPD - Heat Performance Drycooler

Liebert HPD of Emerson Network Power dissipate the heat coming from water-cooled direct expansion indoor units.

Specifically designed for High Performance Air Conditioning applications, Liebert HPD are outdoor units that can operate with water or glycol mixture up to a 40% concentration.

If connected to Liebert indoor FREECOOLER units, they can use low temperature outside environments to cool the room without using the compressors. Resulting energy savings can be up to 30% per year.

Drycoolers are available in two versions: standard and low noise. Each of them use axial fans, but with differing speeds.

This gives the best choice between optimum performance and silent operation. All models operate with 50Hz power supply (60Hz available as a special feature).

*The same Drycooler unit can be installed either Horizontally or Vertically, with simple operation to be done on site, thus reducing transportation and handling costs.*



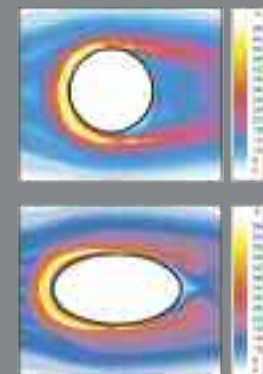
Electric Panel and fan speed control (Three phases Drycooler Modes)

### Optional features are:

- Modulating fan speed control with single set point
- Modulating fan speed control with double set point for free cooling operation, to switch between summer mode (compressor working) to winter mode (free cooling operation)
- Epoxy coated coil
- Hydraulic connections flange kits (for Three Phase models, Single Phase models are provided with threaded hydraulic Connections)



Liebert HPD Drycoolers are equipped with heat exchanges made with oval copper tubes. This design improves the heat exchanger capacity, versus drycoolers with traditional coil geometries.



Higher fin efficiency & heat transfer distribution



Safety switch.  
Power supply 50Hz or 60Hz.



Pipe adapters.



Modulating fan speed control. Silent function during the night.



Service valves with pressure tap.



Silent axial fans.  
IP54 motors.



### Liebert HPA - High Performance Condenser

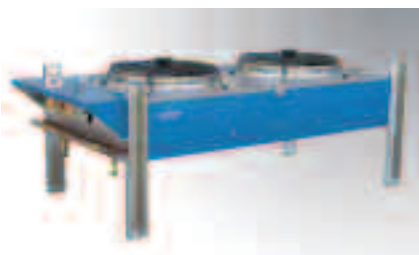
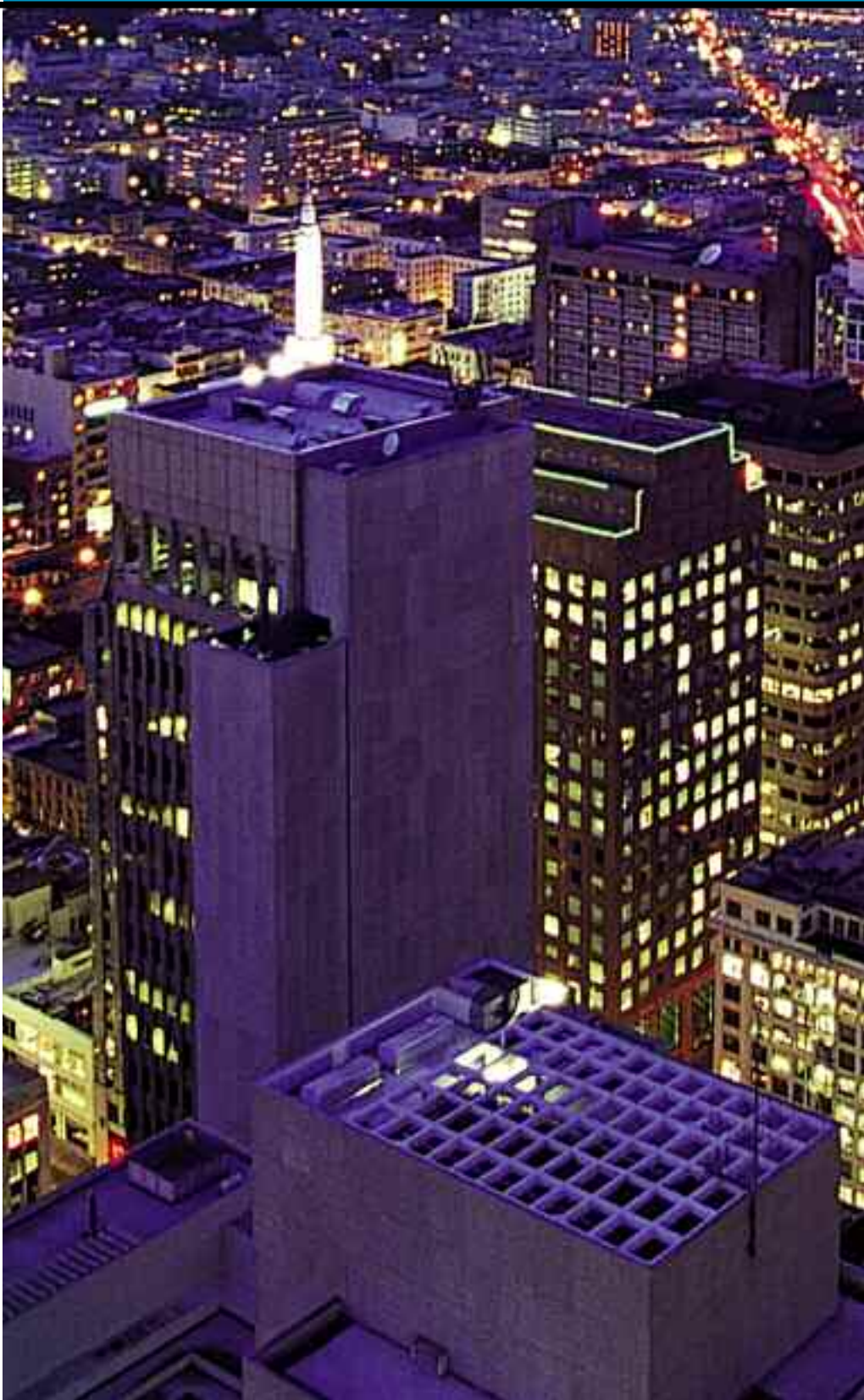
Liebert HPA of Emerson Network Power dissipate the heat coming from air cooled direct expansion indoor units. Specifically designed for High Performance Air Conditioning applications, Liebert HPA are characterised by high energy efficiency, excellent reliability and low sound emissions.

A wide range of sizes, from 5 kW to 100 kW cooling capacity, fulfils every demand: from the small switchboard to the big computer room, including working environments such as offices, museums and trading rooms. Liebert HPA are air-cooled outdoor units, suitable for R407C and R22 refrigerants. Two versions are available: single (HCE models) and double circuit (HBE models).

All the models have coated aluminium frames. The standard coil is made of copper piping and aluminium fins. There is also the option of epoxy coated coils or copper fins, for better resistance to corrosion.

The inner surface of the pipes has a special pattern that, through increased turbulence, allows greater heat exchange at the same airflow. The fans, therefore, consume less energy and produce less noise. Thanks to special coil supports, there is no contact between the pipes and the frame.

This eliminates the risk of breaking the sealed circuit thus improving the durability of the product.



*Legs can be used either for horizontal or vertical installation.*

## Technical Features [Condensers]

### Standard Working Mode

	Heat Rejection <sup>(1)</sup>		Air Volume	SPL		Power supply	Power Input		Current Absorption		Dimensions (Vertical Air Flow)			Net Weight
	R407C	R22		5 m f.f. <sup>(2)</sup>			[V/Ph/Hz]		[A]		Length	Width	Height	
	[kW]	[kW]	[m <sup>3</sup> /h]	[dB(A)]	[dB(A)]	[kW]	[kW]	[A]	[A]	[mm]	[mm]	[mm]	[kg]	
HCE 07	7.8	7.7	2400	45.5	48.5	230/1/50-60	0.18	0.28	0.85	1.25	700,5	599	630	12
HCE 10	9.4	9.4	2300	45.5	48.5	230/1/50-60	0.18	0.28	0.85	1.25	700,5	599	630	16
HCE 14	14.6	14.4	4600	44.5	45.5	230/1/50-60	0.27	0.39	1.20	1.70	1055	892	934	45
HCE 17	15.9	15.7	4600	44.5	45.5	230/1/50-60	0.27	0.39	1.20	1.70	1055	892	934	45
HCE 24	25.3	25.0	8300	50.5		230/1/50 400/3/60	0.56	0.87	2.50	1.45	1338	1109	907	56
HCE 29	28.9	28.8	7800	50.5		230/1/50 400/3/60	0.56	0.87	2.50	1.45	1338	1109	907	66
HCE 33 HBE 33	31.8	31.5	9200	47.5	48.5	230/1/50-60	0.54	0.78	2.40	3.40	1865	892	934	72
HCE 42	42.2	41.6	16600	53.5		230/1/50 400/3/60	1.12	1.74	5.00	2.90	2338	1109	907	93
HCE 49 HBE 49	50.4	49.9	16600	53.5		230/1/50 400/3/60	1.12	1.74	5.00	2.90	2338	1009	907	93
HCE 58	58.1	57.6	15600	53.5		230/1/50 400/3/60	1.12	1.74	5.00	2.90	2338	1109	907	102
HCE 74 HBE 74	75.7	74.9	24900	54.5		230/1/50 400/3/60	1.68	2.61	7.50	4.35	3338	1109	907	136
HCE 87 HBE 87	87.1	86.4	23400	54.5		230/1/50 400/3/60	1.68	2.61	7.50	4.35	3338	1109	907	165
HCE 95	90.6	90.5	24000	54.5		230/1/50 400/3/60	1.68	2.61	7.50	4.35	3338	1109	907	195
HCE 99	116.4	115.2	31200	55.5		230/1/50 400/3/60	2.24	3.48	10.00	5.80	4338	1109	907	215

### Low Noise Mode

	Heat Rejection <sup>(1)</sup>		Air Volume	SPL		Power supply	Power Input		Current Absorption		Dimensions (Vertical Air Flow)			Net Weight
	R407C	R22		5 m f.f. <sup>(2)</sup>			[V/Ph/Hz]		[A]		Length	Width	Height	
	[kW]	[kW]	[m <sup>3</sup> /h]	[dB(A)]	[dB(A)]	[kW]	[kW]	[A]	[A]	[mm]	[mm]	[mm]	[kg]	
HCE 07	5.7	5.7	1582	39.5	42.1	230/1/50-60	0.11	0.17	0.80	1.17	700,5	559	599	12
HCE 10	6.6	6.6	1516	39.5	42.1	230/1/50-60	0.11	0.17	0.80	1.17	700,5	559	599	16
HCE 14	11.3	11.2	3261	40.6	41.5	230/1/50-60	0.18	0.26	1.14	1.61	1055	813	892	45
HCE 17	12.2	12.1	3261	40.6	41.5	230/1/50-60	0.18	0.26	1.14	1.61	1055	813	892	45
HCE 24	21.2	21.1	6524	40.2		230/1/50 400/3/60	40.2	0.66	2.41	1.40	1338	1009	1109	56
HCE 29	24.2	24.1	6131	40.2		230/1/50 400/3/60	40.2	0.66	2.41	1.40	1338	1009	1109	66
HCE 33 HBE 33	24.4	24.2	6523	43.3	44.2	230/1/50-60	0.36	0.53	2.28	3.23	1865	813	892	72
HCE 42	36.0	35.9	13048	42.6		230/1/50 400/3/60	0.85	1.32	4.82	2.80	2338	1009	1109	93
HCE 49 HBE 49	42.3	41.9	13048	42.6		230/1/50 400/3/60	0.85	1.32	4.82	2.80	2338	1009	1109	93
HCE 58	48.2	48.1	12262	42.6		230/1/50 400/3/60	0.85	1.32	4.82	2.80	2338	1009	1109	102
HCE 74 HBE 74	63.5	62.9	19571	43.4		230/1/50 400/3/60	1.27	1.98	7.23	4.20	3338	1009	1109	136
HCE 87 HBE 87	72.2	72.1	18392	43.4		230/1/50 400/3/60	1.27	1.98	7.23	4.20	3338	1009	1109	165
HCE 95	75.5	75.4	18864	43.4		230/1/50 400/3/60	1.27	1.98	7.23	4.20	3338	1009	1109	195
HBE 99	95.9	95.2	24523	44.2		230/1/50 400/3/60	1.70	2.64	9.65	5.59	4338	1009	1109	215

(1) Condensing T- Coil air inlet T = 15K

(2) Sound pressurelevel at 5 m free field

## Technical Features [Dry Cooler]

### Standard Models

Model	Cooling Capacity <sup>(1)</sup>	Air Flow	Water Flow	Water Pres. Drop	Power Supply	Adsorbed Power	SPL 10m f.f. <sup>(2)</sup>	Dimensions (Vertical Air Flow)			Net Weight
	[kW]	[m³/h]	[m³/h]	[kPa]	[V/Ph/Hz]	[kW]	[db(A)]	Length	Width	Height	[Kg]
ESM009	10,8	7100	1,9	42	230/1/50	1 X 0,78	46	820	1336	1030	47
ESM013	12,8	6700	2,2	54	230/1/50	1 X 0,78	46	820	1336	1030	53
ESM018	16,1	15000	2,8	27	230/1/50	2 X 0,78	49	820	2236	1030	82
ESM022	22,0	14200	3,8	52	230/1/50	2 X 0,78	49	820	2236	1030	94
EST028	28,0	20000	4,9	40	400/3/50	2 X 0,69	49	1250	2866	1070	133
EST040	36,4	19400	6,3	31	400/3/50	2 X 0,69	49	1250	2866	1070	153
EST050	46,1	18400	8	43	400/3/50	2 X 0,69	49	1250	2866	1070	193
EST060	62,8	28200	10,9	22	400/3/50	3 X 0,69	51	1250	4066	1070	254
EST070	69,5	27600	12,1	55	400/3/50	3 X 0,69	51	1250	4066	1070	283
EST080	84,8	37600	14,7	48	400/3/50	4 X 0,69	52	1250	5266	1070	340
EST125	128,9	63000	22,4	58	400/3/50	3 X 2,00	50	1620	5276	1650	763
EST175	168,1	84000	29,2	17	400/3/50	4 X 2,00	51	1620	6826	1650	990
EST220	217,6	118800	37,8	11	400/3/50	6 X 2,00	53	2340	5576	1650	1115
EST270	265,4	109200	46,1	54	400/3/50	6 X 2,00	53	2340	5576	1650	1253
EST330	327,2	151600	56,9	20	400/3/50	8 X 2,00	54	2340	7226	1650	1585
EST400	414,1	189500	72	38	400/3/50	10 X 2,00	54	2340	8876	1650	1940

### Low Noise Mode

Model	Cooling Capacity <sup>(1)</sup>	Air Flow	Water Flow	Water Pres. Drop	Power Supply	Adsorbed Power	SPL 10m f.f. <sup>(2)</sup>	Dimensions (Vertical Air Flow)			Net Weight
	[kW]	[m³/h]	[m³/h]	[kPa]	[V/Ph/Hz]	[kW]	[db(A)]	Length	Width	Height	[Kg]
ELM008	6,8	5200	1,2	26	230/1/50	1 X 0,29	40	820	1336	1030	41
ELM011	10,3	4700	1,8	51	230/1/50	1 X 0,29	40	820	1336	1030	53
ELM015	13,9	10400	2,4	47	230/1/50	2 X 0,29	43	820	2236	1030	82
ELM018	17,9	9800	3,1	36	230/1/50	2 X 0,29	43	820	2236	1030	94
ELM027	27,0	14700	4,7	46	230/1/50	3 X 0,29	44	820	3136	1030	139
ELT040	36,9	15400	6,4	43	400/3/50	2 X 0,48	43	1250	2866	1070	173
ELT047	44,5	21000	7,7	20	400/3/50	3 X 0,33	44	1250	4066	1070	225
ELT055	55,7	23100	9,7	55	400/3/50	3 X 0,48	45	1250	4066	1070	254
ELT065	65,6	32000	11,4	51	400/3/50	4 X 0,48	46	1250	5266	1070	302
ELT085	80,8	28800	14	21	400/3/50	4 X 0,48	46	1250	5266	1070	416
ELT100	96,7	40800	16,8	35	400/3/50	3 X 0,83	41	1620	5276	1650	763
ELT130	128,7	62800	22,4	21	400/3/50	4 X 1,23	44	2340	3926	1650	756
ELT160	158,2	65200	27,5	11	400/3/50	4 X 1,23	44	1620	6826	1650	1045
ELT210	212,3	89100	36,9	50	400/3/50	6 X 1,23	46	2340	5576	1650	1180
ELT270	277,5	118800	48,2	15	400/3/50	8 X 1,23	47	2340	7226	1650	1585
ELT350	351,0	148500	61	28	400/3/50	10 X 1,23	47	2340	8876	1650	1940

(1) Capacities referred at Tair IN = 35°C; T water IN = 45°C; T water OUT = 40°C

Fluid pure water / Slm zero meter

(2) Sound pressure level @ 10 m free field, in accordance with EN13487

# Ensuring The High Availability Of Mission-Critical Data And Applications.

**Emerson Network Power**, a business of Emerson (NYSE:EMR), is the global leader in enabling Business-Critical Continuity™. The company is the trusted source for custom, adaptive and ultra-reliable solutions that enable and protect its customers' business-critical technology infrastructures. Backed by the largest global services organization in the industry, Emerson Network Power offers a full range of innovative power, precision cooling, connectivity and embedded products and services for computer, communications, healthcare and industrial systems. Key product brands within the Emerson Network Power family include Liebert, Knürr, ASCO, Astec, Lorain.

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