

## HS-CHAQ-I 39÷98

### FROM 3,9 KW TO 10 KW

**A CLASS ENERGY EFFICIENCY AIRCOOLED REVERSIBLE HEAT PUMPS WITH EC INVERTER AXIAL FANS, INVERTER ROTARY/SCROLL COMPRESSOR, PLATE EXCHANGER AND HYDRONIC KIT.**



**ROTATIF INVERTER** 

**INVERTER SCROLL** 

HS-CHAQ-I 39÷98 reversible Heat Pumps with A CLASS energy efficiency are designed for small domestic or service sector environments. Equipped with R410A refrigerant, INVERTER Rotary/Scroll compressors and EC INVERTER axial fans, they are extremely functional and reliable units. The Inverter device controls and continuously modulates the compressor speed, keeping the temperature of the water delivered to the system stable and constant and adapting it perfectly to the thermal load of the places where terminal units it feeds are installed. This obtains high energy efficiencies and ESEER/IPLV values higher than conventional unit, and a reduction of compressor starting peak currents, thus considerably reducing the risk of malfunctioning or breakages. The EC Inverter axial fans vary their speed according to the required thermal load, with consequent benefits in terms of energy efficiency and silent operation. Moreover, HS-CHAQ-I 39÷98 does not require inertial storage tanks, since the refrigerating capacity delivered is constantly equal to that required while guaranteeing very quiet operation because the fans adjust their speed to the real load of the system, with benefits above all during the night. It also prevents shutdown due to unexpected overloads, by means of an innovative control system which, on being activated, reduces the refrigerating capacity delivered while keeping the unit running.

## VERSION

### HS-CHAQ-I

Reversible Heat Pump

## FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- DC INVERTER Rotary / Twin Rotary / Scroll compressor, complete with overload protection and crankcase heater.
- EC INVERTER axial fans with low ventilation and special wing profile, directly coupled to external rotor motors.
- Condenser with copper tube and aluminium finned coil, complete with drain pan and protection guards.
- Evaporator AISI 316 stainless steel braze welded plates type, complete with water flow switch and antifreeze heater.
- Electronic thermostatic valve.
- R410A refrigerant.
- Electrical panel includes: main switch with door lock device, fuses, compressor and pump remote control switch.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- Water circuit includes: modulating circulating pump with high efficiency DC Brushless motor, flow switch, safety valve, gauge and expansion vessel.
- Microprocessor control and regulation system.
- Communication with Modbus RTU protocol through RS485 serial interface.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

KDS Dual set-point kit

### LOOSE ACCESSORIES

CR Remote control panel  
AG Rubber shock absorbers

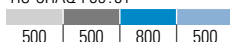


MODEL			39	61	77	98
Heating	Heating capacity (1)	kW	5.6	8.9	11.8	13.9
	Absorbed power (1)	kW	1.7	2.8	3.5	4.4
	COP (1)		3.23	3.22	3.33	3.17
	Heating capacity (2)	kW	5.9	9.2	12.5	14.3
	Absorbed power (2)	kW	1.5	2.3	3.1	3.6
	COP (2)		3.99	4.01	4.09	4.01
Heating (EN14511)	Heating capacity (1)	kW	5.5	8.8	11.7	13.8
	Absorbed power (1)	kW	1.6	2.7	3.4	4.3
	COP (1)		3.35	3.30	3.42	3.24
	EUROVENT Class		A	A	A	A
	Heating capacity (2)	kW	5.8	9.1	12.4	14.2
	Absorbed power (2)	kW	1.4	2.2	3.0	3.5
	COP (2)		4.15	4.10	4.20	4.10
	SCOP (3)		2.83	2.63	2.60	2.58
	Energy Efficiency (3)	%	110	102	101	100
	Energy Class (3)		A+	A+	A+	A+
Cooling	Cooling capacity (4)	kW	3.9	6.1	7.7	9.8
	Absorbed power (4)	kW	1.4	2.1	2.7	3.5
	EER (4)		2.85	2.93	2.85	2.83
	Cooling capacity (5)	kW	5.0	8.2	11.4	13.0
	Absorbed power (5)	kW	1.3	2.2	3.0	3.6
	EER (5)		3.73	3.69	3.84	3.67
Cooling (EN14511)	Cooling capacity (4)	kW	3.9	6.1	7.8	9.9
	Absorbed power (4)	kW	1.3	2.0	2.6	3.4
	EER (4)		3.06	3.07	2.98	2.94
	ESEER		4.45	4.08	4.04	4.29
	EUROVENT Class		B	B	B	B
	Cooling capacity (5)	kW	5.1	8.3	11.6	13.2
	Absorbed power (5)	kW	1.3	2.2	2.9	3.4
	EER (5)		4.01	3.87	4.02	3.83
Compressor	Quantity	n°	1	1	1	1
	Type		Rotary		Twin Rotary	
Electrical characteristics	Power supply	V/Ph/Hz	230/1/50		400/3+N/50	
	Max. running current	A	12	20	25	11
	Max. starting current	A	8	10	16	10
Water circuit	Water flow	l/s	0.28	0.44	0.60	0.68
	Pump available static pressure	kPa	57	32	45	38
	Water connections	"G	1"M	1"M	1"M	1"M
Sound pressure	STD version (6)	dB(A)	50	53	54	54
Weights	Transport weight	Kg	70	87	140	145
	Operating weight	Kg	73	92	147	152

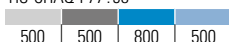
DIMENSIONS			39	61	77	98
L	STD	mm	1100	1200	1220	1220
W	STD	mm	370	370	445	445
H	STD	mm	720	860	1400	1400

#### CLEARANCE AREA

HS-CHAQ-I 39÷61



HS-CHAQ-I 77÷98



#### NOTES

1. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
2. Heated water from 30 to 35 °C, ambient air temperature 7 °C d.b./6 °C w.b.
3. Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Regulation n. 811/2013.
4. Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
5. Chilled water from 23 to 18 °C, ambient air temperature 35 °C.
6. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

## HS-CHAF / HS-CHAQ 42÷205

### FROM 4,2 KW TO 21 KW



**A CLASS ENERGY EFFICIENCY AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, ROTARY/SCROLL COMPRESSOR, PLATE EXCHANGER AND PUMP KIT.**

The HYDROSLIM series is the winning choice for ideal comfort in residential and commercial environments. The range, in A CLASS energy efficiency, excels for its compact sizes, quietness and optimised water circuit, on a peraluman structure. The HYDROSLIM series features R410A refrigerant, ensuring high efficiency with reduced heat exchange surfaces and environment respect thanks to the low quantities of refrigerant used. Particular design features enable immediate and effective use, easy installation and lasting reliability. These extremely compact and high-tech units offer you ideal comfort in all seasons.

Particular design features enable immediate and effective use, easy installation and lasting reliability.



### VERSION

#### HS-CHAF

Cooling only with tank and pump

#### HS-CHAQ

Reversible Heat Pump with tank and pump

### FEATURES

- Structure with supporting frame, in peraluman, galvanized sheet and with rubber shock absorbers on the frame.
- Rotary / Scroll compressor with internal overheat protection and crankcase heater, if needed.
- Axial fan type with low ventilation and special wing profile, directly coupled to external rotor motors.
- Condenser in copper tubes and aluminium finned coil complete with drain pan for HP version only.
- Evaporator AISI 316 stainless steel braze welded plates type, built-in the storage tank.
- R410A refrigerant.
- Electrical panel includes: main switch with door lock device, fuses, compressor contact and pump contact (122÷205).
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- Water circuit includes: water differential pressure switch, insulated tank, circulating pump, safety valve, gauge and expansion vessel inserted in the storage tank.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

- |    |                           |
|----|---------------------------|
| BT | Low water temperature Kit |
| TX | Coil with pre-coated fins |

#### LOOSE ACCESSORIES

- |    |   |
|----|---|
| CR | Remote control panel                        |
| IS | Modbus RTU protocol, RS485 serial interface |
| RP | Coil protection metallic guards             |



MODEL			42	51	64	75	86	104	122	153	186	205
Cooling	Cooling capacity (1)	kW	4.2	5.1	6.4	7.5	8.6	10.4	12.2	15.3	18.6	20.5
	Absorbed power (1)	kW	1.4	1.7	2.1	2.5	2.9	3.5	4.0	5.0	6.0	6.6
	EER (1)		3.00	3.00	3.05	3.00	2.97	2.97	3.05	3.06	3.10	3.11
Cooling (EN14511)	Cooling capacity (1)	kW	4.3	5.2	6.5	7.6	8.7	10.5	12.5	15.6	18.9	20.8
	Absorbed power (1)	kW	1.3	1.6	2.0	2.4	2.8	3.4	3.7	4.7	5.7	6.4
	EER (1)		3.23	3.19	3.20	3.15	3.11	3.10	3.36	3.32	3.29	3.27
	ESEER		3.10	3.25	3.37	3.41	3.37	3.32	3.34	3.38	3.42	3.44
	EUROVENT Class		A	A	A	A	A	A	A	A	A	A
Heating	Heating capacity (2)	kW	5.0	6.0	8.0	8.7	10.3	12.4	14.8	18.8	21.9	24.4
	Absorbed power (2)	kW	1.7	2.0	2.6	2.9	3.5	4.2	4.8	6.2	7.1	8.0
	COP (2)		2.94	3.00	3.08	3.00	2.94	2.95	3.08	3.03	3.08	3.05
Heating (EN14511)	Heating capacity (2)	kW	4.9	5.9	7.9	8.6	10.2	12.3	14.5	18.5	21.7	24.2
	Absorbed power (2)	kW	1.6	2.0	2.5	2.8	3.4	4.1	4.5	5.9	6.9	7.8
	COP (2)		2.99	2.98	3.11	3.06	3.01	3.01	3.21	3.12	3.16	3.11
	EUROVENT Class		C	C	B	B	B	B	A	B	B	A
	SCOP (3)		2.95	3.06	3.17	2.95	3.00	2.99	3.06	3.16	3.18	3.17
	Energy Efficiency (3)	%	115	119	124	115	117	117	119	123	124	124
	Energy Class (3)		A	A	A+	A	A	A	A	A	A+	A+
Compressor	Quantity	n°	1	1	1	1	1	1	1	1	1	1
	Type		Rotary				Scroll					
Electrical characteristics	Power supply	V/Ph/Hz	230/1/50						400/3+N/50			
	Max. running current	A	9	11	14	15	18	23	13	15	17	18
	Max. starting current	A	38	44	63	64	77	88	54	75	78	78
Water circuit	Water flow	l/s	0.20	0.24	0.31	0.36	0.41	0.50	0.58	0.73	0.89	0.98
	Pump available static pressure	kPa	52	48	35	45	41	42	140	123	90	80
	Tank water volume	l	25	25	25	25	25	25	50	50	50	50
	Water connections	"G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1"	1"	1"	1"
Sound pressure	STD version (4)	dB(A)	49	49	49	49	51	52	52	52	52	52
Weights	Transport weight	Kg	96	98	106	110	118	120	192	194	196	198
	Operating weight	Kg	121	123	131	135	143	145	242	244	246	248

DIMENSIONS			42	51	64	75	86	104	122	153	186	205
L	STD	mm	870	870	870	870	870	870	1160	1160	1160	1160
W	STD	mm	320	320	320	320	320	320	500	500	500	500
H	STD	mm	1100	1100	1100	1100	1100	1100	1270	1270	1270	1270

#### CLEARANCE AREA

HS-CHAF / HS-CHAQ 42÷104

200	200	800	200
-----	-----	-----	-----

HS-CHAF / HS-CHAQ 122÷205

200	200	800	200
-----	-----	-----	-----



#### NOTES

- Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
  - Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
  - Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Regulation n. 811/2013.
  - Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of HP version are specified on technical brochure.

## SL-CHAC-HL / SL-CHAQ-HL 73÷160

### FROM 11 KW TO 23 KW

**A CLASS ENERGY EFFICIENCY AIRCOOLED DEDICATED HEAT PUMPS WITH DOMESTIC HOT WATER PRODUCTION, AXIAL FANS, SCROLL COMPRESSOR, PLATE EXCHANGER AND HYDRONIC KIT.**



**HYDROLOGIK**

SANILINE is the line of Heat Pumps dedicated to hot water production up to 60 °C and operations up to -20 °C external air temperature, with Scroll compressors, axial fans and integrated hydronic kit. The unit, featuring A CLASS energy efficiency, is designed to singly handle winter heating, summer air conditioning and the production of high temperature hot water, making use of the electrical energy and heat accumulated in the clean air source, free and infinite, which can also transfer heat to homes. Flexibility is the main feature of the SANILINE series, which is also combined with heating units and managed by the innovative, intelligent HYDROLOGIK control system, optimizing the water setpoint and regulating power supply voltage to the pump and fans, making use of an inertial tank unnecessary. This results in performance with elevated energy efficiency, silent functioning, optimized dimensions and costs. SANILINE is also able to operate in extreme conditions where the external air temperature is very low, as well as intelligently managing integrated elements such as furnaces and electrical heaters. Based on the external air sensor, the microprocessor activates the single integration elements in the system.

### VERSION

#### SL-CHAC-HL

Heat Pump with HYDROLOGIK technology

#### SL-CHAQ-HL

Reversible Heat Pump with HYDROLOGIK technology

### FEATURES

- Structure with supporting frame, in peraluman, galvanized sheet and with rubber shock absorbers on the frame.
- Scroll compressor with internal overheat protection and crankcase heater.
- Axial fan type with low ventilation and special wing profile, directly coupled to external rotor motors.
- Condenser with copper tube and aluminium finned coil, complete with drain pan.
- Evaporator AISI 316 stainless steel braze welded plates type, completed with water differential pressure switch and antifreeze heater.
- R407C refrigerant.
- Electrical panel includes: main switch with door lock device, fuses, compressor and pump remote control switch.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- Water circuit includes: variable speed circulating pump, safety valve, gauge and expansion vessel.
- Microprocessor control and regulation system with HYDROLOGIK technology.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

EH	Supplementary electrical heater
KC	Gas burner integration Kit
TX	Coil with pre-coated fins

#### LOOSE ACCESSORIES

HW	Storage tank for domestic hot water production
CR	Remote control panel
IS	Modbus RTU protocol, RS485 serial interface
RP	Coil protection metallic guards



MODEL			73*	105*	73**	105**	160
Heating	Heating capacity (1)	kW	11.5	16.0	11.5	16.0	22.5
	Absorbed power (1)	kW	3.2	4.6	3.2	4.6	6.5
	COP (1)		3.59	3.48	3.59	3.48	3.46
	Heating capacity (2)	kW	11.3	15.8	11.3	15.8	22.4
	Absorbed power (2)	kW	2.7	3.8	2.7	3.8	5.4
	COP (2)		4.19	4.16	4.19	4.16	4.15
Heating (EN14511)	Heating capacity (1)	kW	11.9	16.4	11.9	16.4	23.0
	Absorbed power (1)	kW	3.2	4.6	3.2	4.6	6.5
	COP (1)		3.72	3.57	3.72	3.57	3.54
	EUROVENT Class		A	A	A	A	A
	SCOP (3)		3.93	4.04	3.93	4.04	3.82
	Energy Efficiency (3)	%	151	155	151	155	148
Cooling	Energy Class (3)		A++	A++	A++	A++	A+
	Cooling capacity (4)	kW	7.3	10.5	7.3	10.5	16.0
	Absorbed power (4)	kW	2.5	3.6	2.5	3.6	5.2
	EER (4)		2.92	2.92	2.92	2.92	3.08
	Cooling capacity (5)	kW	10.8	15.5	10.8	15.5	21.2
	Absorbed power (5)	kW	2.7	4.0	2.7	4.0	6.1
Cooling (EN14511)	EER (5)		4.00	3.88	4.00	3.88	3.48
	Cooling capacity (4)	kW	7.0	10.2	7.0	10.2	15.6
	Absorbed power (4)	kW	2.8	3.9	2.8	3.9	5.6
	EER (4)		2.50	2.62	2.50	2.62	2.79
	ESEER		2.80	3.12	2.80	3.12	3.11
	EUROVENT Class		E	D	E	D	C
Compressor	Quantity	n°	1	1	1	1	1
Supplementary electrical heater	Power supply	V/Ph/Hz	230/1/50				
	Heating capacity	kW	4/6	4/6	4/6	4/6	4/6
	Absorbed current	A	18/26	18/26	18/26	18/26	18/26
	Steps	n°	2	2	2	2	2
Electrical characteristics	Power supply	V/Ph/Hz	230/1/50		400/3+N/50		
	Max. running current	A	26	35	13	15	19
	Max. starting current	A	102	165	45	69	106
Water circuit	Water flow	l/s	0.54	0.75	0.54	0.75	1.07
	Pump available static pressure	kPa	231	185	231	185	156
	Water connections	"G	1"	1"	1"	1"	1"
Sound pressure	STD version (6)	dB(A)	52	52	52	52	52
Weights	Transport weight	Kg	205	208	205	208	210
	Operating weight	Kg	209	212	209	212	214

DIMENSIONS			73*	105*	73**	105**	160
L	STD	mm	1160	1160	1160	1160	1160
W	STD	mm	500	500	500	500	500
H	STD	mm	1270	1270	1270	1270	1270

## CLEARANCE AREA

SL-CHAC-HL / SL-CHAO-HL 73÷160

200	200	800	200
-----	-----	-----	-----



## NOTES

1. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
  2. Heated water from 30 to 35 °C, ambient air temperature 7 °C d.b./6 °C w.b.
  3. Seasonal energy efficiency of ambient heating at medium temperature with average climatic conditions. According to EU Regulation n. 811/2013.
  4. Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
  5. Chilled water from 23 to 18 °C, ambient air temperature 35 °C.
  6. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of reversible version are specified on technical brochure.
- N.B. \* = Single phase
- N.B. \*\* = Three phase



## SL-CHAC-HL / SL-CHAQ-HL 204÷373

### FROM 31 KW TO 53 KW

**A CLASS ENERGY EFFICIENCY AIRCOOLED DEDICATED HEAT PUMPS WITH DOMESTIC HOT WATER PRODUCTION, AXIAL FANS, SCROLL COMPRESSOR, PLATE EXCHANGER AND HYDRONIC KIT.**



**HYDROLOGIK**

SANILINE, featuring A CLASS energy efficiency, is the innovative series of Heat Pumps dedicated to production of hot water up to 60 °C and operation up to -20 °C external air temperature, with Scroll compressors, axial fans and integrated hydronic unit. The unit, designed to originate and control – throughout the year – the best comfort conditions in rooms with a high rate of daily attendance, such as enclosed areas destined to the activities of the service sector, autonomously handles winter heating, summer air conditioning and the production of high temperature sanitary hot water. The SANILINE series, designed with an extremely compact structure for simple installation operations, uses only the electric energy and the heat accumulated in the air, to transfer heat to the rooms, thus allowing considerable energy savings, a high rate of reliability and the shortest start-up times. Flexibility is the main feature of the SANILINE series, which is indeed combined with terminal units and managed by the innovative, intelligent HYDROLOGIK control and optimization system, which renders the use of an inertial tank unnecessary and guarantees performances with elevated energy efficiency and silent functioning.

### VERSION

#### SL-CHAC-HL

Heat Pump with HYDROLOGIK technology

#### SL-CHAQ-HL

Reversible Heat Pump with HYDROLOGIK technology

### FEATURES

- Structure with supporting frame, in peraluman and galvanized sheet.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Axial fan type with low ventilation and special wing profile, directly coupled to external rotor motors.
- Condenser with copper tube and aluminium finned coil.
- Evaporator AISI 316 stainless steel braze welded plates type, completed with water differential pressure switch and antifreeze heater.
- R407C refrigerant.
- Electrical panel includes: main switch with door lock device, fuses, compressor and pump remote control switch.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- Water circuit includes: variable speed circulating pump, safety valve, gauge and expansion vessel.
- Microprocessor control and regulation system with HYDROLOGIK technology.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

EH	Supplementary electrical heater
KC	Gas burner integration Kit
TX	Coil with pre-coated fins

#### LOOSE ACCESSORIES

HW	Storage tank for domestic hot water production
CR	Remote control panel
IS	Modbus RTU protocol, RS485 serial interface
RP	Coil protection metallic guards
AG	Rubber shock absorbers





MODEL			204	289	373
Heating	Heating capacity (1)	kW	30.7	40.2	52.6
	Absorbed power (1)	kW	8.0	10.9	13.6
	COP (1)		3.84	3.69	3.87
	Heating capacity (2)	kW	29.8	40.0	50.2
	Absorbed power (2)	kW	6.7	9.2	11.4
	COP (2)		4.45	4.35	4.40
Heating (EN14511)	Heating capacity (1)	kW	31.4	41.1	53.5
	Absorbed power (1)	kW	8.0	10.9	13.6
	COP (1)		3.93	3.77	3.93
	EUROVENT Class		A	A	A
	SCOP (3)		3.93	3.74	3.74
	Energy Efficiency (3)	%	153	145	145
Cooling	Energy Class (3)		A++	A+	A+
	Cooling capacity (4)	kW	20.4	28.9	37.3
	Absorbed power (4)	kW	6.6	9.3	11.7
	EER (4)		3.09	3.11	3.19
	Cooling capacity (5)	kW	27.6	39.3	47.8
	Absorbed power (5)	kW	7.7	10.7	12.8
Cooling (EN14511)	EER (5)		3.58	3.67	3.73
	Cooling capacity (4)	kW	19.8	28.2	36.5
	Absorbed power (4)	kW	7.2	10.0	12.5
	EER (4)		2.75	2.82	2.92
	ESEER		3.11	3.16	3.27
	EUROVENT Class		C	C	B
Compressor	Quantity	n°	1	1	1
Supplementary electrical heater	Power supply	V/Ph/Hz	400/3/50		
	Heating capacity	kW	6/10	6/10	6/10
	Absorbed current	A	26/43	26/43	26/43
	Steps	n°	2	2	2
Electrical characteristics	Power supply	V/Ph/Hz	400/3+N/50		
	Max. running current	A	28	36	42
	Max. starting current	A	109	139	179
	Water flow	l/s	1.47	1.92	2.51
Water circuit	Pump available static pressure	kPa	230	227	195
	Water connections	"G	1"	1"	1"
Sound pressure	STD version (6)	dB(A)	61	62	64
Weights	Transport weight	Kg	220	235	265
	Operating weight	Kg	224	239	269

DIMENSIONS			204	289	373
L	STD	mm	1850	1850	1850
W	STD	mm	1000	1000	1000
H	STD	mm	1300	1300	1300

## CLEARANCE AREA

SL-CHAC-HL / SL-CHAQ-HL 204-373

500	800	800	800
-----	-----	-----	-----



## NOTES

1. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
  2. Heated water from 30 to 35 °C, ambient air temperature 7 °C d.b./6 °C w.b.
  3. Seasonal energy efficiency of ambient heating at medium temperature with average climatic conditions. According to EU Regulation n. 811/2013.
  4. Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
  5. Chilled water from 23 to 18 °C, ambient air temperature 35 °C.
  6. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of reversible version are specified on technical brochure.





## SL-CHAC-HL / SL-CHAQ-HL 443÷1010

### FROM 57 KW TO 114 KW



HYDROLOGIK

**A CLASS ENERGY EFFICIENCY AIRCOOLED DEDICATED HEAT PUMPS WITH DOMESTIC HOT WATER PRODUCTION, AXIAL FANS, SCROLL COMPRESSORS, PLATE EXCHANGER AND HYDRONIC KIT.**

**SANILINE**, featuring A CLASS energy efficiency, is the innovative series of Heat Pumps dedicated to production of hot water up to 60 °C and operation up to -20 °C external air temperature, with Scroll compressors, axial fans and integrated hydronic unit. The unit, designed to originate and control – throughout the year – the best comfort conditions in rooms with a high rate of daily attendance, such as enclosed areas destined to the activities of the service sector, autonomously handles winter heating, summer air conditioning and the production of high temperature sanitary hot water. The SANILINE series, designed with an extremely compact structure for simple installation operations, uses only the electric energy and the heat accumulated in the air, to transfer heat to the rooms, thus allowing considerable energy savings, a high rate of reliability and the shortest start-up times. Flexibility is the main feature of the SANILINE series, which is indeed combined with terminal units and managed by the innovative, intelligent HYDROLOGIK control and optimization system, which makes the use of an inertial tank unnecessary and guarantees performances with elevated energy efficiency and silent functioning.

### VERSION

#### SL-CHAC-HL

Heat Pump with HYDROLOGIK technology

#### SL-CHAC-SSL-HL

Super silenced Heat Pump with HYDROLOGIK technology

#### SL-CHAQ-HL

Reversible Heat Pump with HYDROLOGIK technology

#### SL-CHAQ-SSL-HL

Super silenced reversible Heat Pump with HYDROLOGIK technology

### FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser with copper tube and aluminium finned coil.
- Evaporator AISI 316 stainless steel braze welded plates type with two independent circuits on the refrigerant side and one on the water side, complete with flow switch and antifreeze heater.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and pump, thermocontacts for fans.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- Water circuit includes: INVERTER circulating pump, safety valve and expansion vessel.
- Microprocessor control and regulation system with HYDROLOGIK technology.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

IM	Automatic circuit breakers
SL	Unit silencing
RFM	Cooling circuit shut-off valve on discharge line
RFL	Cooling circuit shut-off valve on liquid line
DS	Desuperheater
KC	Gas burner integration Kit

SS	Soft start
TX	Coil with pre-coated fins
IS	Modbus RTU protocol, RS485 serial interface

#### LOOSE ACCESSORIES

HW	Storage tank for domestic hot water production
MN	High and low pressure gauges
CR	Remote control panel
RP	Coil protection metallic guards
AG	Rubber shock absorbers
AM	Spring shock absorbers



MODEL			443	604	786	1010
Heating	Heating capacity (1)	kW	57.2	78.3	92.7	114
	Absorbed power (1)	kW	16.3	20.8	25.7	33.7
	COP (1)		3.51	3.76	3.61	3.38
	Heating capacity (2)	kW	55.7	74.4	91.1	112
	Absorbed power (2)	kW	13.7	17.4	21.5	27.1
	COP (2)		4.07	4.28	4.24	4.13
Heating (EN14511)	Heating capacity (1)	kW	58.0	79.2	93.6	116
	Absorbed power (1)	kW	16.3	20.8	25.7	33.7
	COP (1)		3.56	3.81	3.64	3.43
	EUROVENT Class		A	A	A	A
	SCOP (3)		4.36	3.93	3.87	3.72
	Energy Efficiency (3)	%	170	153	151	145
Cooling	Energy Class (3)		A++	A++	A++	A+
	Cooling capacity (4)	kW	44.3	60.4	78.6	101
	Absorbed power (4)	kW	16.4	23.6	34.8	39.1
	EER (4)		2.70	2.56	2.26	2.58
	Cooling capacity (5)	kW	60.3	81.8	101	130
	Absorbed power (5)	kW	18.7	27.5	37.6	42.2
Cooling (EN14511)	EER (5)		3.22	2.97	2.69	3.08
	Cooling capacity (4)	kW	43.6	59.6	77.7	99.7
	Absorbed power (4)	kW	17.1	24.4	35.7	40.4
	EER (4)		2.55	2.44	2.18	2.47
	ESEER		3.08	2.99	2.81	2.96
	EUROVENT Class		D	E	F	E
Compressor	Quantity	n°	2	2	2	2
	Refrigerant circuits	n°	2	2	2	2
	Capacity steps	n°			2	
Electrical characteristics	Power supply	V/Ph/Hz			400/3/50	
	Max. running current	A	44	56	68	84
	Max. starting current	A	125	159	205	246
Water circuit	Water flow	l/s	2.73	3.74	4.43	5.46
	Pump available static pressure	kPa	150	130	110	135
	Water connections	"G	2 1/2"	2 1/2"	2 1/2"	2 1/2"
Sound pressure	STD version (6)	dB(A)	60	61	62	64
	With SL accessory (6)	dB(A)	58	59	60	62
	SSL version (6)	dB(A)	56	57	58	60
Weights	Transport weight	Kg	746	837	856	913
	Operating weight	Kg	755	855	875	935

DIMENSIONS			443	604	786	1010
L	STD	mm	2350	2350	2350	2350
	SSL	mm	2350	2350	2350	3550
W	STD/SSL	mm	1100	1100	1100	1100
H	STD	mm	1920	2220	2220	2220
	SSL	mm	2220	2220	2220	2220

## CLEARANCE AREA

SL-CHAC-HL / SL-CHAO-HL 443 ÷ 1010

300	800	800	1800
-----	-----	-----	------



## NOTES

1. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
  2. Heated water from 30 to 35 °C, ambient air temperature 7 °C d.b./6 °C w.b.
  3. Seasonal energy efficiency of ambient heating at medium temperature with average climatic conditions. According to EU Regulation n. 811/2013.
  4. Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
  5. Chilled water from 23 to 18 °C, ambient air temperature 35 °C.
  6. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of SSL and HP versions are specified on technical brochure.

