

Water chiller

WSAT-XIN: cooling only
 WSAN-XIN: reversible heat pump
 Air cooled
 Outdoor installation
Capacity from 50 to 238 kW

HYDRONIC

DC Inverter



ELFOEnergy Magnum

The **ELFOEnergy Magnum** heat pumps and liquid chillers are high efficiency packaged units for small and medium-sized applications in the services sector. Designed for outdoor installation, they ensure the highest energy efficiency over the entire operating cycle, especially under load staging conditions that coincide with the unit's longer operating time, thanks to the continuous capacity modulation that adapts the capacity supplied to the actual energy demand required by the system.

ELFOEnergy Magnum 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:

- ▶ **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.

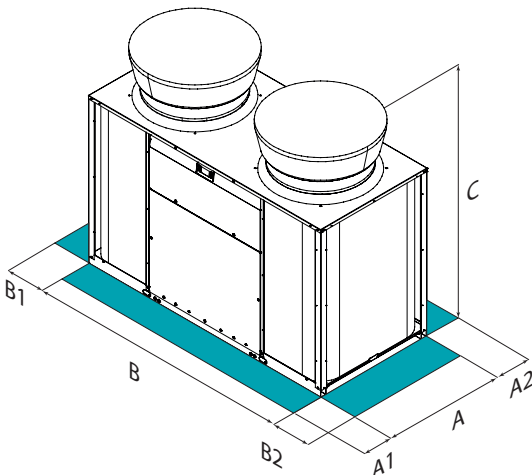


Unit listed on
www.eurovent-certification.com

functions and features



dimensions and clearances



Size – WSAT-XIN	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

Size – WSAN-XIN	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 (WSAT-XIN ONLY):

- ▶ - Energy recovery: not required (Standard)
- ▶ R Total energy recovery

technical data

Size – WSAT-XIN			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 capacity (EN14511:2013)	(1)	kW	49,9	62,7	71,7	84,1	100	117	131	144	161	179	199	220	238
Total power input (EN14511:2013)	(1)	kW	16,1	20,0	22,9	27,0	32,1	37,5	42,4	46,2	51,2	57,7	64,0	70,1	76,1
EER (EN 14511:2013)	(1)	-	3,10	3,14	3,13	3,11	3,12	3,12	3,10	3,12	3,14	3,11	3,11	3,14	3,13
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
Size – WSAN-XIN			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 capacity (EN14511:2013)	(1)	kW	49,6	59,3	69,7	82,2	96,7	109	127	146	162	174	193	211	226
Total power input (EN14511:2013)	(1)	kW	16,9	20,6	23,6	28,8	34,7	40,2	44,1	51,4	57,7	63,5	67,2	73,2	79,9
EER (EN 14511:2013)	(1)	-	2,93	2,87	2,95	2,85	2,78	2,72	2,87	2,83	2,81	2,74	2,87	2,88	2,83
▶ Heating capacity (EN14511:2013)	(2)	kW	56,1	68,5	78,4	93,3	111	127	147	168	187	202	220	242	261
Total power input (EN14511:2013)	(2)	kW	17,5	21,4	24,4	29,1	34,6	39,7	46,0	52,4	58,5	63,1	68,8	75,5	81,5
COP (EN 14511:2013)	(2)	-	3,20	3,21	3,21	3,20	3,21	3,21	3,20	3,20	3,20	3,20	3,20	3,20	3,20
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 calculated in compliance with 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 calculated in compliance with Standard UNI-EN14511:2013 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.

PRELIMINARY DATA

accessories

- ▶ **CCCA** Copper / aluminium condenser coil with acrylic lining
- ▶ **CCCA1** Condenser coil with Energy Guard DCC Aluminum
- ▶ **HYG1** Hydronic assembly unit with 1 ON/OFF pump
- ▶ **HYG2** Hydronic assembly with 2 ON/OFF pumps
- ▶ **VARYP** VARYFLOW + (2 inverter pumps)
- ▶ **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

Key to symbols:

- Accessories separately supplied

- ▶ **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 (cosφ > 0.9)
- WSAT-XIN only:**
- ▶ **HYGR1V** Recovery side hydronic unit with 1 inverter pump
- WSAN-XIN only:**
- ▶ **VACS** Translation not found for code 85723 on language 2