

### Water chiller

WSH-XSC3: cooling only  
 WSHN-XSC3: reversible heat pump  
 Water cooled  
 Indoor installation  
**Capacity from 211 to 731 kW**

## SPINchiller<sup>3</sup>

The **WSH-XSC3** liquid chiller units and **WSHN-XSC3** water source heat pump units for indoor installation belong to the SPINchiller<sup>3</sup> family, and are thus distinguished for their excellent energy efficiency, modularity and reliability, thanks to the high degree of industrialisation distinguishing all products of the family.

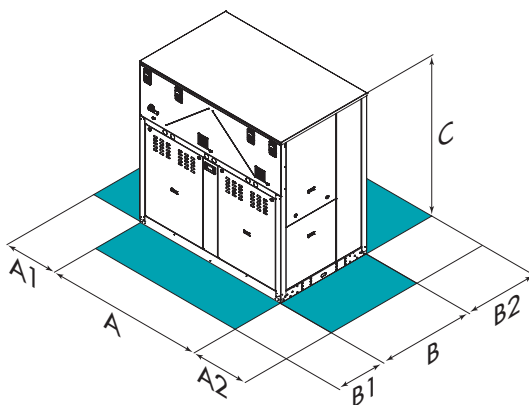
- ▶ The **EFFICIENCY** of these products increases as the load decreases, thanks to the modular technology characterising the compressors and cutting-edge heat exchange solutions, yet they guarantee top-ranking performances in their category even with maximum load conditions. The high seasonal efficiency of SPINchiller<sup>3</sup> products and their precision in satisfying the requested load guarantee maximum comfort at all times with excellent performance, resulting in considerably lower energy consumption.
- ▶ The high seasonal efficiency of **MODULARITY** offers an effective solution for large-size central heating plants. The possibility of controlling in cascade mode SPINchiller<sup>3</sup> units having different functions (chiller or heat pump) allows for satisfying demands of up to 5 MW, with guaranteed superior efficiency, reliability and construction quality compared to most solutions available on the market.
- ▶ The extensive range of options available with SPINchiller<sup>3</sup>, including the pumping units mounted on the product – even inverter-driven – make the product suitable for installation in any system.
- ▶ The entire series is Eurovent-certified.



### functions and features



### dimensions and clearances



Size – WSH-XSC3		70.4	75.4	80.4	85.4	90.4	100.4	110.4	120.4	140.4	160.4	180.4	200.4	220.4	240.4
A - Length	mm	2234	2234	2234	2234	2234	2234	2234	2234	2234	2234	2234	2234	2234	2234
B - Width	mm	1132	1132	1132	1132	1132	1132	1132	1460	1460	1460	1460	1460	1460	1460
C - Height	mm	2210	2210	2210	2210	2210	2210	2210	2210	2210	2210	2210	2210	2210	2210
A1	mm	500	500	500	500	500	500	500	500	500	500	500	500	500	500
A2	mm	500	500	500	500	500	500	500	500	500	500	500	500	500	500
B1	mm	800	800	800	800	800	800	800	800	800	800	800	800	800	800
B2	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
EN	Operating weight	kg	1246	1268	1336	1356	1419	1692	1751	1935	2052	2213	2412	2496	2650

Size – WSHN-XSC3		70.4	75.4	80.4	85.4	90.4	100.4	110.4	120.4	140.4	160.4	180.4	200.4	220.4	240.4
A - Length	mm	2234	2234	2234	2234	2234	2234	2234	2234	2234	2234	2234	2234	2234	2234
B - Width	mm	1134	1134	1134	1134	1134	1134	1134	1460	1460	1460	1460	1460	1460	1460
C - Height	mm	2210	2210	2210	2210	2210	2210	2210	2210	2210	2210	2210	2210	2210	2210
A1	mm	500	500	500	500	500	500	500	500	500	500	500	500	500	500
A2	mm	500	500	500	500	500	500	500	500	500	500	500	500	500	500
B1	mm	800	800	800	800	800	800	800	800	800	800	800	800	800	800
B2	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
EN	Operating weight	kg	1242	1264	1322	1343	1406	1583	1651	1924	2013	2121	2291	2411	2537

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.  
 EN Super-silenced (EN)

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

## versions and configurations

### ACOUSTIC CONFIGURATION:

- ▶ **EN** Super-silenced acoustic configuration (Standard)
- ▶ **BN** Basic acoustic configuration

### ENERGY RECOVERY:

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

### LOW TEMPERATURE (WSH-XSC3 ONLY):

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

### OPERATION (WSH-XSC3 ONLY):

- ▶ **OCO** Cooling-only operation (Standard)
- ▶ **OHI** Operation with water circuit change-over
- ▶ **OHO** Heating-only operation

## technical data

Size – WSH-XSC3			70.4	75.4	80.4	85.4	90.4	100.4	110.4	120.4	140.4	160.4	180.4	200.4	220.4	240.4
▶ Cooling capacity (EN14511:2013)	(1)	kW	217	231	248	268	292	319	350	395	449	503	568	623	674	731
Total power input (EN14511:2013)	(1)	kW	46,5	50,3	53,2	58,4	61,8	68,1	75,5	83,6	95,7	108	122	133	146	160
EER (EN 14511:2013)	(1)	-	4,67	4,59	4,65	4,59	4,72	4,68	4,64	4,72	4,69	4,67	4,66	4,67	4,60	4,56
SEER	(4)	-	6,16	6,24	6,18	6,06	6,01	5,73	5,65	5,91	6,04	5,88	5,88	5,89	5,89	5,89
▶ Heating capacity (EN14511:2013)	(2)	kW	249	266	285	309	333	366	401	453	517	578	655	720	780	847
Total power input (EN14511:2013)	(2)	kW	56,8	61,5	64,2	71,5	76,3	83,5	92,6	103	117	131	150	163	180	197
COP (EN 14511:2013)	(2)	-	4,39	4,32	4,44	4,32	4,36	4,38	4,33	4,41	4,42	4,41	4,36	4,41	4,33	4,29
Refrigeration circuits	Nr		2													
No. of compressors	Nr		4													
Type of compressors	-		SCROLL													
Water flow-rate (User Side)	l/s		10,4	11,1	11,9	12,8	14,0	15,3	16,8	18,9	21,5	24,1	27,2	29,9	32,3	35,0
Water flow rate (Source Side)	l/s		12,6	13,4	14,3	15,6	16,9	18,5	20,3	22,8	26,0	29,1	32,9	36,1	39,1	42,5
Standard power supply	V		400/3/50													
EN Sound pressure level	dB(A)		63	64	65	65	65	66	68	68	70	72	71	72	72	73
Size – WSHN-XSC3			70.4	75.4	80.4	85.4	90.4	100.4	110.4	120.4	140.4	160.4	180.4	200.4	220.4	240.4
▶ Cooling capacity (EN14511:2013)	(1)	kW	211	225	242	261	283	313	341	389	443	496	555	610	666	717
Total power input (EN14511:2013)	(1)	kW	48,5	52,6	55,4	60,9	65,6	70,7	78,1	87,3	99,8	112	127	139	153	168
EER (EN 14511:2013)	(1)	-	4,36	4,28	4,36	4,29	4,32	4,42	4,37	4,46	4,44	4,42	4,36	4,38	4,36	4,27
SEER	(4)	-	5,95	5,89	5,84	5,90	5,92	5,65	5,40	5,92	5,90	5,88	5,89	5,88	5,88	5,89
▶ Heating capacity (EN14511:2013)	(2)	kW	244	260	279	302	327	358	393	446	508	570	641	704	771	833
Total power input (EN14511:2013)	(2)	kW	59,0	64,0	67,6	74,3	80,3	86,5	94,9	107	121	135	156	170	187	206
COP (EN 14511:2013)	(2)	-	4,13	4,06	4,13	4,06	4,08	4,14	4,15	4,18	4,19	4,20	4,11	4,15	4,13	4,04
Refrigeration circuits	Nr		2													
No. of compressors	Nr		4													
Type of compressors	-		SCROLL													
Water flow-rate (User Side)	l/s		10,1	10,8	11,6	12,5	13,6	15,0	16,4	18,7	21,2	23,8	26,6	29,3	31,9	34,4
Water flow rate (Source Side)	l/s		12,4	13,2	14,2	15,4	16,6	18,3	20,0	22,7	25,9	29,0	32,5	35,7	39,1	42,2
Standard power supply	V		400/3/50													
EN Sound pressure level	dB(A)		63	64	65	65	65	66	68	68	70	72	71	72	72	73
<b>Directive ErP (Energy Related Products)</b>																
SCOP - AVERAGE Climate - W35	(4)	-	6,09	6,09	6,13	6,05	5,89	6,22	6,07	-	-	-	-	-	-	-
SCOP - AVERAGE Climate - W55	(4)	-	4,72	4,67	4,72	4,67	4,41	4,77	4,70	-	-	-	-	-	-	-

### Notes

- (1) Data referred to the following conditions: Internal exchanger water = 12/7°C. External exchanger water = 30/35°C. Performance data calculated in accordance with UNI-EN14511:2013
- (2) Data calculated in compliance with Standard EN 14511:2013 referred to the following conditions: Internal exchanger water temperature = 40/45°C. Entering external exchanger air temperature = 10/7°C
- (3) Sound levels refer to full load units, in test nominal conditions. The sound pressure level refers to 1 m. from the standard 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. external exchanger water = 30/35 °C
- (4) Data calculated according to the EN 14825:2016 Regulation

EN Super-silenced (EN)

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

- ▶ **AP** Rear water fittings
  - ▶ **SDV** Cutoff valve on compressor supply and return
  - ▶ **MHP** High and low pressure gauges
  - ▶ **MF2** Multi-function phase monitor
  - ▶ **SFSTR** Disposal for inrush current reduction (sizes 70.4÷160.4)
  - ▶ **RCMRX** Remote control via microprocessor control
  - ▶ **ACIE** Antifreeze heater for internal exchanger protection
  - ▶ **EHCS** Source side antifreeze electric heaters
  - ▶ **CMSC10** Serial communication module for LonWorks supervisor
  - ▶ **CMSC9** Serial communication module for Modbus supervisor
  - ▶ **CMSC8** Serial communication module for BACnet supervisor
  - ▶ **SCP4** Set-point compensation with 0-10 V signal
  - ▶ **SPC2** Set-point compensation with outdoor air temperature probe
  - ▶ **CSVX** Couple of manually operated shut-off valves
  - ▶ **IFWX** Steel mesh strainer on the water side
  - ▶ **PFCP** Power factor correction capacitors (cosfi > 0.9)
  - ▶ **AVIBX** Anti-vibration mount support
  - ▶ **CONTA2** Energy meter
  - ▶ **RPRPDI** Refrigerant leak detector with pump down function in the casing
  - ▶ **ECS** ECOSHARE function for the automatic management of a group of units
  - ▶ **PSX** Mains power supply
- WSH-XSC3 only:**
- ▶ **HYGC1** Cooling side hydronic assembly with 1 ON/OFF pump
  - ▶ **HYGC2** Cooling side hydronic assembly with 2 ON/OFF pumps
  - ▶ **VS2MC** Cooling side 2-way modulating valve
  - ▶ **VS2MCX** Cooling side 2-way modulating valve
  - ▶ **VS3MCX** Cooling side 3-way modulating valve
  - ▶ **VARYC** VARYFLOW + (cooling side 2 inverter pumps)
  - ▶ **2PMC** Hydropack cooling side with 2 pumps
  - ▶ **V2MCP** Cooling side 2-way modulating valve for high DP
- ▶ **V2MCPX** Cooling side 2-way modulating valve for high DP
  - ▶ **HYGH1** Heating side hydronic assembly with 1 ON/OFF pump
  - ▶ **HYGH2** Heating side hydronic assembly with 2 ON/OFF pumps
  - ▶ **VARYH** VARYFLOW + (heating side 2 inverter pumps)
  - ▶ **VS2MH** Heating side 2-way modulating valve
  - ▶ **VS2MHX** Heating side 2-way modulating valve
  - ▶ **VS3MHX** Heating side 3-way modulating valve
  - ▶ **2PMH** Hydropack heating side with 2 pumps
  - ▶ **V2MHP** Heating side 2-way modulating valve for high DP
  - ▶ **V2MHPX** Heating side 2-way modulating valve for high DP
  - ▶ **IVFDT** Inverter driven variable flow-rate cooling side control depending on the temperature differential
  - ▶ **IVFDTH** Inverter driven variable flow-rate heating side control depending on the temperature differential
- WSHN-XSC3 only:**
- ▶ **IVFDT** Inverter driven variable flow-rate user side control depending on the temperature differential
  - ▶ **HYGU1** User side hydronic assembly with 1 ON/OFF pump
  - ▶ **HYGU2** User side hydronic assembly with 2 ON/OFF pumps
  - ▶ **VARYU** VARYFLOW + (user side 2 inverter pumps)
  - ▶ **HYP2U** Hydropack user side with 2 pumps
  - ▶ **HYGS1** Source side hydronic assembly with 1 ON/OFF pump
  - ▶ **HYGS2** Source side hydronic assembly with 2 ON/OFF pumps
  - ▶ **VARYS** VARYFLOW + (source side 2 inverter pumps)
  - ▶ **VS2M** Source side 2-way modulating valve
  - ▶ **VS2MX** Source side 2-way modulating valve
  - ▶ **VS3MX** Source side 3-way modulating valve
  - ▶ **HYP2S** Hydropack source side with 2 pumps
  - ▶ **V2MSP** Source side 2-way modulating valve for high DP
  - ▶ **V2MSPX** Source side 2-way modulating valve for high DP
  - ▶ **VACSUX** User side DHW switching valve (sizes 180.4÷240.4)

### Key to symbols and notes

- Accessories separately supplied

For compatibility between the various accessories, please refer to the dedicated Technical Bulletin or our website in the Systems and Products section.

