

Water chiller

WSAT-XEE: cooling only
WSAN-XEE: reversible heat pump
Air cooled
Outdoor installation
Capacity from 24 to 73,1 kW

ELFOEnergy Medium

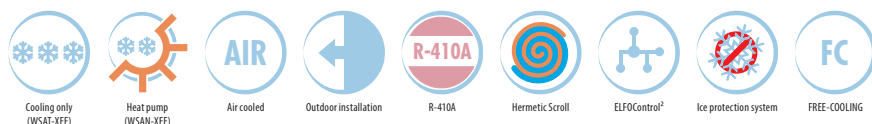


Liquid chillers and heat pumps of the **ELFOEnergy Medium** range, ideal for the small-scale commercial sector, are specifically designed for outdoor installation.

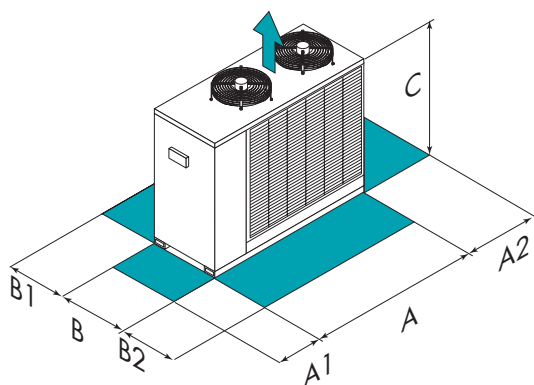
- **High energy efficiency**, especially during operation at partial loads, thanks to the use of two compressors of different capacity operating on a single cooling circuit
- **Ideal for systems with radiant panels or hydronic terminal units**
- **Hydronic assembly supplied as standard**, available with pumps with non-standard available head and/or with double pump
- **Storage tank not normally necessary**, but available for applications where the quantity of water in the system is below limits.



functions and features



dimensions and clearances



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

Size – WSAT-XEE		82	102	122	162	182	222	262	302
A - Length	mm	1771	1771	1771	2012	2012	2012	2406	2406
B - Width	mm	680	680	680	1100	1100	1100	1100	1100
C - Height	mm	1287	1287	1287	1599	1599	1599	1593	1593
A1	mm	700	700	700	700	700	700	700	700
A2	mm	700	700	700	700	700	700	700	700
B1	mm	700	700	700	700	700	700	700	700
B2	mm	700	700	700	700	700	700	700	700
Operating weight	kg	298	303	323	456	469	490	547	561
Size – WSAN-XEE		82	102	122	162	182	222	262	302
A - Length	mm	1771	1771	1771	2012	2012	2012	2406	2406
B - Width	mm	680	680	680	1100	1100	1100	1100	1100
C - Height	mm	1287	1287	1287	1599	1599	1599	1593	1593
A1	mm	700	700	700	700	700	700	700	700
A2	mm	700	700	700	700	700	700	700	700
B1	mm	700	700	700	700	700	700	700	700
B2	mm	700	700	700	700	700	700	700	700
Operating weight	kg	315	320	370	530	550	580	675	690

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.

versions and configurations

LOW TEMPERATURE:

- - Low temperature: not required (Standard)
- **B** Water low temperature

DOUBLE SET POINT:

- - Double set point: not required (Standard)
- **DSPB** Double set point for water low temperature

ENERGY RECOVERY:

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

FREE-COOLING (WSAT-XEE ONLY):

- - FREE-COOLING: not required (Standard)
- **FCD** Direct FREE-COOLING

EXTERNAL SECTION FAN CONSUMPTION REDUCTION (WSAT-XEE ONLY):

- - Device for fan consumption reduction of the external section: not required (Standard)
- **CREFB** Device for fan consumption reduction of the external section, ECOBREEZE type

OPERATION (WSAN-XEE ONLY):

- **OHP** Operation in heat pump (Standard)
- **OHO** Heating-only operation

technical data

Size – WSAT-XEE			82	102	122	162	182	222	262	302
► Cooling capacity (EN 14511:2013)	(1)	kW	24,7	28,7	34,2	40,5	46,4	55,2	65,0	73,1
Total power input (EN 14511:2013)	(1)	kW	9,26	10,7	12,8	14,6	17,1	20,8	24,1	27,2
EER (EN 14511:2013)	(1)	-	2,67	2,67	2,68	2,78	2,72	2,65	2,70	2,69
SEER	(4)	-	3,85	3,84	3,82	3,84	3,84	3,82	3,83	3,83
Refrigeration circuits		Nr	1							
No. of compressors		Nr	2							
Type of compressors			SCROLL							
Standard airflow		l/s	2545	2538	2514	4933	4875	4778	7196	7145
Water flow-rate (User Side)		l/s	1,20	1,30	1,60	1,90	2,20	2,60	3,10	3,40
Useful pump discharge head		kPa	132	126	120	104	88	148	139	131
Standard power supply		V	400/3/50+N							
Sound pressure level (1 m)	(3)	dB(A)	60	60	60	64	64	65	65	65
Size – WSAN-XEE			82	102	122	162	182	222	262	302
► Cooling capacity (EN 14511:2013)	(1)	kW	24,0	28,0	33,2	39,9	46,1	53,7	63,9	72,8
Total power input (EN 14511:2013)	(1)	kW	9,77	11,2	13,4	15,7	18,2	21,7	25,7	29,0
EER (EN 14511:2013)	(1)	-	2,46	2,49	2,48	2,55	2,54	2,47	2,49	2,51
SEER	(4)	-	3,47	3,66	3,56	3,28	3,46	3,55	3,65	3,65
► Heating capacity (EN 14511:2013)	(2)	kW	28,4	32,5	37,0	45,1	52,6	61,1	71,5	82,8
Total power input (EN 14511:2013)	(2)	kW	9,42	10,7	12,1	14,5	17,0	19,7	22,8	26,2
COP (EN 14511:2013)	(2)	-	3,01	3,04	3,06	3,11	3,10	3,10	3,13	3,16
Refrigeration circuits		Nr	1							
No. of compressors		Nr	2							
Type of compressors			SCROLL							
Standard airflow		l/s	2553	2545	2514	4965	4902	4778	7196	6971
Water flow-rate (User Side)	(1)	l/s	1,10	1,30	1,60	1,90	2,20	2,50	3,00	3,40
Useful pump discharge head	(1)	kPa	136	129	125	107	89	150	141	131
Standard power supply		V	400/3/50+N							
Sound pressure level		dB(A)	60	60	60	64	64	65	65	65
Directive ErP (Energy Related Products)										
ErP Energy Class - AVERAGE Climate - W35		-	A+	A+	A+	A+	A+	A+	A+	A+
SCOP - AVERAGE Climate - W35	(4)	-	3,33	3,48	3,60	3,22	3,27	3,20	3,28	3,35

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 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.
- (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 (rated heat output ≤70 kW at specified reference conditions), the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 2016/2281, also known as Ecodesign Lot21.

accessories

- **CCCA** Copper / aluminium condenser coil with acrylic lining
- **CCCA1** Condenser coil with Aluminium Energy Guard DCC treatment
- **1PUR** Single-pump with reduced available head
- **1PUM** Single-pump with larger available head
- **2PUS** Standard double pump
- **2PUR** Double pump with reduced available head (sizes 222÷302)
- **2PUM** Double pump with larger available head
- **ACC1** Teflon steel storage device
- **IFWX** Steel mesh strainer on the water side
- **MHP** High and low pressure gauges
- **MHPX** High and low pressure gauges
- **AMRX** Rubber antivibration mounts
- **PGCEX** Coil protection grilles outdoor air side

Key to symbols:

- Accessories separately supplied

- **SFSTR4N** Disposal for inrush current reduction, for unit 400/3/50+N
- **PM** Phase monitor
- **PMX** Phase monitor
- **RCMRX** Remote control via microprocessor control
- **CMMBX** Serial communication module to supervisor (Modbus)
- **CMSC7** Modbus/LON WORKS serial converter kit
- **CMSC9** Serial communication module for Modbus supervisor
- **PCDWX** Daily and weekly programming clock
- **SCP3X** Set point compensation according to the outside enthalpy
- **CLSE** Free contacts for alarm
- **PFCP** Power factor correction capacitors (cosφ > 0.9)
- WSAT-XEE only:**
- **SPCX** Set-point compensation with outdoor air temperature probe