



SPINchiller⁴

Capacity from 61 to 320 tons

Preliminary data

61 – 125 tons available from November this year

Larger capacities up to 320 tons available in Q2 2025

Air-cooled Heat Pump with inverter rotary/scroll compressors

- Scroll compressors, EC fans, two circuits
- Refrigerant R32 – GWP = 675
- Hot water up to 131F, operation down to 5 F
- Three acoustic configurations
- Modular operation management up to 8 units
- Power supply 230V, 460V, 575V

functions and features



versions and configurations

VERSION:

- EXC** Excellence (Standard)
PRM Premium

EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

- CREFB** Device for fan consumption reduction of the external section, ECOBREEZE type (Standard)

ENERGY RECOVERY:

- Energy recovery: not required (Standard)
D Partial energy recovery
R Total energy recovery (WSAT-YSC4 only)

EVAPORATOR

- EVPH** Plate heat exchanger (Standard)
EVFTP Shell and tube evaporator PED test

ACOUSTIC CONFIGURATION:

- ST** Standard acoustic configuration
SC Acoustic configuration with compressor soundproofing (Standard)
EN Super-silenced acoustic configuration

LOW TEMPERATURE

- Energy recovery: not required (Standard)
B Water low temperature

accessories

Hydropack with 1 pump
 Hydropack user side with nr.1 inverter pump
 Hydropack with nr.1 high static pressure pump
 Hydropack user side with nr.1 high static pressure inverter pump
 Hydropack user side with 2 pumps
 Hydropack user side with no.2 of inverter pumps
 Hydropack user side with nr.2 high static pressure pump
 Hydropack lato utilizzo con n°2 pompe ad inverter alta prevalenza
 Inverter driven variable flow-rate user side control depending on the temperature differential
 Steel mesh strainer on the water side
 Couple of manually operated shut-off valves
 Storage tank
 Rubber antivibration mounts
 Energy meter
 Remote control via microprocessor control
 Mains power supply
 Serial communication module for LonWorks supervisor
 Serial communication module for Modbus supervisor
 Serial communication module for BACnet-IP supervisor
 Set-point compensation with 0-10 V signal
 Set point compensation with 4-20 mA signal
 ECOSHARE function for the automatic management of a group of units
 Power factor correction capacitors (cosφ > 0.9)
 Disposal for inrush current reduction
 Electrical panel antifreeze protection for min. outdoor temperature down to -25°C

High and low pressure gauges
 Cutoff valve on compressor supply and return
 Anti-seismic spring antivibration mounts
 Refrigerant leak detector in the casing
 Demand limit with 4-20 mA
 Demand limit with 0-10 V
 Soundproofing paneling of the pumping unit
 Differential pressure switch water side with antifreeze protection

Microchannel coils protection panels
 Finned coil protection grilles and compressor compartment
 Microchannel e-coated coil
 Electrical panel antifreeze protection for min. outdoor temperature down to -39°C
 Variable flow-rate control of the inverter pump external to the unit depending on the temperature differential

Copper / aluminium condenser coil with acrylic lining
 Condenser coil with Aluminium Energy Guard DCC treatment
 Anti-hail protection grilles
 Finned coil protection grill

Imperial data will be available soon.

WSAT – cooling only / WSAN – reversible heat pump

technical data

Size	▶▶ WSAT-YSC4			80.3	100.4	115.4	130.4	155.5	170.5	185.5	210.6	225.6	240.6
ST/SC-EXC	♦ Cooling capacity (EN 14511:2018)	(1)	kW	222	267	314	364	423	472	520	573	624	675
ST/SC-EXC	Total power input (EN 14511:2018)	(1)	kW	69,4	85,5	99,8	115	135	149	167	184	200	218
ST/SC-EXC	EER (EN 14511:2018)	(1)	-	3,20	3,12	3,15	3,17	3,15	3,16	3,11	3,12	3,12	3,10
ST/SC-EXC	SEER	(4)	-	4,70	4,67	4,78	4,75	4,92	5,00	4,96	4,94	4,96	4,90
ST/SC-EXC	η _{sc}	(4)	%	185,2	183,8	188,3	187,1	193,6	197,0	195,5	194,6	195,4	193,1
ST/SC-EXC	Refrigeration circuits		Nr	2									
ST/SC-EXC	No. of compressors		Nr	3	4				5		6		
ST/SC-EXC	Type of compressors		-	SCROLL									
ST/SC-EXC	Refrigerant		-	R-32									
ST/SC-EXC	Standard power supply		V	400/3~/50									
ST-EXC	Sound power level	(3)	dB(A)	90	91	92	93	94	95	95	96	96	97
SC-EXC	Sound power level	(3)	dB(A)	87	88	89	90	90	91	91	92	92	93
EN-EXC	Sound power level	(3)	dB(A)	84	84	86	86	86	87	88	88	88	89

Size		WSAT-YSC4	90.3	110.4	130.4	145.4	170.5	185.5	210.6	225.6	240.6	
ST/SC-PRM	♦ Cooling capacity (EN 14511:2018)	(1)	kW	232	291	333	384	443	483	537	590	644
ST/SC-PRM	Total power input (EN 14511:2018)	(1)	kW	84.5	102	124	139	156	179	199	209	233
ST/SC-PRM	EER (EN 14511:2018)	(1)	-	2,74	2,85	2,70	2,77	2,84	2,70	2,70	2,82	2,76
ST/SC-PRM	SEER	(4)	-	4,38	4,48	4,46	4,47	4,65	4,64	4,61	4,69	4,62
ST/SC-PRM	η _{sc}	(4)	%	172,3	176,1	175,4	175,8	183,0	182,5	181,2	184,7	181,9
ST/SC-PRM	Refrigeration circuits		Nr	2								
ST/SC-PRM	No. of compressors		Nr	3	4				5		6	
ST/SC-PRM	Type of compressors		-	SCROLL								
ST/SC-PRM	Refrigerant		-	R-32								
ST/SC-PRM	Standard power supply		V	400/3~/50								
ST-PRM	Sound power level	(3)	dB(A)	90	91	92	93	94	94	95	96	96
SC-PRM	Sound power level	(3)	dB(A)	87	88	89	89	90	90	91	92	92
EN-PRM	Sound power level	(3)	dB(A)	84	86	86	87	87	88	89	89	89

Size			WSAN-YSC4	80.3	90.4	100.4	110.4	120.4	130.4	145.4	160.4	185.5	210.6	225.6	240.6
ST/SC-EXC	♦ Cooling capacity (EN 14511:2018)	(1)	kW	215	240	265	290	320	355	390	430	500	555	610	655
ST/SC-EXC	Total power input (EN 14511:2018)	(1)	kW	72.9	76.4	84.7	94.9	106	114	128	143	163	188	198	218
ST/SC-EXC	EER (EN 14511:2018)	(1)	-	2.95	3.14	3.13	3.05	3.02	3.11	3.04	3.00	3.06	2.96	3.08	3.01
ST/SC-EXC	SEER	(4)	-	4.45	4.79	4.74	4.81	4.84	4.86	4.78	4.72	4.88	4.84	4.89	4.86
ST/SC-EXC	$\eta_{s,c}$	(4)	%	175.0	188.5	186.6	189.4	190.4	191.3	188.1	186.0	192.1	190.7	192.6	191.5
ST/SC-EXC	♦ Heating capacity (EN 14511:2018)	(2)	kW	225	255	280	310	335	375	415	455	530	585	640	685
ST/SC-EXC	Total power input (EN 14511:2018)	(2)	kW	69.9	78.8	85.6	95.2	103	114	125	137	160	178	199	211
ST/SC-EXC	COP (EN 14511:2018)	(2)	-	3.22	3.24	3.27	3.26	3.26	3.29	3.32	3.31	3.32	3.28	3.22	3.24
ST/SC-EXC	Refrigeration circuits		Nr	2											
ST/SC-EXC	No. of compressors		Nr	3											
ST/SC-EXC	Type of compressors		-	4											
ST/SC-EXC	Refrigerant		-	SCROLL											
ST/SC-EXC	Standard power supply		V	R-32											
SC-EXC	Sound power level	(3)	dB(A)	400/3"/50											
EN-EXC	Sound power level	(3)	dB(A)	87	88	89	89	89	91	91	91	92	92	93	93
SCOP - AVERAGE Climate - W35		(4)	-	3.73	3.90	3.92	4.10	4.08	4.05	4.00	4.10	-	-	-	-
η_{SH}		(4)	%	146.0	153.0	154.0	161.0	160.0	159.0	157.0	161.0	-	-	-	-

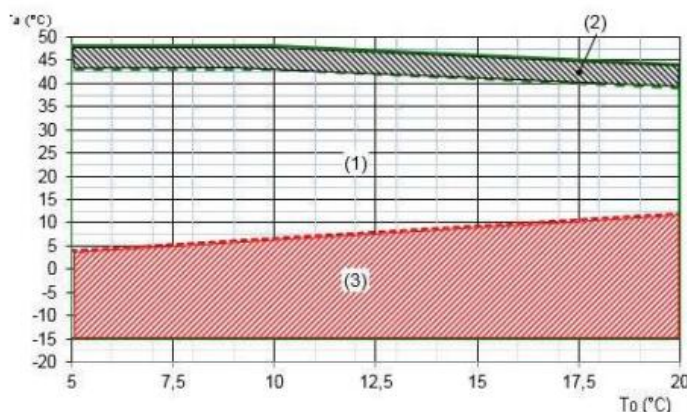
Size			▶▶ WSAN-YSC4	90.3	100.3	110.4	120.4	130.4	145.4	160.4	185.5	210.6	225.6	240.6	
ST/SC-PRM	♦ Cooling capacity (EN 14511:2018)	(1)	kW	235	255	275	300	335	370	405	480	530	585	630	
ST/SC-PRM	Total power input (EN 14511:2018)	(1)	kW	83,7	94,1	102	116	119	136	155	172	200	207	227	
ST/SC-PRM	EER (EN 14511:2018)	(1)	-	2,80	2,71	2,70	2,59	2,81	2,72	2,61	2,80	2,65	2,83	2,77	
ST/SC-PRM	SEER	(4)	-	4,26	4,24	4,35	4,37	4,55	4,57	4,33	4,64	4,62	4,66	4,64	
ST/SC-PRM	$\eta_{s,c}$	(4)	%	167,2	166,7	171,0	171,6	178,9	179,9	170,1	182,8	181,8	183,4	182,5	
ST/SC-PRM	♦ Heating capacity (EN 14511:2018)	(2)	kW	240	265	285	315	350	385	420	500	555	610	655	
ST/SC-PRM	Total power input (EN 14511:2018)	(2)	kW	76,4	85,5	92,3	102	112	124	134	157	175	191	206	
ST/SC-PRM	COP (EN 14511:2018)	(2)	-	3,15	3,10	3,09	3,09	3,12	3,10	3,13	3,19	3,17	3,18	3,18	
ST/SC-PRM	Refrigeration circuits		Nr	2											
ST/SC-PRM	No. of compressors		Nr	3											
ST/SC-PRM	Type of compressors		-	4											
ST/SC-PRM	Refrigerant		-	SCROLL											
ST/SC-PRM	Standard power supply		V	R-32											
SC-PRM	Sound power level	(3)	dB(A)	400/3"/50											
EN-PRM	Sound power level	(3)	dB(A)	87	88	88	88	90	90	90	91	91	92	92	
				85	86	86	86	86	87	87	88	89	90	90	
Directive ErP (Energy Related Products)															
SCOP - AVERAGE Climate - W35				(4)	-	3,47	3,64	3,83	3,87	3,80	3,64	3,82	3,91	-	-
η_{SH}				(4)	%	136,0	143,0	150,0	152,0	149,0	143,0	150,0	153,0	-	-

(1) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions:
Internal exchanger water temperature = 12/7°C; Entering external exchanger air temperature = 35°C
(2) Data compliant to Standard EN 14511:2018 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) Sound pressure levels are referred to units operating at nominal load in nominal conditions.
Measurements are carried out accordingly to UNI EN ISO 9614-1 at nominal standard conditions
defined in respective regulations: EU 2016/2281, UE 813/2013, UE 811/2013
(4) Data calculated according to the EN 14825:2018 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.

Operating range - Cooling

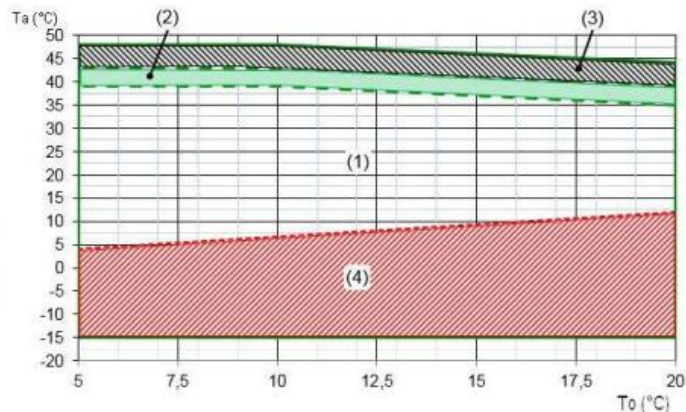
Excellence ST/SC



Ta (°C) = external exchanger inlet air temperature (D.B.)
To (°C) = internal exchanger outlet water temperature

- Standard unit operating range at full load
- Unit operating range with automatic staging of the compressor capacity
- Unit operating range with air flow automatic modulation

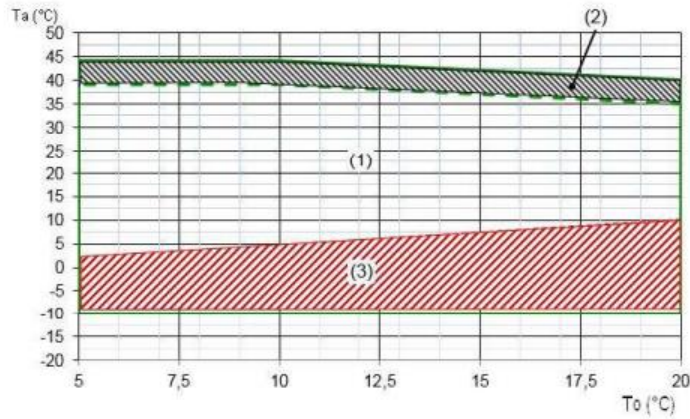
Excellence EN



Ta (°C) = external exchanger inlet air temperature (D.B.)
To (°C) = internal exchanger outlet water temperature

- Standard unit operating range at full load
- Extended operating range with air flow-rate automatic increasing. Inside this field the sound levels are the same of the 'compressor soundproofing (SC)' acoustic configuration
- Unit operating range with automatic staging of the compressor capacity
- Unit operating range with air flow-rate automatic modulation

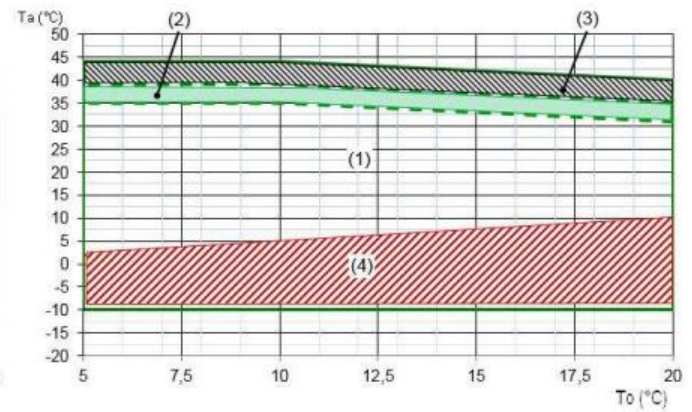
Premium ST/SC



Ta (°C) = external exchanger inlet air temperature (D.B.)
To (°C) = internal exchanger outlet water temperature

1. Standard unit operating range at full load
2. Unit operating range with automatic staging of the compressor capacity
3. Unit operating range with air flow automatic modulation

Premium EN

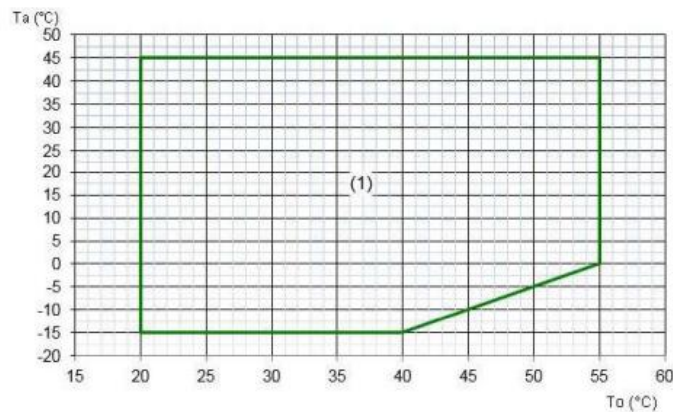


Ta (°C) = external exchanger inlet air temperature (D.B.)
To (°C) = internal exchanger outlet water temperature

1. Standard unit operating range at full load
2. Extended operating range with air flow-rate automatic increasing. Inside this field the sound levels are the same of the 'compressor soundproofing (SC)' acoustic configuration
3. Unit operating range with automatic staging of the compressor capacity
4. Unit operating range with air flow automatic modulation

Operating range - Heating

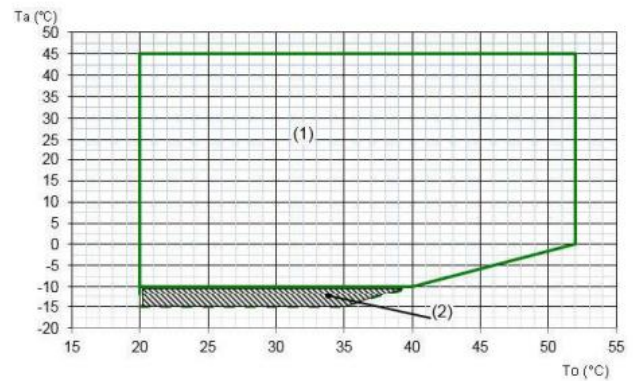
Excellence ST/SC/EN



Ta (°C) = external exchanger inlet air temperature (D.B.)
To (°C) = internal exchanger outlet water temperature

1. Standard unit operating range at full load

Premium ST/SC/EN



Ta (°C) = external exchanger inlet air temperature (D.B.)
To (°C) = internal exchanger outlet water temperature

1. Standard unit operating range at full load
2. Unit operating range with automatic staging of the compressor capacity

The diagram shows a 3D perspective of a rectangular container. The container has a black frame and a blue base. The base is labeled with dimensions A_1 and B_1 . The container's overall dimensions are labeled as A (length), B (width), and C (height). The container is shown sitting on a light blue rectangular area that is slightly larger than the base, with dimensions A_1 and B_1 also indicated for this area.

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

SC-PRM Compressors soundproofing (SC)-Premium

[illegible]