

### Water chiller

WSAT-XSC2: cooling only  
 WSAN-XSC2: reversible heat pump  
 Air cooled  
 Outdoor installation  
**Capacity from 239 to 665 kW**

## SPINchiller<sup>2</sup>



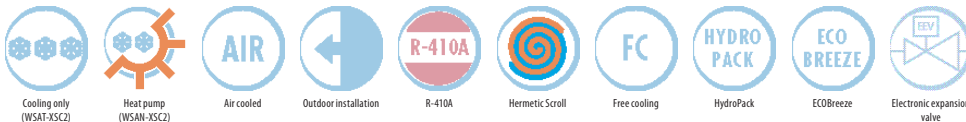
**SPINchiller<sup>2</sup>** water chillers and heat pumps provide the highest seasonal efficiency. They're designed to be installed outdoor and feature uneven scroll compressors mounted in the same circuit, electronic expansion valves and high efficiency plate type evaporators. SPINchiller<sup>2</sup> shows an unmatched seasonal efficiency ESEER and is available in two versions: EXCELLENCE and PREMIUM. The standard version EXCELLENCE offers the highest efficiency both at full and at part load. Also the PREMIUM version offers high efficiency at part load but favour also the compact dimensions being therefore extremely competitive. Thanks to its features, SPINchiller<sup>2</sup> offers:

- ▶ **selfadaptivity in different load conditions**, thanks to high number of capacity steps and to the management logic that has been developed to increase the efficiency and reduce the wear of the compressors;
- ▶ **high unit reliability**, thanks to the double refrigerant circuit, to the proven architecture and to the components produced at high volumes;
- ▶ **low noise**, thanks to the sizing of the coil and to the high efficiency fans having "winglets" blade profiles;
- ▶ **easy and quick installation**, thanks to the quick connections to the system, to the easy electrical connections and to the complete functional test undertaken before the shipment. The units can also be supplied with inbuilt pumps, desuperheater and storage tank, allowing all the main components of the plant to be in the unit.

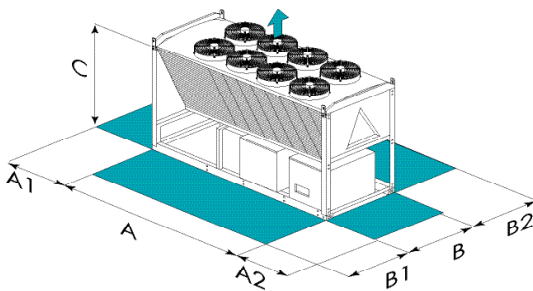


Unit listed on  
[www.eurovent-certification.com](http://www.eurovent-certification.com)

### 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-XSC2			90D	100D	110D	120D	140D	160D	170E	180F	200F	220F	240F
SC-EXC	A - Length	mm	4750	5800	5800	5800	4750	4750	4750	4750	5800	5800	5800
SC-EXC	B - Width	mm	1115	1171	1171	1171	2233	2233	2233	2233	2288	2288	2288
SC-EXC	C - Height	mm	2241	2241	2241	2241	2276	2276	2276	2276	2276	2276	2276
SC-EXC	A1	mm	750	700	700	700	700	700	700	700	700	700	700
SC-EXC	A2	mm	750	700	700	700	1911	1911	1911	1911	1911	1911	1911
SC-EXC	B1	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
SC-EXC	B2	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
SC-EXC	Operating weight	kg	1703	2142	2206	2374	2955	3078	3388	3575	4039	4284	4304
SC-PRM	Operating weight	kg	1572	1783	1818	2202	2286	2394	2895	3081	3409	3479	3627

Size – WSAN-XSC2			80D	90D	100D	110D	120D	140D	160D	170E	180F	200F	220F	240F
SC-EXC	A - Length	mm	2850	2850	3800	3800	3800	4750	4750	5800	5800	5800	5800	5800
SC-EXC	B - Width	mm	2233	2233	2233	2233	2233	2233	2233	2233	2233	2233	2233	
SC-EXC	C - Height	mm	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	
SC-EXC	A1	mm	700	700	700	700	700	700	700	700	700	700	700	
SC-EXC	A2	mm	2041	2041	2041	2041	2041	1911	1911	1911	1911	1911	1911	
SC-EXC	B1	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	
SC-EXC	B2	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	
SC-EXC	Operating weight	kg	1877	2078	2502	2658	2707	3608	3765	4591	4792	4972	5216	
SC-PRM	Operating weight	kg	1805	2133	2325	2399	2362	2466	2512	-	-	-	-	

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.

SC-EXC Compressors soundproofing (SC)-Excellence

SC-PRM Compressors soundproofing (SC)-Premium

## versions and configurations

### LOW TEMPERATURE:

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

### VERSION:

- ▶ EXC Excellence (Standard)
- ▶ PRM Premium

### ENERGY RECOVERY:

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

### ACOUSTIC CONFIGURATION:

- ▶ SC Acoustic configuration with compressor soundproofing (Standard)
- ▶ EN Extremely low noise acoustic configuration

### EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

- ▶ CREFF Device for consumption reduction of the external section at variable speed (phase-cutting) (Standard)
- ▶ CREFB Device for consumption reduction of the external section ECOBREEZE fans

### DOUBLE SET POINT:

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

### FREE COOLING (WSAT-XSC2 ONLY):

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

## accessories

- ▶ 1PUS Standard pump
- ▶ 1PU1SB Standard pump with emergency pump
- ▶ 2PM Hydropack with 2 pumps
- ▶ 3PM Hydropack with 3 pumps
- IFWX Water steel mesh strainer
- ▶ A400 400-litre storage tank
- ▶ A400RPS 400-litre storage tank with built-in primary circuit
- ▶ A500 500-litre storage tank
- ▶ A500RPS 500-litre storage tank with primary circuit onboard
- ▶ CCCA Copper / aluminium condenser coil with acrylic lining
- ▶ CCCA1 Copper / aluminium condenser coil with Energy Guard DCC Aluminium
- AMMX Spring antivibration mounts
- ▶ PGFC Finned coil protection grill
- ▶ MF2 Multi-function phase monitor
- RCMRX Remote control via microprocessor control
- ▶ CMSC8 Serial communication module to BACnet supervisor
- ▶ CMSC10 Serial communication module to LonWorks supervisor
- ▶ CMSC9 Serial communication module to MODBUS supervisor
- ▶ SCP4 Compensation of set point with signal 0-10 V
- ▶ SPC2 Set point compensation with outside temperature probe
- ▶ CLSCLR Free contacts compressor state and local / remote management
- ▶ PFPC Power factor correction capacitors (cosφ > 0.9)
- ▶ SFSTR Disposal for inrush current reduction
- ▶ RE-20 Electrical panel antifreeze protection for min.outdoor temperature up to -20°C

- ▶ RE-25 Electrical panel antifreeze protection for min.outdoor temperature up to -25°C
- ▶ RE-30 Electrical panel antifreeze protection for min.outdoor temperature up to -30°C
- ▶ RE-35 Electrical panel antifreeze protection for min.outdoor temperature up to -35°C
- ▶ RE-39 Electrical panel antifreeze protection for min.outdoor temperature up to -39°C
- ▶ FANQE Electrical panel ventilation
- ▶ MHP High and low pressure gauges
- ▶ SDV Compressor discharge and suction shut-off valve

### WSAT-XSC2 only:

- ▶ CONTA2 Energy meter
- ▶ ECS ECOSHARE function for the automatic management of a group of units

### WSAN-XSC2 only:

- ▶ A280 280-litre storage tank
- ▶ A280RPS 280-litre storage tank with built-in primary circuit
- ▶ A450 450-litre storage tank
- ▶ A450RPS 450-litre storage tank with built-in primary circuit
- ▶ PGCCH Anti-hail protection grilles
- ▶ PM Phase monitor
- ▶ SPC1 Set point compensation with 4-20 mA signal
- ▶ SPC3 Set point compensation according to the outside enthalpy
- ▶ ABU Flush hydraulic connections
- ▶ MSL Master-slave operation
- ▶ OHE Limit extension kit in heating up to -10°C (W.B.)

### Key to symbols:

- Accessories supplied separately.

## technical data












Size – WSAT-XSC2			90D	100D	110D	120D	140D	160D	170E	180F	200F	220F	240F	
Eurovent	(*)													
SC-EXC	▶ Cooling capacity (EN14511:2011)	(1)	kW	259	283	313	354	394	440	478	521	566	615	665
SC-EXC	Total power input (EN14511:2011)	(1)	kW	83,1	91,2	101	113	127	141	154	167	182	196	213
SC-EXC	EER (EN 14511:2011)	(1)	-	3,12	3,1	3,11	3,12	3,11	3,13	3,11	3,12	3,11	3,14	3,12
SC-EXC	ESEER	(1)	-	4,52	4,49	4,41	4,18	4,49	4,32	4,48	4,49	4,42	4,4	4,22
SC-PRM	Cooling capacity (EN14511:2011)	(1)	kW	239	262	291	329	369	410	443	479	524	572	611
SC-PRM	Total power input (EN14511:2011)	(1)	kW	87,8	95,8	107	122	135	151	162	176	191	211	226
SC-PRM	EER (EN 14511:2011)	(1)	-	2,72	2,74	2,71	2,7	2,74	2,71	2,73	2,72	2,74	2,71	2,71
SC-PRM	ESEER	(1)	-	4,16	4,14	4,07	3,95	3,88	3,71	4,11	4,18	4,04	4	4,07
SC-EXC	Sound pressure level	(2)	dB(A)	72	72	73	73	74	74	74	74	74	74	75
SC-PRM	Sound pressure level	(2)	dB(A)	70	72	72	73	72	73	74	74	74	74	75
Refrigerant circuits			Nr	2	2	2	2	2	2	2	2	2	2	2
No. of compressors			Nr	4	4	4	4	4	4	5	6	6	6	6
Type of compressors			-	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
Standard power supply		V		400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50

### Notes

- (\*) The programme applies to air-cooled water chillers up to 600 kW and water-cooled water chillers up to 1500 kW.
- (1) Data calculated in compliance with Standard EN 14511:2011 referred to the following conditions: Internal exchanger water temperature = 12/7°C; External exchanger air temperature = 35°C
- (2) Sound levels refer to full load units, in test nominal conditions. The sound pressure level refers to 1 m. from the unit outer surface operating in open field. Measurements are carried out according to the UNI EN ISO 9614-2 standard, in compliance with the EUROVENT 8/1 certification. Data referred to the following conditions: Internal exchanger water = 12/7°C; Outdoor air temperature 35°C

- (3) Data calculated in compliance with Standard EN 14511:2011 referred to the following conditions: Internal exchanger water temperature = 40/45°C; External exchanger air temperature = 7°C D.B./6°C W.B.

- SC-EXC Compressors soundproofing (SC)-Excellence  
SC-PRM Compressors soundproofing (SC)-Premium

Size – WSAN-XSC2			80D	90D	100D	110D	120D	140D	160D	170E	180F	200F	220F	240F
<b>Eurovent</b> (*)														-
SC-EXC	▶ Cooling capacity (EN14511:2011)	(1) kW	203	242	264	290	328	371	418	454	485	532	570	620
SC-EXC	Total power input (EN14511:2011)	(1) kW	75,9	90,1	98,3	108	121	137	154	166	180	197	213	231
SC-EXC	EER (EN 14511:2011)	(1) -	2,68	2,69	2,69	2,69	2,71	2,71	2,71	2,74	2,69	2,7	2,68	2,68
SC-EXC	ESEER	(1) -	4,21	4,28	4,27	4,15	3,97	4,11	3,91	4,26	4,19	4,15	4,14	3,98
SC-EXC	▶ Heating capacity (EN14511:2011)	(3) kW	231	281	310	344	386	432	490	521	567	628	682	736
SC-EXC	Total power input (EN14511:2011)	(3) kW	72,1	88,5	96,7	108	121	134	151	162	177	194	209	227
SC-EXC	COP (EN 14511:2011)	(3) -	3,2	3,18	3,21	3,19	3,19	3,21	3,25	3,21	3,21	3,23	3,26	3,24
SC-EXC	Refrigerant circuits	Nr	2	2	2	2	2	2	2	2	2	2	2	2
SC-EXC	No. of compressors	Nr	4	4	4	4	4	4	4	5	6	6	6	6
SC-EXC	Type of compressors	-	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
SC-EXC	Standard power supply	V	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
SC-PRM	▶ Cooling capacity (EN14511:2011)	(1) kW	194	224	250	267	316	354	396	-	-	-	-	-
SC-PRM	Total power input (EN14511:2011)	(1) kW	77,9	89,8	100,3	112	127	142	160	-	-	-	-	-
SC-PRM	EER (EN 14511:2011)	(1) -	2,49	2,5	2,49	2,38	2,49	2,49	2,48	-	-	-	-	-
SC-PRM	ESEER	(1) -	3,96	3,94	3,96	3,57	3,62	3,6	3,36	-	-	-	-	-
SC-PRM	▶ Heating capacity (EN14511:2011)	(3) kW	220	261	281	306	350	394	433	-	-	-	-	-
SC-PRM	Total power input (EN14511:2011)	(3) kW	70,6	85,9	93,1	100,7	117	131	144	-	-	-	-	-
SC-PRM	COP (EN 14511:2011)	(3) -	3,11	3,04	3,02	3,04	2,99	3,01	3	-	-	-	-	-
SC-PRM	Refrigerant circuits	Nr	2	2	2	2	2	2	2	-	-	-	-	-
SC-PRM	No. of compressors	Nr	4	4	4	4	4	4	4	-	-	-	-	-
SC-PRM	Type of compressors	-	scroll	scroll	scroll	scroll	scroll	scroll	scroll	-	-	-	-	-
SC-PRM	Standard power supply	V	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	-	-	-	-	-
SC-EXC	Sound pressure level	(2) dB(A)	73	74	74	75	75	76	76	76	76	77	77	77
SC-PRM	Sound pressure level	(2) dB(A)	70	72	72	72	73	73	73	-	-	-	-	-

**Notes**

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