

■ Precision Cooling for  
Business-Critical Continuity

Liebert Hiross HPC-W  
*280-1200 kW Water-cooled chillers*





After Montreal and Kyoto protocols, recently renewed, the air-conditioning world is constantly researching and developing new refrigerants and above all new, more and more efficient and reliable machines, in order to reduce the energy consumption and thus the level of CO<sub>2</sub> produced and discharged into the environment.

With over 40 years of experience on energy efficiency, **Emerson Network Power** confirms its mission even with **Liebert Hiross Matrix**, distinguishing itself for an efficiency on the top of the market and for a high reliability, which guarantee a low operating cost.

**Liebert Hiross Matrix HPC-W is the water-cooled chiller of Matrix family designed for all the mission critical applications, from Data Centres to industries; it is the ideal solution also for residential installations, such as hotels, offices and hospitals.**

## Reliability

It is the first priority in Emerson Network Power Research & Development while designing Mission Critical application chillers.

In fact, Liebert Hiross HPC-W chillers are equipped with 2 independent refrigerant circuits and with highly reliable components, accurately managed by the microprocessor; moreover, before the shipment, each of them is fully tested for some hours in a dedicated climatic room.





## Energy Efficiency

Liebert Hiross Matrix HPC-W is the chiller with EER higher than 5 thanks to high efficiency components and to a design with oversized heat exchangers.

### High efficiency means:

- Lower electrical consumption and consequent cost saving
- A 700-kW chiller with EER 20% higher than a similar one with the same capacity can provide a saving till 23,000 €/year!

## Quietness

Thanks to its innovative layout, Liebert Hiross HPC-W is the most silent chiller in the market and with the lowest vibrations transmitted to the building where it is installed.



Electronic Expansion Valve



Integration microprocessor-compressors



## Main features

- Easy maintenance and component accessibility thanks to its innovative layout
- High precision on water outlet thanks to compressor-microprocessor integration  $\pm 0.2$
- Economiser for very high efficiency
- Electronic expansion valve for high performances and reliability
- Configurations:
  - Heat Pump
  - Heat Recovery (20%-100%)

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## Technical Features

Model		WS1027	WS1031	WS1035	WS1040	WS1047	WS1052	WS1060	WS2033	WS2039	WS2043	WS2048
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### Performances<sup>1</sup>

Cooling capacity	kW	283	319	362	419	480	541	602	341	402	445	485
Compressor power input	kW	58	66	72	85	97	113	124	73	83	96	101
Unit EER	---	4,88	4,84	5,04	4,91	4,94	4,78	4,87	4,67	4,83	4,62	4,80

### Performances<sup>2</sup> with ECO

Cooling capacity	kW	301	345	382	456	511	581	638	361	434	471	528
Compressor power input	kW	59	69	73	89	99	118	127	74	87	98	106
Unit EER	---	5,11	5,03	5,24	5,13	5,18	4,94	5,04	4,86	4,98	4,81	4,96
Number of refig circuits	#	1	1	1	1	1	1	1	2	2	2	2
Base version SPL3	dB(A)	76,5	77,0	77,5	76,5	76,0	77,0	77,0	73,0	74,0	74,0	77,0
Base version PWL4	dB(A)	94,0	94,5	95,0	94,5	94,0	95,0	95,0	91,0	92,0	92,0	95,5
Low-Noise version SPL3	dB(A)	68,0	69,0	69,0	69,0	68,0	69,0	69,0	65,0	65,0	66,0	68,0
Low-Noise version PWL4	dB(A)	86,0	87,0	87,0	87,0	86,0	87,0	87,0	83,0	83,0	84,0	86,5
Diameter (evaporator side)	DN-inch	DN125-5"-141,3 VICT.			DN150-6"-168,3 VICT.			DN125-5"-141,3 VICT.		DN150-6"-168,3 VICT.		
Diameter (condenser side)	DN-inch	DN80-3"GAS F		DN100-4"GAS F		DN125-5"GAS F			DN80-3"GAS F			
Operating weight	kg	2.403	2.509	2.570	3.530	3.557	3.741	3.761	3.238	3.463	3.601	4.311

Model		WS2054	WS2061	WS2065	WS2070	WS2080	WS2087	WS2093	WS2099	WS2105	WS2111	WS2119
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### Performances<sup>1</sup>

Cooling capacity	kW	560	635	675	724	839	893	963	1024	1081	1143	1203
Compressor power input	kW	115	132	138	144	171	184	195	213	227	236	247
Unit EER	---	4,85	4,82	4,89	5,04	4,92	4,86	4,95	4,82	4,77	4,85	4,87

### Performances<sup>2</sup> with ECO

Cooling capacity	kW	596	685	721	765	908	958	1022	1096	1162	1220	1275
Compressor power input	kW	118	137	142	146	178	190	197	219	235	243	253
Unit EER	---	5,07	4,99	5,07	5,25	5,10	5,05	5,19	5,01	4,94	5,03	5,04
Number of refig circuits	#	2	2	2	2	2	2	2	2	2	2	2
Base version SPL3	dB(A)	77,0	78,0	78,0	79,0	78,0	77,5	77,0	77,5	78,0	78,5	78,5
Base version PWL4	dB(A)	95,5	96,5	96,5	97,5	96,5	96,0	95,5	96,0	96,5	97,0	97,0
Low-Noise version SPL3	dB(A)	69,0	70,0	70,0	70,0	70,0	70,0	69,0	70,0	70,0	70,5	70,5
Low-Noise version PWL4	dB(A)	87,5	88,5	88,5	88,5	88,5	88,5	87,5	88,5	88,5	89,0	89,0
Diameter (evaporator side)	DN-inch	DN150-6"-168,3 VICT.		DN200-8"-219,1 VICT.								
Diameter (condenser side)	DN-inch	DN80-3"GAS F		DN100-4"GAS F			DN125-5"GAS F					
Operating weight	kg	4.483	4.816	4.829	5.048	6.793	6.802	6.921	7.114	7.237	7.257	7.277

For Heat Pump and Heat Recovery performances, please refer to Product Documentation

## Dimensions

Model	length [mm]	depth [mm]	height [mm]	Model	length [mm]	depth [mm]	height [mm]
WS1027	4.350	890	2.000	WS2054	4.350	1.750	2.000
WS1031	4.350	890	2.000	WS2061	4.350	1.750	2.000
WS1035	4.350	890	2.000	WS2065	4.350	1.750	2.000
WS1040	4.650	890	2.040	WS2070	4.350	1.750	2.000
WS1047	4.650	890	2.040	WS2080	4.650	1.750	2.040
WS1052	4.650	890	2.040	WS2087	4.650	1.750	2.040
WS1060	4.650	890	2.040	WS2093	4.650	1.750	2.040
WS2033	4.100	1.750	2.000	WS2099	4.650	1.750	2.130
WS2039	4.100	1.750	2.000	WS2105	4.650	1.750	2.130
WS2043	4.100	1.750	2.000	WS2111	4.650	1.750	2.130
WS2048	4.350	1.750	2.000	WS2119	4.650	1.750	2.130



- At the following standard conditions: power supply 400V/3ph/50Hz; refrigerant R134a; evaporator water inlet/outlet 12/7 °C; condenser water inlet/outlet 30/35 °C;
- At the following standard conditions: power supply 400V/3ph/50Hz; refrigerant R134a; with Economiser evaporator water inlet/outlet 12/7 °C; condenser water inlet/outlet 30/35 °C;
- Measured at 1m from the unit; free field conditions; according to ISO 3744; nominal working conditions
- Calculated according to ISO 3744; nominal working conditions

### Emerson Network Power.

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- Inbound Power
- Precision Cooling
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- Site Monitoring and Services