

Clivet. Change things



Chiller

35 Agencies in Italy

707 Employees in Italy
and Abroad

100 Countries We Export to

53.500m² of plants in Feltre
Belluno

7 Branches: Great Britain, Germany,
Russia, UAE, India, China, BALKANS



ELFOEnergy Edge EVO

Reversible heat pump

Air cooled

Outdoor installation

Capacity from 4,85 to 29,5 kW



Unit listed on
www.eurovent-certification.com

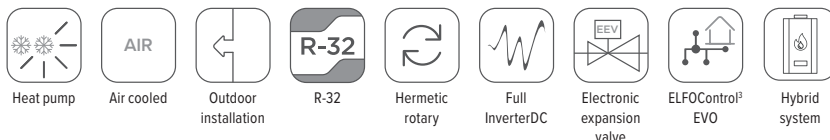


ErP
compliant

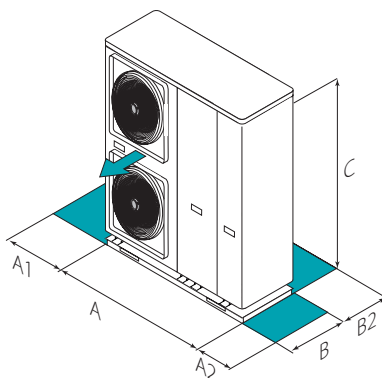


- ✓ Full inverter technology with rotary compressors
- ✓ High water temperature solution for residential systems
- ✓ Refrigerant R32 - GWP = 675
- ✓ High full load and seasonal efficiency with compact dimensions
- ✓ Hot water up to 60°C, low water temperature down to 5°C
- ✓ Three acoustic levels: standard, silenced and super-silenced
- ✓ Compatible with ELFOControl³ EVO, photovoltaic, solar thermal and Smart Grid
- ✓ Hybrid version available in combination with a condensing boiler for instant DHW production

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	▶▶ WSAN-YMi	21	31	41	61	71	81	91	101	121	141
A - Length	mm	1210	1210	1210	1404	1404	1404	1129	1129	1129	1129
B - Width	mm	402	402	402	405	405	405	440	440	440	440
C - Height	mm	945	945	945	1414	1414	1414	1558	1558	1558	1558
A1	mm	400	400	400	400	400	400	300	300	300	300
A2	mm	400	400	400	400	400	400	600	600	600	600
B2	mm	300	300	300	300	300	300	300	300	300	300
230/1~/50 Operating weight	kg	99	99	99	158	158	158	-	-	-	-
400/3N~/50 Operating weight	kg	-	-	-	172	172	172	177	177	177	177

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.

VOLTAGE:

230M	Supply voltage 230/1~/50
400TN	Supply voltage 400/3N~/50

IBH

Back-up electric heater (sizes 61=81 only) (only available with Direct Shipping)

technical data

Size		WSAN-YMI	21	31	41	61	71	81	
230/1"/50	♦ Cooling capacity (EN 14511:2018)	(1) kW	4,85	6,30	7,95	10,9	12,9	13,8	
230/1"/50	Total power input (EN 14511:2018)	(1) kW	1,63	2,27	3,15	3,74	4,64	5,21	
230/1"/50	EER (EN 14511:2018)	(1) -	2,98	2,77	2,53	2,92	2,78	2,65	
230/1"/50	SEER	(4) -	4,71	4,99	4,92	4,85	4,73	4,54	
230/1"/50	η _{s,c}	(4) %	185,4	196,6	193,8	191,0	186,2	178,6	
230/1"/50	♦ Heating capacity (EN 14511:2018)	(2) kW	4,80	6,70	8,60	12,4	14,1	16,2	
230/1"/50	Total power input (EN 14511:2018)	(2) kW	1,33	1,88	2,50	3,52	4,06	4,72	
230/1"/50	COP (EN 14511:2018)	(2) -	3,60	3,57	3,44	3,53	3,47	3,43	
230/1"/50	Water flow-rate (User Side)	l/s	0,23	0,30	0,38	0,52	0,62	0,66	
230/1"/50	Useful pump discharge head	kPa	59,9	50,5	37,9	49,7	36,4	30,7	
230/1"/50	No. of compressor	Nr				1			
230/1"/50	Refrigeration circuits	Nr				1			
230/1"/50	Type of compressor	-				ROTARY INVERTER			
230/1"/50	Refrigerant	-				R-32			
230/1"/50	Standard air flow	l/s	850	850	850	1710	1710	1710	
230/1"/50	Sound pressure level	(3) dB(A)	49	52	55	54	55	56	
Directive ErP (Energy Related Products)									
230/1"/50	ErP Energy Class - AVERAGE Climate - W35	-	A+++	A+++	A+++	A++	A++	A++	
230/1"/50	ErP Energy Class - AVERAGE Climate - W55	-	A++	A++	A++	A++	A++	A++	
230/1"/50	SCOP - AVERAGE Climate - W35	(4) -	4,48	4,49	4,51	4,30	4,35	4,30	
230/1"/50	η _{s,H}	(4) %	176,0	176,0	177,0	169,0	168,0	169,0	
230/1"/50	SCOP - AVERAGE Climate - W55	(4) -	3,23	3,24	3,22	3,23	3,26	3,27	
230/1"/50	η _{s,H}	(4) %	127,0	127,0	126,0	126,0	128,0	128,0	
Size		WSAN-YMI	61	71	81	91	101	121	141
400/3N"/50	♦ Cooling capacity (EN 14511:2018)	(1) kW	10,9	12,9	13,8	17,0	21,0	26,0	29,5
400/3N"/50	Total power input (EN 14511:2018)	(1) kW	3,72	4,62	5,19	5,57	7,12	9,63	11,6
400/3N"/50	EER (EN 14511:2018)	(1) -	2,93	2,80	2,66	3,05	2,95	2,70	2,55
400/3N"/50	SEER	(4) -	4,85	4,73	4,54	4,70	4,70	4,66	4,49
400/3N"/50	η _{s,c}	(4) %	191,0	186,2	178,6	185,0	185,0	183,4	176,6
400/3N"/50	♦ Heating capacity (EN 14511:2018)	(2) kW	12,4	14,1	16,2	18,0	22,0	26,0	30,0
400/3N"/50	Total power input (EN 14511:2018)	(2) kW	3,45	3,99	4,70	5,14	6,47	8,39	10,3
400/3N"/50	COP (EN 14511:2018)	(2) -	3,59	3,54	3,45	3,50	3,40	3,10	2,90
400/3N"/50	Water flow-rate (User Side)	l/s	0,52	0,62	0,66	0,81	1,00	1,24	1,43
400/3N"/50	Useful pump discharge head	kPa	49,7	36,4	30,7	102	94,6	78,8	59,4
400/3N"/50	No. of compressor	Nr				1			
400/3N"/50	Refrigeration circuits	Nr				1			
400/3N"/50	Type of compressor	-				ROTARY INVERTER			
400/3N"/50	Refrigerant	-				R-32			
400/3N"/50	Standard air flow	l/s	1710	1710	1710	2958	2958	3108	3108
400/3N"/50	Sound pressure level	(3) dB(A)	54	56	56	57	59	61	63
Directive ErP (Energy Related Products)									
400/3N"/50	ErP Energy Class - AVERAGE Climate - W35	-	A++	A++	A++	A+++	A+++	A+++	A++
400/3N"/50	ErP Energy Class - AVERAGE Climate - W55	-	A++	A++	A++	A++	A++	A+	A+
400/3N"/50	SCOP - AVERAGE Climate - W35	(4) -	4,30	4,35	4,30	4,61	4,54	4,50	4,20
400/3N"/50	η _{s,H}	(4) %	169,0	168,0	169,0	181,0	179,0	177,0	165,0
400/3N"/50	SCOP - AVERAGE Climate - W55	(4) -	3,23	3,26	3,27	3,21	3,23	3,16	3,14
400/3N"/50	η _{s,H}	(4) %	126,0	128,0	128,0	125,0	126,0	123,0	123,0

(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 calculated in compliance with Standard EN 14511:2018 referred to the following conditions:
Internal exchanger water temperature = 40/45°C. External exchanger air temperature 7 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 14825:2018 Regulation

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rate heat output ≤70 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤400 kW at specified reference conditions).

accessories

IBHX	Backup electric heater
KTLFX	Hose kit for connection to the chiller/heat pump
KSAX	100-litre circuit breaker
QERAX	Connection electrical panel of the DHW storage heater
ACS200X	200-litre domestic hot water storage tank
ACS300X	300-litre domestic hot water storage tank (size 21÷51)
ACS500X	500-litre domestic hot water storage tank
ACS2SX	200-litre domestic hot water storage tank with solar coil
ACS3SX	300-litre domestic hot water storage tank with solar coil (size 21÷51)
ACS5SX	500-litre domestic hot water storage tank with solar coil

Accessories whose code ends with "X" are supplied separately

3DHWX	Three-way valve for domestic hot water
TANKX	Buffer tank
KTCAMX	Piping kit for the connection to the buffer tank on supply water side
KTCARX	Piping kit for the connection to the buffer tank on return water side
T1BX	Probe for auxiliary heating source T1B

WSAT-YSi WSAN-YSi



ELFOEnergy Sheen EVO

Liquid chiller

WSAT-YSi: cooling only

WSAN-YSi: reversible heat pump

Air cooled

Outdoor installation

Capacity from 22,3 to 98,0 kW



Unit listed on
www.eurovent-certification.com

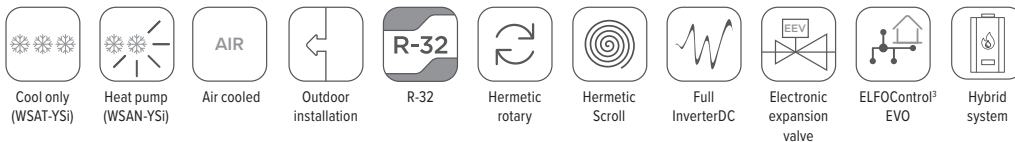


ErP
compliant

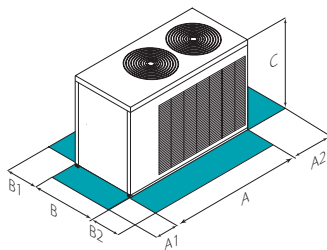


- ✓ Full inverter technology with rotary or scroll compressors
- ✓ First investment driven and refurbishment applications
- ✓ Refrigerant R32 - GWP=675
- ✓ High seasonal efficiency
- ✓ Domestic hot water up to 54°C, low water temperature down to -8°C
- ✓ Three acoustic levels: standard, silenced and super-silenced
- ✓ Modular design to connect up to 16 units in parallel
- ✓ Integrated hydronic assembly, system tank and three-way valve (only for heat pump).

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-YSi	16.2	20.2	24.2	30.2	35.2	40.2
A - Length	mm	2280	2280	2280	3300	3300	3300
B - Width	mm	1060	1060	1060	1100	1100	1100
C - Height	mm	1320	1320	1320	1510	1510	1510
A1	mm	800	800	800	800	800	800
A2	mm	800	800	800	800	800	800
B1	mm	800	800	800	800	800	800
B2	mm	800	800	800	800	800	800
Operating weight	kg	470	470	470	680	680	680

Size	▶▶ WSAN-YSi	10.1	12.1	14.1	16.2	18.2	22.2	30.2	35.2	40.2
A - Length	mm	1920	1920	1920	2280	2280	2280	3300	3300	3300
B - Width	mm	1005	1005	1005	1060	1060	1060	1100	1100	1100
C - Height	mm	1175	1175	1175	1320	1320	1320	1510	1510	1510
A1	mm	800	800	800	800	800	800	800	800	800
A2	mm	800	800	800	800	800	800	800	800	800
B1	mm	800	800	800	800	800	800	800	800	800
B2	mm	800	800	800	800	800	800	800	800	800
Operating weight	kg	298	298	298	530	530	530	830	830	830

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.

TYPE OF FANS:

VEND DC high efficiency fan (Standard)

technical data

Size	▶▶ WSAT-YSi	16.2	20.2	24.2	30.2	35.2	40.2
♦ Cooling capacity (EN14511:2018)	(1) kW	43,0	54,0	65,0	76,0	87,0	98,0
Total power input (EN14511:2018)	(1) kW	13,0	17,2	23,6	23,4	28,3	35,1
EER (EN14511:2018)	(1) -	3,30	3,14	2,76	3,25	3,07	2,79
SEER	(4) -	4,97	4,81	4,65	5,37	5,15	4,95
$\eta_{s,c}$	(4) %	195,8	189,5	182,9	212,0	203,2	195,2
No. of compressors	Nr	2					
Refrigeration circuits	Nr	1					
Type of compressors	-	ROTARY INVERTER			SCROLL INVERTER		
Refrigerant	-	R-32			R-32		
Standard airflow	l/s	6944	6944	6944	10417	10417	10417
Standard power supply	V	400/3N~/50					
Sound pressure level	(3) dB(A)	65	66	67	66	68	69

Size	▶▶ WSAN-YSi	10.1	12.1	14.1	16.2	18.2	22.2	30.2	35.2	40.2
♦ Cooling capacity (EN14511:2018)	(1) kW	22,3	25,8	29,0	42,0	48,0	55,0	68,9	79,8	88,4
Total power input (EN14511:2018)	(1) kW	7,38	9,09	10,4	15,6	18,3	20,9	22,3	28,4	33,5
EER (EN14511:2018)	(1) -	3,02	2,84	2,80	2,69	2,63	2,64	3,09	2,81	2,65
SEER	(4) -	4,63	4,64	4,63	4,00	3,99	4,01	4,14	4,04	3,94
$\eta_{s,c}$	(4) %	182,2	182,6	182,2	157,0	156,6	157,4	162,6	158,7	154,4
♦ Heating capacity (EN14511:2018)	(2) kW	24,3	27,1	31,4	48,6	54,0	62,0	73,4	84,0	97,3
Total power input (EN14511:2018)	(2) kW	7,35	8,27	9,80	14,6	16,6	20,0	23,0	26,3	31,5
COP (EN14511:2018)	(2) -	3,30	3,27	3,20	3,32	3,26	3,10	3,19	3,19	3,09
No. of compressors	Nr	1				2				
Refrigeration circuits	Nr	1				2				
Type of compressors	-	ROTARY INVERTER				SCROLL INVERTER				
Refrigerant	-	R-32				R-32				
Standard airflow	l/s	3472	3472	3472	6667	6667	6667	10417	10417	10417
Standard power supply	V	400/3N~/50								
Sound pressure level	(3) dB(A)	59	60	61	64	65	65	65	65	66
Directive ErP (Energy Related Products)										
ErP Energy Class - AVERAGE Climate - W35	-	A++	A++	A++	A++	A++	A++	A++	A++	A++
SCOP - AVERAGE Climate - W35	(4) -	4,30	4,25	4,24	3,91	3,90	3,87	4,07	4,06	4,04
$\eta_{s,h}$	(4) %	169,0	167,0	167,0	153,0	153,0	152,0	160,0	159,0	159,0

(1) Data compliant to 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) 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 14825:2018 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.

accessories

HYG1	Hydronic assembly with 1 ON/OFF pump
HYGU1V	User side hydronic group with 1 inverter pump
ACC	Storage tank
IFWX	Steel mesh strainer on the water side
AVIBX	Anti-vibration mount support
IFWI	Steel mesh strainer on the water side include in the packaging (available only with options: ASING)
REMAUX	Advanced remote control module for auxiliary controls of sheen/storm units
AMMSX	Spring antivibration mounts
AVIBI	Antivibration mountings included in the unit's packaging
PGFC	Finned coil protection grill
PGFCX	Finned coil protection grill

Accessories whose code ends with "X" are supplied separately

Only WSAT-YSi:

CCCME Microchannel e-coated coil

Only WSAN-YSi:

VACS DHW switching valve**SNATEX** Non atex main switch for remote external installation**SNB** On board main switch

WSAT-XEE WSAN-XEE



ELFOEnergy Large²

Liquid chiller

WSAT-XEE: cooling only

WSAN-XEE: reversible heat pump

Air cooled

Outdoor installation

Capacity from 84,4 to 216 kW



Unit listed on
www.eurovent-certification.com



ErP
compliant

- ✓ Scroll compressors and EC Axial fans
- ✓ First investment driven and refurbishment applications
- ✓ Refrigerant R410A - GWP = 2088
- ✓ High efficiency with compact dimensions
- ✓ Two acoustic configurations: standard and super-silenced
- ✓ Partial or total energy recovery
- ✓ Direct free-cooling for chiller version
- ✓ Integrated hydronic assembly and system tank

functions and features



Cooling only
(WSAT-XEE)



Heat pump
(WSAN-XEE)



Air cooled



Outdoor
installation



R-410A



Hermetic
Scroll



Electronic
expansion
valve



Ice
protection
system



FREE-
COOLING



HydroPack

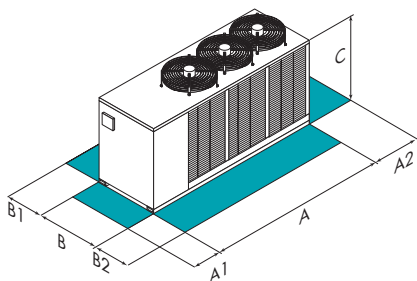


ECOBREEZE



Intelliplant

dimensions and clearances



CAUTION!

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

For all the other configurations, refer to the relative Technical Bulletin.

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

Size	WSAT-XEE	352	402	432	452	502	552	602	702	802
SC-EXC A - Length	mm	3075	3075	3075	4025	4025	4025	4025	5025	5025
SC-EXC B - Width	mm	1097	1097	1097	1097	1097	1097	1097	1097	1097
SC-EXC C - Height	mm	1805	1805	1805	1805	1805	1805	1805	1805	1805
SC-EXC A1	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000
SC-EXC A2	mm	700	700	700	700	700	700	700	700	700
SC-EXC B1	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350
SC-EXC B2	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350
SC-EXC Operating weight	mm	896	933	1024	1207	1234	1256	1302	1497	1544

Size	WSAT-XEE	352	402	432	452	502	552	602	702	802
SC-PRM A - Length	mm	2710	2710	2710	2710	2710	2710	3075	4025	4025
SC-PRM B - Width	mm	1097	1097	1097	1097	1097	1097	1097	1097	1097
SC-PRM C - Height	mm	1805	1805	1805	1805	1805	1805	1805	1805	1805
SC-PRM A1	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000
SC-PRM A2	mm	700	700	700	700	700	700	700	700	700
SC-PRM B1	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350
SC-PRM B2	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350
SC-PRM Operating weight	mm	778	802	892	924	963	984	1087	1295	1324

Size	WSAN-XEE	352	402	432	452	502	552	602	702	802
SC A - Length	mm	3075	3075	3075	3075	3075	4025	4025	5025	5025
SC B - Width	mm	1097	1097	1097	1097	1097	1097	1097	1097	1097
SC C - Height	mm	1805	1805	1805	1805	1805	1805	1805	1805	1805
SC A1	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000
SC A2	mm	700	700	700	700	700	700	700	700	700
SC B1	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350
SC B2	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350
SC Operating weight	mm	915	975	1059	1101	1126	1326	1341	1549	1564

LOW TEMPERATURE:

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

EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

- CREFB** Device for fan consumption reduction of the external section, ECOBREEZE type (Standard)
CREFP Device for fan consumption reduction of the external section at variable speed (phase-cutting)

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

VERSION (WSAT-XEE ONLY):

- EXC** Excellence (Standard)
PRM Premium

FREE-COOLING (WSAT-XEE ONLY):

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

technical data

Size		WSAT-XEE	352	402	432	452	502	552	602	702	802
SC-EXC	♦ Cooling capacity (EN14511:2018)	(1) kW	95,6	109	120	129	140	152	174	195	216
SC-EXC	Total power input(EN14511:2018)	(1) kW	30,7	34,8	38,8	40,9	45,0	49,0	55,8	62,3	69,6
SC-EXC	EER (EN14511:2018)	(1) -	3,12	3,13	3,10	3,15	3,12	3,10	3,12	3,13	3,11
SC-EXC	SEER	(4) -	4,12	4,24	4,11	4,22	4,17	4,11	4,14	4,22	4,10
SC-EXC	η_{sc}	(4) %	161,9	166,7	161,6	165,8	163,9	161,5	162,4	165,8	161,0
SC-EXC	Refrigeration circuits	Nr					1				
SC-EXC	No. of compressors	Nr					2				
SC-EXC	Type of compressors	-					SCROLL				
SC-EXC	Refrigerant	-					R-410A				
SC-EXC	Standard airflow	l/s	12327	12248	12182	18373	18373	18216	18102	24227	24069
SC-EXC	Water flow-rate (User Side)	l/s	4,60	5,20	5,80	6,20	6,70	7,30	8,40	9,30	10,40
SC-EXC	Standard power supply	V					400/3~/50				
SC-EXC	Sound pressure level	(3) dB(A)	67	67	68	68	68	69	69	70	70
Size		WSAT-XEE	352	402	432	452	502	552	602	702	802
SC-PRM	♦ Cooling capacity (EN14511:2018)	(1) kW	89,8	101	111	119	130	143	159	185	203
SC-PRM	Total power input(EN14511:2018)	(1) kW	32,6	37,7	42,0	44,2	48,0	53,2	61,0	66,9	75,9
SC-PRM	EER (EN14511:2018)	(1) -	2,75	2,67	2,64	2,70	2,71	2,69	2,61	2,76	2,67
SC-PRM	SEER	(4) -	3,81	3,80	3,80	3,85	3,85	3,81	3,82	3,89	3,81
SC-PRM	η_{sc}	(4) %	149,5	149,0	149,1	151,1	150,9	149,5	149,8	152,7	149,5
SC-PRM	Refrigeration circuits	Nr					1				
SC-PRM	No. of compressors	Nr					2				
SC-PRM	Type of compressors	-					SCROLL				
SC-PRM	Refrigerant	-					R-410A				
SC-PRM	Standard airflow	l/s	12474	12474	12394	12119	11871	11871	12268	18536	18536
SC-PRM	Water flow-rate (User Side)	l/s	4,30	4,80	5,30	5,70	6,20	6,90	7,60	8,90	9,70
SC-PRM	Standard power supply	V					400/3~/50				
SC-PRM	Sound pressure level	(3) dB(A)	67	67	67	67	68	68	68	69	69
Size		WSAN-XEE	352	402	432	452	502	552	602	702	802
SC	♦ Cooling capacity (EN14511:2018)	(1) kW	84,4	96,7	105	114	122	140	156	183	202
SC	Total power input(EN14511:2018)	(1) kW	32,7	36,5	41,3	43,6	48,5	51,3	60,8	66,9	76,5
SC	EER (EN14511:2018)	(1) -	2,58	2,65	2,55	2,61	2,52	2,73	2,56	2,73	2,64
SC	SEER	(4) -	3,37	3,50	3,40	3,57	3,52	3,62	3,47	3,66	3,50
SC	η_{sc}	(4) %	131,7	137,1	133,0	140,0	137,7	141,6	135,7	143,3	136,9
SC	♦ Heating capacity (EN14511:2018)	(2) kW	101	116	127	136	147	165	183	212	234
SC	Total power input (EN14511:2018)	(2) kW	32,6	36,7	40,4	42,1	45,8	51,1	57,1	65,3	72,6
SC	COP (EN14511:2018)	(2) -	3,08	3,16	3,14	3,23	3,20	3,24	3,21	3,25	3,23
SC	Refrigeration circuits	Nr					1				
SC	No. of compressors	Nr					2				
SC	Type of compressors	-					SCROLL				
SC	Refrigerant	-					R-410A				
SC	Standard airflow	l/s	12497	12281	12281	12217	12105	18255	18255	24267	24267
SC	Water flow-rate (User Side)	l/s	4,10	4,60	5,10	5,50	5,90	6,70	7,40	8,70	9,70
SC	Standard power supply	V					400/3~/50				
SC	Sound pressure level	(3) dB(A)	67	67	67	67	67	68	68	71	71
Directive ErP (Energy Related Products)											
SCOP - AVERAGE Climate - W35	-	-	3,40	3,41	3,48	3,54	3,54	3,48	3,49	3,44	3,40
$\eta_{s,H}$	(4) %		133,0	133,0	136,0	139,0	139,0	136,0	137,0	135,0	133,0

(1) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions:
 Internal exchanger water temperature = 12/7°C; Entering eExternal exchanger air temperature = 35°C

(2) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions:
 Internal exchanger water temperature = 40/45°C. External exchanger air temperature 7 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 14825:2018 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.

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

WSAT-XEM WSAN-XEM



ELFOEnergy Magnum

Liquid chiller

WSAT-XEM: cooling only

WSAN-XEM: reversible heat pump

Air cooled

Outdoor installation

Capacity from 139 to 354 kW



Unit listed on
www.eurovent-certification.com



ErP
compliant

- ✓ Scroll compressors and phase-cutting fans type
- ✓ High versatility and configurability for small and medium tertiary applications
- ✓ Double independent circuits for high reliability
- ✓ Refrigerant R410A - GWP = 2088
- ✓ High full load and seasonal efficiency (Excellence version), high seasonal efficiency and compact dimensions (Premium version)
- ✓ Domestic hot water up to 58°C, low water temperature down to -8°C
- ✓ Modular operation management, up to 7 units in cascade
- ✓ Integrated hydronic assembly, system tank, partial recovery and total recovery (only for chiller)

functions and features



Cooling only
(WSAT-XEM)



Heat pump
(WSAN-XEM)



Air cooled



Outdoor
installation



R-410A



Hermetic
Scroll



AxiTop

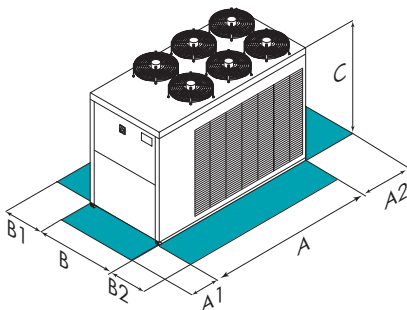


Vary Flow



Intelliplant

dimensions and clearances



CAUTION!

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

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

Size	WSAT-XEM	50.4	55.4	60.4	65.4	70.4	80.4	90.4	100.4	110.4	120.4
SC-EXC A - Length	mm	4400	4400	4400	4400	4400	4400	4400	5200	5200	5200
SC-EXC B - Width	mm	1812	1812	1812	1812	2250	2250	2250	2250	2250	2250
SC-EXC C - Height	mm	1800	1800	1800	1800	2300	2300	2300	2300	2300	2300
SC-EXC A1	mm	1300	1300	1300	1300	1500	1500	1500	1500	1500	1500
SC-EXC A2	mm	750	750	750	750	750	750	750	750	750	750
SC-EXC B1	mm	1100	1100	1100	1100	1500	1500	1500	1500	1500	1500
SC-EXC B2	mm	1100	1100	1100	1100	1500	1500	1500	1500	1500	1500
SC-EXC Operating weight	kg	1466	1500	1548	1630	2317	2403	2527	2924	2991	3126

Size	WSAN-XEM	70.4	80.4	90.4	100.4	110.4	120.4
SC-PRM A - Length	mm	3800	3800	4400	4400	4400	5200
SC-PRM B - Width	mm	2250	2250	2250	2250	2250	2250
SC-PRM C - Height	mm	2300	2300	2300	2300	2300	2300
SC-PRM A1	mm	1500	1500	1500	1500	1500	1500
SC-PRM A2	mm	750	750	750	750	750	750
SC-PRM B1	mm	1500	1500	1500	1500	1500	1500
SC-PRM B2	mm	1500	1500	1500	1500	1500	1500
SC-PRM Operating weight	kg	2135	2244	2328	2610	2698	3006

Size	WSAN-XEM	50.4	55.4	60.4	65.4	70.4	80.4	90.4	100.4	110.4	120.4
EXC A - Length	mm	4400	4400	4400	4400	4400	4400	4400	5200	5200	5200
EXC B - Width	mm	1812	1812	1812	1812	2250	2250	2250	2250	2250	2250
EXC C - Height	mm	1800	1800	1800	1800	2300	2300	2300	2300	2300	2300
EXC A1	mm	1300	1300	1300	1300	1500	1500	1500	1500	1500	1500
EXC A2	mm	750	750	750	750	750	750	750	750	750	750
EXC B1	mm	1100	1100	1100	1100	1500	1500	1500	1500	1500	1500
EXC B2	mm	1100	1100	1100	1100	1500	1500	1500	1500	1500	1500
EXC Operating weight	kg	1590	1604	1673	1831	2420	2540	2681	3114	3194	3338

versions and configurations

ENERGY RECOVERY:

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

ACOUSTIC CONFIGURATION (WSAT-XEM ONLY):

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

VERSION (WSAT-XEM ONLY):

- EXC** Excellence (Standard)
- PRM** Premium (sizes 70.4÷120.4)

technical data

Size		WSAT-XEM	50.4	55.4	60.4	65.4	70.4	80.4	90.4	100.4	110.4	120.4
SC-EXC ♦ Cooling capacity (EN14511:2018)	(1)	kW	143	157	170	182	197	223	260	287	317	354
SC-EXC Total power input(EN14511:2018)	(1)	kW	45,8	50,2	54,5	58,4	63,0	71,5	83,7	91,6	102	114
SC-EXC EER (EN14511:2018)	(1)	-	3,12	3,13	3,12	3,11	3,12	3,12	3,10	3,13	3,10	3,10
SC-EXC SEER	(4)	-	4,23	4,42	4,51	4,51	4,41	4,52	4,52	4,33	4,26	4,40
SC-EXC η_{sc}	(4)	%	166,4	173,9	177,3	177,3	173,5	177,7	177,7	170,0	167,4	172,9
SC-EXC Refrigeration circuits		Nr	2									
SC-EXC No. of compressors		Nr	4									
SC-EXC Type of compressors		-	SCROLL									
SC-EXC Refrigerant		-	R-410A									
SC-EXC Standard airflow		l/s	20722	19917	19900	19472	23856	22947	22944	33833	33611	33833
SC-EXC Water flow-rate (User Side)		l/s	6,80	7,50	8,10	8,70	9,40	10,7	12,4	13,7	15,1	16,9
SC-EXC Standard power supply		V	400/3N~/50									
SC-EXC Sound pressure level	(3)	dB(A)	69	69	69	69	68	68	68	72	72	72

Size		WSAT-XEM	70.4	80.4	90.4	100.4	110.4	120.4
SC-PRM ♦ Cooling capacity (EN14511:2018)	(1)	kW	183	207	242	261	288	330
SC-PRM Total power input(EN14511:2018)	(1)	kW	66,9	76,0	89,3	96,4	105	122
SC-PRM EER (EN14511:2018)	(1)	-	2,74	2,73	2,71	2,71	2,73	2,71
SC-PRM SEER	(4)	-	4,10	4,13	4,32	4,17	4,19	4,10
SC-PRM η_{sc}	(4)	%	161,1	162,3	169,6	163,8	164,7	160,9
SC-PRM Refrigeration circuits		Nr	2					
SC-PRM No. of compressors		Nr	4					
SC-PRM Type of compressors		-	SCROLL					
SC-PRM Refrigerant		-	R-410A					
SC-PRM Standard airflow		l/s	23800	23550	24450	24450	23900	34450
SC-PRM Water flow-rate (User Side)		l/s	8,70	9,90	11,5	12,4	13,7	15,8
SC-PRM Standard power supply		V	400/3~/50					
SC-PRM Sound pressure level	(3)	dB(A)	67	67	68	68	68	71

Size		WSAN-XEM	50.4	55.4	60.4	65.4	70.4	80.4	90.4	100.4	110.4	120.4
EXC ♦ Cooling capacity (EN14511:2018)	(1)	kW	139	148	160	170	184	208	235	273	296	321
EXC Total power input(EN14511:2018)	(1)	kW	48,7	53,6	58,4	63,7	67,6	77,0	92,7	98,1	110	126
EXC EER (EN14511:2018)	(1)	-	2,85	2,76	2,73	2,66	2,72	2,70	2,54	2,79	2,69	2,55
EXC SEER	(4)	-	3,99	4,00	4,04	4,07	3,94	4,08	4,08	3,93	3,91	3,85
EXC η_{sc}	(4)	%	156,5	157,0	158,8	159,7	154,7	160,3	160,2	154,0	153,2	151,0
EXC ♦ Heating capacity (EN14511:2018)	(2)	kW	155	167	183	194	210	239	274	313	340	378
EXC Total power input (EN14511:2018)	(2)	kW	47,9	52,3	56,5	60,1	65,3	74,3	85,1	97,5	106	118
EXC COP (EN14511:2018)	(2)	-	3,24	3,20	3,24	3,23	3,22	3,22	3,22	3,21	3,21	3,20
EXC Refrigeration circuits		Nr	2									
EXC No. of compressors		Nr	4									
EXC Type of compressors		-	SCROLL									
EXC Refrigerant		-	R-410A									
EXC Standard airflow		l/s	20300	20300	20000	20000	25000	24200	24200	35000	35000	35000
EXC Water flow-rate (User Side)		l/s	6,66	7,12	7,66	8,13	8,81	10,0	11,3	13,1	14,2	15,5
EXC Standard power supply		V	400/3N~/50									
EXC Sound pressure level	(3)	dB(A)	69	69	69	69	68	68	68	72	72	72

Directive ErP (Energy Related Products)

SCOP - AVERAGE Climate - W35	(4)	-	3,70	3,66	3,72	3,72	3,64	3,64	3,76	3,25	3,70	3,80
$\eta_{s,h}$	(4)	%	145,0	143,0	146,0	146,0	143,0	143,0	147,0	127,0	145,0	149,0

- (1) Data compliant to 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) 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 14825:2018 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.

accessories

- HYG1** Hydronic assembly with 1 ON/OFF pump
- VARYP** VARYFLOW + (2 inverter pumps)
- HYG2** Hydronic assembly with 2 ON/OFF pumps
- ACC** Storage tank
- CCCA** Copper / aluminium condenser coil with acrylic lining
- CCCA1** Condenser coil with Aluminium Energy Guard DCC treatment
- HEDIF** Diffuser for high efficiency axial fan (sizes 70.4÷120.4)
- CREFB** Device for fan consumption reduction of the external section, ECOBREEZE type (sizes 70.4÷120.4)
- SFSTR** Disposal for inrush current reduction
- MF2** Multi-function phase monitor
- CMSC10** Serial communication module for LonWorks supervisor
- CMSLWX** LonWorks serial communication module
- CMSC8** Serial communication module for BACnet supervisor
- BACX** BACnet serial communication module
- CMSC9** Serial communication module for Modbus supervisor
- CMMBX** Serial communication module to supervisor (Modbus)
- PFCP** Power factor correction capacitors (cosφ > 0.9)

Accessories whose code ends with "X" are supplied separately

- PGFC** Finned coil protection grilles
- PGFCX** Finned coil protection grilles
- MHP** High and low pressure gauges
- MHPX** High and low pressure gauges
- IFWX** Steel mesh strainer on the water side
- RCTX** Remote control
- AVIBX** Anti-vibration mount support
- RE-25** Electrical panel antifreeze protection for min. outdoor temperature down to -25°C
- RE-30** Electrical panel antifreeze protection for min. outdoor temperature down to -30°C

WSAN-XEM only:

- VACSUX** User side DHW switching valve

WSAT-XEM only:

- CREFO** Device for fan consumption reduction of the external section, on/off type (sizes 70.4÷120.4)
- SDV** Cutoff valve on compressor supply and return
- RPRPDI** Refrigerant leak detector with pump down function in the casing

WSAT-XSC3 WSAN-XSC3



SPINchiller³

Liquid chiller

WSAT-XSC3: cooling only

WSAN-XSC3: reversible heat pump

Air cooled

Outdoor installation

Capacity from 243 to 1350 kW

- ✓ Scroll compressors and phase-cutting fans type
- ✓ High full load and seasonal efficiency (Excellence version), high seasonal efficiency and compact dimensions (Premium version)
- ✓ Two / Four independent circuits for high reliability
- ✓ Refrigerant R410A - GWP = 2088
- ✓ Low water temperature down to -12°C
- ✓ Domestic hot water up to 53°C, low water temperature down to -12°C
- ✓ Two acoustic configurations
- ✓ Modular operation management, up to 4 units in cascade
- ✓ Integrated hydronic assembly, system tank, heat, partial recovery and total recovery



Unit listed on
www.eurovent-certification.com



ErP
compliant

functions and features



Cooling only
(WSAT-XSC3)



Heat pump
(WSAN-XSC3)



Air cooled



Outdoor
installation



R-410A



Hermetic
Scroll



Electronic
expansion
valve



AxiTop

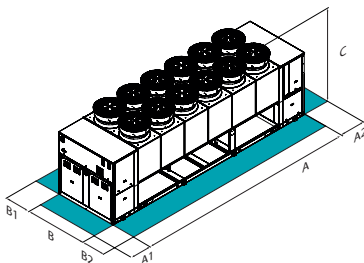


HydroPack



Intelliplant

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-XSC3	90.4	100.4	110.4	120.4	140.4	160.4	180.4	200.4	220.4	240.4	260.6	280.6	300.6	320.6	340.6	360.6	400.8	440.8	480.8
SC-EXC A - Length	mm	4149	4149	4149	4149	5124	5124	5124	5994	5994	5994	7948	7948	9900	9900	9900	9900	11989	11989	11989
SC-EXC B - Width	mm	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243
SC-EXC C - Height	mm	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668
SC-EXC A1	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
SC-EXC A2	mm	700	700	700	700	700	700	700	700	700	700	1500	1500	1500	1500	1500	1500	1500	1500	1500
SC-EXC B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-EXC B2	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-EXC Operating weight	kg	2704	2836	2869	2979	3428	3528	3899	4384	4538	4676	5837	5963	6692	6881	7138	7375	8768	9076	9352

Size	WSAT-XSC3	120.4	140.4	160.4	180.4	200.4	220.4	240.4	260.6	280.6	300.6	320.6	340.6	360.6	400.8	440.8	480.8
SC-PRM A - Length	mm	4149	4149	4149	5124	5124	5994	5994	6973	6973	7948	7948	7948	7948	10243	11989	11989
SC-PRM B - Width	mm	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243
SC-PRM C - Height	mm	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668
SC-PRM A1	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
SC-PRM A2	mm	700	700	700	700	700	700	700	1500	1500	1500	1500	1500	1500	1500	1500	1500
SC-PRM B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-PRM B2	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-PRM Operating weight	kg	2839	2984	3070	3609	3754	4296	4510	5413	5527	5982	6119	6338	6537	7508	8592	9020

Size	WSAN-XSC3	90.4	100.4	110.4	120.4	140.4	160.4	180.4	200.4	220.4	240.4	260.8	280.8	300.8	320.8	340.8	360.8	400.8	440.8	480.8
SC-EXC A - Length	mm	4149	4149	4149	4149	5124	5124	6050	6050	6400	6400	9268	10243	10243	10243	11114	11989	11989	12822	12822
SC-EXC B - Width	mm	2243	2243	2243	2243	2243	2243	2243	2243	2243	2243	2246	2246	2246	2246	2246	2246	2246	2246	2246
SC-EXC C - Height	mm	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668
SC-EXC A1	mm	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
SC-EXC A2	mm	700	700	700	700	700	700	700	700	700	700	1500	1500	1500	1500	1500	1500	1500	1500	1500
SC-EXC B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-EXC B2	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
SC-EXC Operating weight	kg	2928	2968	3028	3162	3588	3602	4347	4399	4816	4956	6750	7175	7189	7203	7948	8693	8797	9631	9912

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.

VERSION:

EXC	Excellence (Standard)
PRM	Premium (WSAT-XSC3 only)

LOW TEMPERATURE:

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

ENERGY RECOVERY:

-	Energy recovery: not required (Standard)
D	Partial energy recovery
R	Total energy recovery (WSAT-XSC3 only)

ACOUSTIC CONFIGURATION:

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

TYPE FAN EXTERNAL SECTION:

AXIX	High efficiency diffuser for axial fan - AxiTop (Standard)
NAXI	High efficiency diffuser for axial fan - AxiTop: not required

technical data

Size			WSAT-XSC3	90.4	100.4	110.4	120.4	140.4	160.4	180.4	200.4	220.4	240.4	260.6	280.6	300.6	320.6	340.6	360.6	400.8	440.8	480.8
SC-EXC	♦ Cooling capacity (EN14511:2018)	(1)	kW	267	290	316	353	405	459	513	572	621	675	734	791	852	905	961	1016	1143	1242	1350
SC-EXC	Total power input (EN14511:2018)	(1)	kW	85,8	92,9	102	114	130	145	165	181	200	218	236	253	274	292	309	328	362	400	435
SC-EXC	EER (EN14511:2018)	(1)	-	3,11	3,12	3,10	3,10	3,11	3,16	3,10	3,16	3,10	3,10	3,11	3,12	3,11	3,10	3,10	3,10	3,16	3,10	3,10
SC-EXC	SEER	(3)	-	4,64	4,65	4,62	4,56	4,66	4,65	4,59	4,64	4,62	4,56	4,61	4,59	4,60	4,65	4,62	4,56	4,66	4,62	4,56
SC-EXC	$\eta_{s,c}$	(3)	%	182,7	183,0	182,0	179,3	183,5	182,9	180,4	182,6	182,0	179,4	181,5	180,8	181,0	183,0	181,9	179,2	183,3	182,0	179,4
SC-EXC	Refrigeration circuits		Nr								2										4	
SC-EXC	No. of compressors		Nr					4								6					8	
SC-EXC	Type of compressors		-																			
SC-EXC	Refrigerant		-																			
SC-EXC	Standard power supply		I/s	36628	36204	36187	34999	48272	46666	45657	58332	57703	57073	73120	72035	97494	96046	95118	94191	116663	115405	114147
SC-EXC	Water flow-rate (User side)		I/s	12,8	13,9	15,2	16,9	19,4	22,0	24,6	27,4	29,8	32,4	34,9	37,6	40,6	43,1	45,7	48,4	54,4	59,2	64,3
SC-EXC	Standard power supply		V																			
SC-EXC	Sound pressure level	(2)	dB(A)	72	72	72	72	72	73	74	74	74	75	73	73	75	75	75	76	75	75	76
EN-EXC	Sound pressure level	(2)	dB(A)	66	66	66	66	66	67	69	69	69	70	68	69	70	70	70	71	70	70	71

Size			WSAT-XSC3	120.4	140.4	160.4	180.4	200.4	220.4	240.4	260.6	280.6	300.6	320.6	340.6	360.6	400.8	440.8	480.8
SC-PRM	♦ Cooling capacity (EN14511:2018)	(1)	kW	333	379	421	490	529	594	645	693	742	798	848	895	942	1058	1187	1291
SC-PRM	Total power input (EN14511:2018)	(1)	kW	120	136	151	174	189	211	229	246	265	287	306	326	346	382	427	462
SC-PRM	EER (EN14511:2018)	(1)	-	2,77	2,80	2,78	2,82	2,80	2,81	2,82	2,81	2,79	2,78	2,77	2,75	2,72	2,77	2,78	2,80
SC-PRM	SEER	(3)	-	4,21	4,19	4,17	4,32	4,22	4,19	4,15	4,42	4,39	4,37	4,35	4,35	4,34	4,22	4,19	4,15
SC-PRM	$\eta_{s,c}$	(3)	%	165,3	164,7	163,7	169,8	165,9	164,8	163,0	173,9	172,4	171,7	170,9	170,8	170,7	165,7	164,6	163,1
SC-PRM	Refrigeration circuits		Nr							2								4	
SC-PRM	No. of compressors		Nr				4						6					8	
SC-PRM	Type of compressors		-																
SC-PRM	Refrigerant		-																
SC-PRM	Standard power supply		I/s	37459	37103	36017	49946	49471	62135	60028	60934	60029	73120	72035	71339	70643	98941	124271	120057
SC-PRM	Water flow-rate (User side)		I/s	15,9	18,1	20,1	23,4	25,3	28,4	30,8	32,9	35,3	38,0	40,3	42,6	44,8	50,3	56,5	61,5
SC-PRM	Standard power supply		V																
SC-PRM	Sound pressure level	(2)	dB(A)	72	72	73	74	74	74	75	72	73	74	74	75	75	76	75	76
EN-PRM	Sound pressure level	(2)	dB(A)	66	66	67	69	69	69	70	68	68	69	69	70	70	71	70	71

Size			WSAN-XSC3	90.4	100.4	110.4	120.4	140.4	160.4	180.4	200.4	220.4	240.4	260.8	280.8	300.8	320.8	340.8	360.8	400.8	440.8	480.8
SC-EXC	♦ Cooling capacity (EN14511:2018)	(1)	kW	243	262	290	322	369	416	473	518	557	593	692	739	785	831	888	945	1037	1115	1186
SC-EXC	Total power input (EN14511:2018)	(1)	kW	88,7	96,1	105	119	137	151	175	189	206	226	256	273	288	303	326	350	378	412	453
SC-EXC	EER (EN14511:2018)	(1)	-	2,74	2,73	2,75	2,70	2,70	2,75	2,70	2,74	2,70	2,62	2,70	2,70	2,73	2,75	2,72	2,70	2,74	2,70	2,62
SC-EXC	SEER	(3)	-	4,13	4,12	4,11	4,13	4,14	4,12	4,20	4,21	4,19	4,11	4,16	4,21	4,20	4,19	4,20	4,21	4,21	4,19	4,11
SC-EXC	$\eta_{s,c}$	(3)	%	162,2	161,8	161,6	162,4	162,8	161,6	165,0	165,3	164,4	161,2	163,3	165,3	164,9	164,5	165,1	165,0	165,2	164,4	161,4
SC-EXC	♦ Heating capacity (EN14511:2018)	(4)	kW	283	312	340	378	426	471	543	600	646	696	803	852	897	942	1014	1086	1201	1292	1391
SC-EXC	Total power input (EN14511:2018)	(4)	kW	88,5	97,1	105	115	131	145	169	184	202	217	246	261	275	290	314	338	369	404	435
SC-EXC	COP (EN14511:2018)	(4)	-	3,20	3,22	3,22	3,28	3,26	3,25	3,22	3,25	3,20	3,20	3,27	3,26	3,26	3,25	3,23	3,22	3,25	3,20	3,20
SC-EXC	Refrigeration circuits		Nr						2									4				
SC-EXC	No. of compressors		Nr					4										8				
SC-EXC	Type of compressors		-																			
SC-EXC	Refrigerant		-																			
SC-EXC	Standard power supply		I/s	37357	37357	36797	36365	49807	49063	62677	61219	60854	60489	86172	99614	98871	98127	111741	125354	122438	121708	120979
SC-EXC	Water flow-rate (User side)		I/s	11,7	12,6	13,9	15,4	17,7	19,9	22,7	24,8	26,7	28,4	33,0	35,3	37,5	39,7	42,4	45,2	49,5	53,3	56,7
SC-EXC	Standard power supply		V																			
SC-EXC	Sound pressure level	(2)	dB(A)	72	72	72	72	72	73	74	74	74	75	73	73	74	74	74	75	75	75	75
EN-EXC	Sound pressure level	(2)	dB(A)	66	66	66	66	66	67	69	69	69	70	67	67	68	68	69	70	70	70	70

(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) 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 refer to the following conditions: internal water exchanger = 12/7 °C; outdoor air temperature 35°C

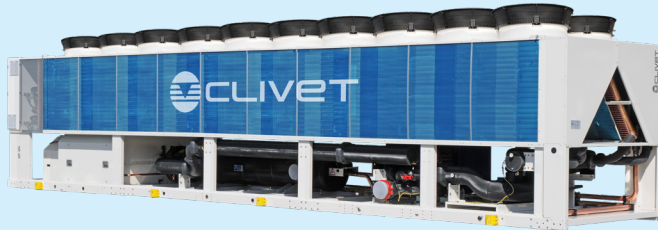
(3) Data calculated according to the EN 14825:2018 Regulation

(4) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions:
Internal exchanger water temperature = 40/45°C. External exchanger air temperature 7 D.B. /6 (°C) W.B.

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 2016/2281, also known as Ecodesign Lot21.

SCREWLine³

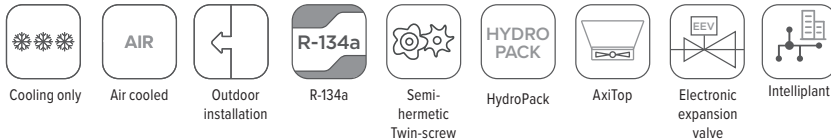
Water chiller
Air cooled
Outdoor installation
Capacity from 468 to 1423 kW



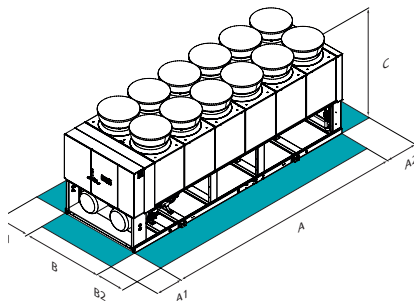
Unit listed on
www.eurovent-certification.com

- ✓ Screw compressors, copper/aluminium coils and phase-cutting fans type
- ✓ First investment driven and refurbishment applications
- ✓ Two independent circuits for high reliability
- ✓ Refrigerant R134a - GWP=1430
- ✓ High full load efficiency (Excellence version)
- ✓ Operation up to 52°C outdoor air temperature, low water temperature down to -8°C
- ✓ Modular operation management for up to 7 units in cascade
- ✓ Integrated hydronic assembly, partial recovery and total recovery

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	»WDAT-SL3	200.2	210.2	220.2	240.2	260.2	280.2	320.2	340.2	360.2	400.2	440.2	500.2	540.2	580.2
ST-EXC A - Length	mm	4788	4788	5758	5758	5758	6738	6738	7714	7714	8691	8691	10640	10640	10640
ST-EXC B - Width	mm	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246
ST-EXC C - Height	mm	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668
ST-EXC A1	mm	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535
ST-EXC A2	mm	700	700	700	700	700	700	700	700	700	700	700	700	700	700
ST-EXC B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
ST-EXC B2	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
ST-EXC Operating weight	kg	4717	4715	5401	5454	5565	6088	6282	7055	7435	8013	8165	8527	9560	9790

Size	»WDAT-SL3	200.2	210.2	220.2	240.2	260.2	280.2	320.2	340.2	360.2	400.2	440.2	500.2	540.2	580.2
ST-RPM A - Length	mm	4788	4788	4788	4788	4788	5758	5758	6738	6738	7714	7714	8691	8691	
ST-RPM B - Width	mm	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	2246	
ST-RPM C - Height	mm	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	2668	
ST-RPM A1	mm	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	1535	
ST-RPM A2	mm	700	700	700	700	700	700	700	700	700	700	700	700	700	
ST-RPM B1	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	
ST-RPM B2	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	
ST-RPM Operating weight	kg	4617	4643	4669	4799	4903	5612	5712	6442	6651	6854	7701	7911	8293	8467

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.

ST-EXC Standard (ST)-Excellence

ST-PRM Standard (ST)-Premium

VERSION:

EXC Excellence (Standard)**RPM** Premium

ENERGY RECOVERY:

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

ACOUSTIC CONFIGURATION:

ST Standard acoustic configuration (Standard)**SC** Acoustic configuration with compressor soundproofing**EN** Extremely low noise acoustic configuration

LOW TEMPERATURE:

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

TYPE FAN EXTERNAL SECTION:

AXIX High efficiency diffuser for axial fan - AxiTop (Standard)**NAXI** High efficiency diffuser for axial fan - AxiTop: not required

EXTERNAL SECTION FAN CONSUMPTION

CREFP Device for fan consumption reduction of the external section at variable speed (phase-cutting) (Standard)**CREFB** Device for fan consumption reduction of the external section, ECOBREEZE type**CREFO** Device for fan consumption reduction of the external section, on/off type

technical data

Size	»WDAT-SL3		200.2	210.2	220.2	240.2	260.2	280.2	320.2	340.2	360.2	400.2	440.2	500.2	540.2	580.2
ST/SC-EXC	♦ Cooling capacity (EN14511:2018)	(1) kW	484	508	549	583	635	706	780	835	898	977	1096	1213	1315	1423
ST/SC-EXC	Total power input (EN14511:2018)	(1) kW	156	164	175	186	204	226	247	267	287	313	353	388	424	454
ST/SC-EXC	EER (EN 14511:2018)	(1) -	3,10	3,10	3,14	3,14	3,11	3,13	3,16	3,13	3,13	3,12	3,10	3,13	3,10	3,13
ST/SC-EXC	SEER	(4) -	4,10	4,10	4,11	4,11	4,10	4,10	4,11	4,11	4,10	4,18	4,14	4,11	4,11	4,11
ST/SC-EXC	Refrigeration circuits	Nr	2													
ST/SC-EXC	No. of compressors	Nr	2													
ST/SC-EXC	Type of compressors	(2) -	DSW													
ST/SC-EXC	Refrigerant	-	R-134a													
ST/SC-EXC	Standard power supply	V	400/3~/50													
ST-EXC	Sound pressure level	(3) dB(A)	81	81	81	81	80	80	80	81	82	83	85	86	87	87
SC-EXC	Sound pressure level	(3) dB(A)	77	77	77	77	77	77	77	78	79	80	82	82	83	83
EN-EXC	Sound pressure level	(3) dB(A)	73	73	73	73	73	72	73	74	74	76	78	78	-	-

Size	»WDAT-SL3		200.2	210.2	220.2	240.2	260.2	280.2	320.2	340.2	360.2	400.2	440.2	500.2	540.2	580.2
ST/SC-PRM	♦ Cooling capacity (EN14511:2018)	(1) kW	468	490	514	560	601	668	744	785	837	916	1026	1142	1260	1359
ST/SC-PRM	Total power input (EN14511:2018)	(1) kW	160	171	181	193	213	241	261	281	305	333	377	413	458	476
ST/SC-PRM	EER (EN 14511:2018)	(1) -	2,92	2,87	2,84	2,90	2,83	2,78	2,85	2,79	2,74	2,75	2,72	2,77	2,75	2,86
ST/SC-PRM	SEER	(4) -	3,90	3,85	3,82	3,85	3,73	3,63	3,84	3,79	3,73	3,63	3,62	3,67	3,75	3,87
ST/SC-PRM	Refrigeration circuits	Nr	2													
ST/SC-PRM	No. of compressors	Nr	2													
ST/SC-PRM	Type of compressors	(2) -	DSW													
ST/SC-PRM	Refrigerant	-	R-134a													
ST/SC-PRM	Standard power supply	V	400/3~/50													
ST-PRM	Sound pressure level	(3) dB(A)	81	81	80	81	80	80	80	81	82	83	85	85	87	87
SC-PRM	Sound pressure level	(3) dB(A)	77	77	77	77	77	77	77	78	79	80	82	82	83	83
EN-PRM	Sound pressure level	(3) dB(A)	74	74	74	74	74	73	74	75	75	77	79	79	80	80

(1) Data calculated in compliance with Standard EN 14511:2018 referred to the following conditions:
Internal exchanger water = 12/7°C; External exchanger entering air = 35°C

(2) DSW = twin-screw compressor

(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 air temperature = 35°C

(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 2016/2281, also known as Ecodesign Lot21.

SC-EXC Compressors insulation (SC)-Excellence

ST-EXC Standard (ST)-Excellence

EN-EXC Supersilenced acoustic configuration (EN) - Excellence

SC-PRM Compressor insulation (SC)-Premium

ST-PRM Standard (ST)-Premium

EN-PRM Supersilenced acoustic configuration (EN) - Premium

accessories

2PM	Hydropack load side with 2 pumps
3PM	Hydropack load side with 3 pumps
CSVX	Couple of manually operated shut-off valves
CCCA	Copper / aluminium condenser coil with acrylic lining
CCCA1	Condenser coil with Aluminium Energy Guard DCC treatment
REGBT	Device for the condensing coil partialization
AMMX	Spring antivibration mounts
PGCC	Finned coil protection grilles and compressor compartment
PGCCH	Anti-hail protection grilles
TPS	Frame protective treatment
CONTA2	Energy meter
RCMRX	Remote control via microprocessor control

Accessories whose code ends with "X" are supplied separately.

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

PSX	Mains power supply
CMSC9	Serial communication module for Modbus supervisor
CMSC10	Serial communication module for LonWorks supervisor
CMSC11	Serial communication module for BACnet-IP supervisor
SCP4	Set-point compensation with 0-10 V signal
SPC2	Set-point compensation with outdoor air temperature probe
SPC1	Set point compensation with 4-20 mA signal
ECS	ECOSHARE function for the automatic management of a group of units
PFCP	Power factor correction capacitors (cosfi > 0.9)
SFSTR2	Progressive compressor start-up device
CBS	Overload circuit breakers

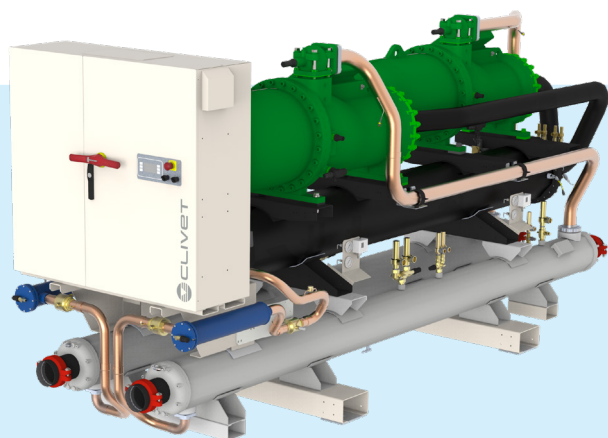
SCREWLine⁴

Water chiller

Water cooled

Indoor installation

Capacity from 572 to 1499 kW



- ✓ Double independent circuits for high reliability with screw compressors
- ✓ First investment driven and refurbishment applications
- ✓ Refrigerant R134a - GWP = 1430
- ✓ 3 operating modes: Cooling only, Heating only, Operation with water circuit change-over
- ✓ Two acoustic configurations: standard and super-silenced
- ✓ Modular operation management, up to 7 units in cascade
- ✓ Integrated partial and total recovery
- ✓ Condenser water temperature up to 65°C with heating only version (OHO), evaporator water temperature down to -8°C



Unit listed on
www.eurovent-certification.com



ErP
compliant

functions and features



Cooling only



Water cooled



Indoor
installation



R-134a



Semi-hermetic
Twin-screw



Reversible
water circuit

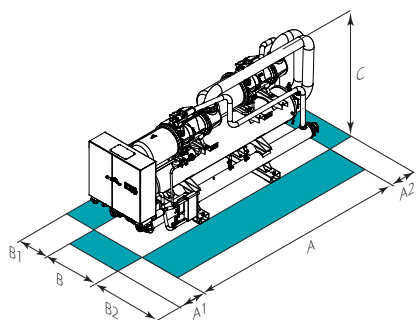


Electronic
expansion
valve



Intelliplant

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	►► WDH-SB4	220.2	240.2	280.2	320.2	360.2	440.2	500.2	540.2	580.2
A - Length	mm	4766	4766	4766	4926	4926	5027	5234	5234	5234
B - Width	mm	1350	1350	1350	1350	1350	1350	1350	1350	1350
C - Height	mm	2028	2028	2028	2182	2182	2180	2299	2299	2299
A1	mm	1470	1470	1470	1470	1470	1470	1470	1470	1470
A2	mm	700	700	700	700	700	700	700	700	700
B1	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000
B2	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000
Operating weight	mm	4099	4119	4156	5854	5874	6004	6453	6681	6761

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.

VERSION:

EXC Excellence (Standard)

LOW TEMPERATURE:

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

OPERATION:

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

ACOUSTIC CONFIGURATION:

ST Standard acoustic configuration (Standard)
EN Extremely low noise acoustic configuration

ENERGY RECOVERY:

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

HIGH WATER TEMPERATURE VERSION:

HWT High water temperature

technical data

Size	►► WDH-SB4	220.2	240.2	280.2	320.2	360.2	440.2	500.2	540.2	580.2
♦ Cooling capacity (EN14511:2018)	(1) kW	572	613	706	867	978	1124	1299	1369	1499
Total power input (EN14511:2018)	(1) kW	109	120	138	164	188	213	244	273	304
EER (EN14511:2018)	(1) -	5,25	5,11	5,11	5,27	5,20	5,29	5,32	5,02	4,93
SEER	(5) -	6,43	6,53	6,52	6,47	6,38	6,43	6,44	6,38	6,38
$\eta_{s,c}$	(5) %	254,3	258,2	257,8	255,9	252,3	254,4	254,5	252,3	252,3
♦ Heating capacity (EN14511:2018)	(2) kW	716	768	939	1033	1179	1454	1592	1740	1858
Total power input (EN14511:2018)	(2) kW	146	157	192	209	241	298	327	354	383
COP (EN14511:2018)	(2) -	4,91	4,88	4,89	4,95	4,90	4,87	4,87	4,92	4,86
Refrigeration circuits	Nr	2								
No. of compressors	Nr	2								
Type of compressors	(4) -	DSW								
Refrigerant	-	R-134a								
Water flow-rate (User Side)	l/s	27,2	29,2	33,6	41,2	46,5	53,4	61,7	65,1	71,2
Water flow rate (Source Side)	l/s	32,7	35,1	40,4	49,4	55,9	64,0	73,9	78,7	86,3
Standard power supply	V	400/3~/50								
ST Sound pressure level	(3) dB(A)	80	81	81	82	82	83	83	85	85
EN Sound pressure level	(3) dB(A)	76	77	77	78	78	80	80	81	81

(1) Performance data calculated in accordance with EN14511:2018 referred to the following conditions: Internal exchanger water temperature = 12/7°C. External exchanger water temperature = 30/35°C.

(2) HWT Version: Performance data calculated in accordance with EN 14511:2018 referred to the following conditions: Internal exchanger water temperature = 40/45°C. External exchanger water 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) DSW = Double screw compressor

(5) 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.

accessories

SPC1 Set point compensation with 4-20 mA signal
SCP4 Set-point compensation with 0-10 V signal
SPC2 Set-point compensation with outdoor air temperature probe
IVMSX Modulating valve source side
CONTA2 Energy meter
IFWX Steel mesh strainer on the water side
AMRX Rubber antivibration mounts
RCMRX Remote control via microprocessor control
PSX Mains power supply
SFSTR2 Progressive compressor start-up device

PFCP Power factor correction capacitors (cosfi > 0.9)
CMSC9 Serial communication module for Modbus supervisor
CMSC10 Serial communication module for LonWorks supervisor
CMSC11 Serial communication module for BACnet-IP supervisor
RPR Refrigerant drops detector
ECS Ecoshare function for the automatic management of a group of units
CBS Overload circuit breakers
RDVS Switching valve with dual safety valves
MHP High and low pressure gauges
CO2P 2 pass condenser

Accessories whose code ends with "X" are supplied separately



توسعه تاسیسات آترینا atrina

نماینده انحصاری شرکت کلیوت ایتالیا در ایران

دفتر مرکزی: نیاوران، خیابان باهنر، نرسیده به میدان قدس

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