

Reversible heat pump
Air cooled
Outdoor installation
Capacity from 85,8 to 150 kW



ELFOEnergy Magnum HW

ELFOEnergy Magnum HW is a series of high temperature heat pumps, ideal for heating, cooling and hot water solution for centralised systems.
Benefits of ELFOEnergy Magnum HW:

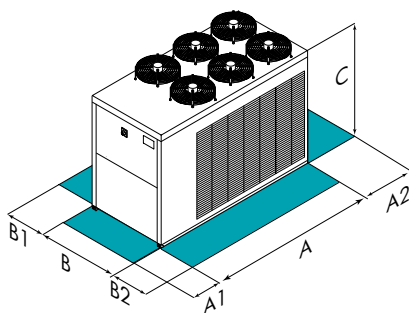
- ▶ **HIGH UNIT RELIABILITY**, thanks to the double refrigerant circuit, to the proven architecture and to the components produced at high volumes.
- ▶ **EXTENDED OPERATING RANGE**: Operation with outdoor air temperature down to -20°C and hot water production at 55°C. Hot water production up to 65°C at outdoor temperatures of down to -13°C.
- ▶ **ADVANCED TECHNOLOGY**: The modulating pumping unit developed by Clivet, consisting of two parallel pumps controlled by an inverter, allows for lower consumption and at the same time ensures operation even under critical conditions. It automatically reduces the water flow rate according to the load required by the system, by controlling the pressure or temperature, and prevents blocks due to overloads in the event of critical conditions.
- ▶ **MODULARITY AND MANAGEMENT OF MORE UNITS IN CASCADE**: The compact construction allows to combine multiple units in confined spaces, realizing a high power system. The control allows to coordinate up to 7 units managing automatically the operation with maximum efficiency.



functions and features



dimensions and clearances



Size – WSAN-XEM HW		35.4	40.4	45.4	50.4	55.4	60.4
A - Length	mm	3400	3400	3400	3400	4400	4400
B - Width	mm	1812	1812	1812	1812	1812	1812
C - Height	mm	1800	1800	1800	1800	1800	1800
A1	mm	1300	1300	1300	1300	1300	1300
A2	mm	750	750	750	750	750	750
B1	mm	1100	1100	1100	1100	1100	1100
B2	mm	1100	1100	1100	1100	1100	1100
Operating weight	kg	1285	1418	1441	1444	1735	1739

The above mentioned data are referred to standard units for the constructive configurations indicated. For all the other configurations, refer to the relative Technical Bulletin.

CAUTION! For trouble-free operation of the unit it is essential to maintain the safety distances indicated by the green areas.

versions and configurations

ENERGY RECOVERY:

- ▶ - Energy recovery: not required (Standard)
- ▶ D Partial energy recovery

technical data

Size – WSAN-XEM HW			35.4	40.4	45.4	50.4	55.4	60.4
▶ Cooling capacity (EN14511:2013)	(1)	kW	85,8	98,3	110	118	131	150
Total power input (EN14511:2013)	(1)	kW	31,5	35,4	37,5	41,7	48,4	54,8
EER (EN 14511:2013)	(1)	-	2,73	2,78	2,93	2,83	2,71	2,73
SEER	(4)	-	2,93	3,35	3,50	3,31	3,28	3,09
▶ Heating capacity (EN14511:2013)	(2)	kW	109	123	134	144	165	185
Total power input (EN14511:2013)	(2)	kW	31,8	34,9	37,9	41,6	48,2	54,5
COP (EN 14511:2013)	(2)	-	3,43	3,52	3,53	3,45	3,42	3,39
Refrigeration circuits		Nr				2		
No. of compressors		Nr				4		
Type of compressors		-				SCROLL		
Standard airflow		l/s	16000	15567	15567	15567	20733	20733
Water flow-rate (User Side)		l/s	4,10	4,70	5,30	5,70	6,30	7,20
Standard power supply		V				400/3/50+N		
Sound pressure level	(3)	dB(A)	67	67	67	67	69	69
Directive ErP (Energy Related Products)								
SCOP - AVERAGE Climate - W35	(4)	-	3,52	3,95	3,90	3,88	3,54	3,64
SCOP - AVERAGE Climate - W55	(4)	-	3,03	3,19	3,15	3,22	3,12	3,04

Notes

- (1) Data compliant to Standard EN 14511:2013 referred to the following conditions: - Internal exchanger water temperature = 12/7°C - Entering external exchanger air temperature = 35°C
- (2) Data compliant to Standard EN 14511:2013 referred to the following conditions: - Internal exchanger water temperature = 40/45°C - Entering external exchanger air temperature = 7°C D.B./6°C W.B.
- (3) The sound levels refer to the unit at full load, in the rated test conditions. The sound pressure level refers to a distance of 1m from the external surface of the units operating in an open field. Measures according to UNI EN ISO 9614-2 regulations, with respect to the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; Outdoor air temperature 35°C

- (4) Data calculated according to the EN 14825:2016 Regulation

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rate heat output ≤70 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions).

accessories

- ▶ **VARYP** VARYFLOW + (2 inverter pumps)
- ▶ **HYG1** Hydronic assembly with 1 ON/OFF pump
- ▶ **HYG2** Hydronic assembly with 2 ON/OFF pumps
- ▶ **VACSUX** User side DHW switching valve
- ▶ **ACC** Storage tank
- ▶ **CCCA** Copper / aluminium condenser coil with acrylic lining
- ▶ **CCCA1** Condenser coil with Aluminium Energy Guard DCC treatment
- ▶ **SFSTR** Disposal for inrush current reduction
- ▶ **MF2** Multi-function phase monitor
- ▶ **CMSC10** Serial communication module for LonWorks supervisor
- ▶ **CMSLWX** LonWorks serial communication module
- ▶ **CMSC8** Serial communication module for BACnet supervisor
- ▶ **BACX** BACnet serial communication module
- ▶ **CMSC9** Serial communication module for Modbus supervisor
- ▶ **CMMBX** Serial communication module for supervisor (Modbus)
- ▶ **PFCP** Power factor correction capacitors (cosfi > 0.9)
- ▶ **PGFC** Finned coil protection grill
- ▶ **PGFCX** Finned coil protection grill
- ▶ **MHP** High and low pressure gauges
- ▶ **MHPX** High and low pressure gauges
- ▶ **IFWX** Steel mesh strainer on the water side
- ▶ **RCTX** Remote control
- ▶ **AVIBX** Anti-vibration mount support

Key to symbols:

- Accessories separately supplied