

Multifunction reversible heat pump
 Air cooled
 Outdoor installation
Capacity from 50 to 227 kW

HYDRONIC

ELFOEnergy Magnum MF

The **ELFOEnergy Magnum Multifunction** pumps are high efficiency packaged units for small and medium-sized applications in the services sector that **can generate thermal and cooling energy simultaneously and independently**.

Designed for outdoor installation, they ensure extremely high efficiency levels during the entire operating cycle thanks to the combination of continuous capacity modulation, which adapts the capacity supplied to the actual energy demand required by the system, and energy recovery, which recovers up to 100% of the capacity supplied, further increasing efficiency.

ELFOEnergy Magnum Multifunction is available in the two EXCELLENCE and PREMIUM versions. The EXCELLENCE version offers the highest energy efficiency both during the seasonal cycle and under full load conditions. The PREMIUM version provides excellent performance under partial load conditions, but has a compact design which gives it an additional competitive edge.

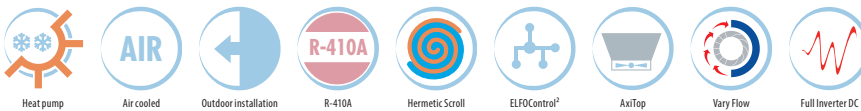
Benefits of ELFOEnergy Magnum Multifunction:

- ▶ **HIGHLY SILENT OPERATION:** The brand new AxiTop diffuser creates ideal air distribution: it aerodynamically decelerates the flow and converts most of its kinetic energy into static pressure, thereby achieving lower noise levels and absorbing less energy.
- ▶ **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.

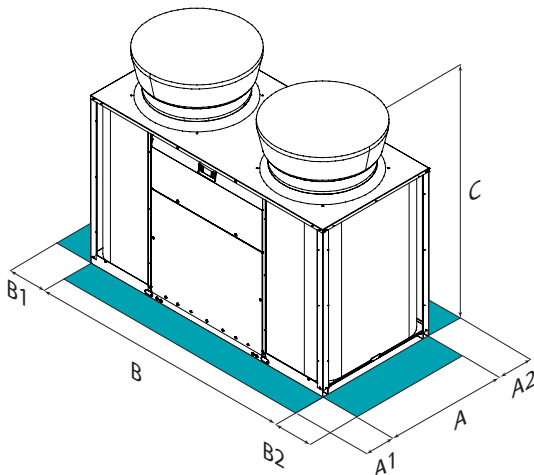
DC Inverter



functions and features



dimensions and clearances



Size – WSAN-XIN MF		18.2	20.2	25.2	30.2	35.2	40.2	48.2	55.2	60.2	65.3	70.4	80.4	85.4
A - Length	mm	2400	2400	2400	2400	3200	3200	4025	4025	4025	4025	5025	5025	5025
B - Width	mm	1100	1100	1100	1100	2200	2200	2200	2200	2200	2200	2200	2200	2200
C - Height	mm	1520	1520	1770	1770	1420	1420	1805	1805	1805	1805	1805	1805	1805
A1	mm	800	800	800	800	1000	1000	1000	1000	1000	1000	1000	1000	1000
A2	mm	800	800	800	800	700	700	700	700	700	700	700	700	700
B1	mm	800	800	800	800	800	800	800	800	800	800	800	800	800
B2	mm	800	800	800	800	800	800	800	800	800	800	800	800	800

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:

- ▶ **R** Total energy recovery (Standard)

CONFIGURATION:

- ▶ **2T** Configuration for 2-pipe system
- ▶ **4T** Configuration for 4-pipe system

technical data

Size – WSAN-XIN MF			18.2	20.2	25.2	30.2	35.2	40.2	48.2	55.2	60.2	65.3	70.4	80.4	85.4
COOLING 0% - HEATING 100%															
Heating capacity	(1)	kW	55,8	68,0	78,0	92,8	111	127	147	167	187	201	219	240	259
Total power input	(1)	kW	17,2	20,9	24,1	28,7	34,2	39,1	45,4	51,8	57,7	62,2	67,9	74,3	80,1
COP at full load	(1)	-	3,24	3,25	3,24	3,24	3,24	3,24	3,23	3,23	3,23	3,23	3,23	3,23	3,24
COOLING 100% - HEATING 0%															
Cooling capacity	(2)	kW	48,3	57,8	67,9	80,0	94,1	106	123	142	158	170	188	206	220
Total power input	(2)	kW	17,0	20,7	23,8	29,0	35,0	40,5	44,5	52,0	58,2	64,0	67,7	73,6	80,4
EER at full load	(2)	-	2,84	2,79	2,85	2,76	2,69	2,62	2,77	2,73	2,71	2,65	2,77	2,80	2,74
COOLING 100% - HEATING 100%															
Cooling capacity	(3)	kW	49,8	59,6	70,0	82,5	97,0	110	127	146	163	175	193	212	227
Heating capacity	(3)	kW	55,8	68,0	78,0	92,8	111	127	147	167	187	201	219	240	259
Total power input	(3)	kW	14,5	18,1	20,4	25,6	31,0	36,1	37,4	44,6	50,8	56,5	56,8	62,4	69,2
Overall efficiency	(4)	-	7,30	7,06	7,24	6,86	6,70	6,54	7,33	7,02	6,88	6,66	7,27	7,25	7,04
Refrigeration circuits	Nr		2	2	2	2	2	2	2	2	2	2	2	2	2
No. of compressors	Nr		2	2	2	2	2	2	2	2	2	3	4	4	4
Type of compressors	-		INVERTER + ON/OFF SCROLL												
Standard power supply	V		400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N

Notes

- (1) Data refer to the following conditions: internal water exchanger = 40/45°C; outdoor air temperature 7°C D.B. / 6°C W.B.
- (2) Data refer to the following conditions: internal water exchanger = 12/7 °C; outdoor air temperature 35°C
- (3) Data referred to the following conditions: - internal exchanger water (evaporator) = 12/7°C - external exchanger water (condenser) = 40/45°C
- (4) Overall efficiency = (Cooling capacity + Heating capacity) / (Total power input)

PRELIMINARY DATA

accessories

- ▶ **CCCA** Copper / aluminium condenser coil with acrylic lining
- ▶ **CCCA1** Condenser coil with Energy Guard DCC Aluminium
- ▶ **HYG1** Hydronic assembly unit with 1 ON/OFF pump
- ▶ **HYG2** Hydronic assembly with 2 ON/OFF pumps
- ▶ **VARYP** VARYFLOW + (2 inverter pumps)
- ▶ **HYGR1V** Recovery side hydronic unit with 1 inverter pump
- ▶ **VACSR** Total recovery side DHW switching valve
- ▶ **ACC1** Teflon steel storage device (sizes 35.2÷85.4)
- ▶ **CMSC10** Serial communication module to LonWorks supervisor
- ▶ **CMSC8** Serial communication module to BACnet supervisor
- ▶ **CMSC9** Serial communication module to Modbus supervisor
- ▶ **RCTX** Remote control
- ▶ **MHP** High and low pressure gauges
- ▶ **MHPX** High and low pressure gauges
- ▶ **PGFC** Finned coil protection grill
- ▶ **PGFCX** Finned coil protection grill
- ▶ **IFWX** Steel mesh strainer on the water side
- ▶ **PFCP** Power factor correction capacitors (cosfi > 0.9)

Key to symbols:

- Accessories separately supplied