

## ► Air-to-Water Reverse Cycle Heat Pumps

# SLH 1202 to 3804

**With Screw Compressors**



261 to 775 kW



287 to 853 kW



**Technical Brochure**

**TM SLH-A.2GB**

Date : November 2004

Supersedes : TM SLH-A.1GB/05.04

**Airwell**

# Design Features

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## General

The SLH air-to-water reverse cycle heat pumps are equipped with low noise level axial fans and are suitable for exterior installation.

The units are supplied with complete charge of oil and HFC 407C refrigerant.

The SLH units are factory tested in compliance with internal quality system specifications and procedures, and are ready for field installation.

The models SLH 1202 to 2602 consist of **2 independent refrigerant circuits** with one semi-hermetic twin screw compressor on each circuit. They are equipped with a dual independent circuit plate type heat exchanger.

The models SLH 2804 to 3804 have **4 independent refrigerant circuits** with one semi-hermetic twin screw compressor on each circuit, two dual independent circuit plate type heat exchangers and two independent electrical boards located on each end of the unit.

The SLH range is available in **4 versions**. Each version is composed of **13 sizes**.

**SLH BLN : Reduced Low Noise Standard Version** equipped with Delta connected fans. Each fan is located in an externally mounted nozzle profile housing generating low sound level. The compressors are housed in a protective box. The SLH BLN units are covering a nominal cooling capacity range from **261 to 775 kW** and a nominal heating capacity range from **287 to 853 kW**.

**SLH LN : Low Noise Version.** These units are fitted with Delta connected fans (each fan is located in an externally mounted nozzle profile housing), with an acoustically insulated box mounted on each compressor and with a fan speed controller. The SLH LN units are covering a nominal cooling capacity range from **247 to 741 kW** and a nominal heating capacity range from **279 to 837 kW**.

**SLH ELN : Extra Low Noise Version** having more fans than the SLH LN version. These units are provided with Star connected low speed fans, greater surface area condenser coils, fan speed controller, acoustically insulated compressors box, and flexible pipes and mufflers mounted on compressor discharge lines. The SLH ELN units are covering a nominal cooling capacity range from **246 to 727 kW** and a nominal heating capacity range from **278 to 824 kW**.

**SLH HET : High Efficiency and High Temperature Version** consisting of same condenser coils and same number of fans as SLH ELN version. The fans are Delta connected and the compressors are housed in protective boxes. These units are provided without fan speed controller, nor flexible pipes and mufflers on discharge lines of compressors. The SLH HET units are suitable for operation, in cooling mode, at high ambient temperatures (up to +46 °C) and are covering a nominal cooling capacity range from **269 to 792 kW** and a nominal heating capacity range from **294 to 852 kW**.

## Reference standards

The following applies to all the sizes and versions belonging to the SLH units :

- Machine Directive : EEC 98/37 (EN 292/1, EN 292/2)
- Low Voltage Directive : EEC 73/23 (EN 60204-1, EN 60439-1)
- Electromagnetic Compatibility Directive : EEC 89/336 as modified by Directive EEC 92/31 (EN 50081-1, EN 50082-2)
- Pressure Equipment Directive : 97/23/CE

## Cabinet and structure

The unit base and frame is of heavy gauge galvanized steel fastened with non-corrosive screws and bolts. Galvanized steel parts are painted with baked-on enamel coloured **white (RAL 9001)**.

The SLH units have a very compact structure, with optimized footprint, designed on 4, 6 and 8.4 meter long bases.

## Semi-hermetic screw compressors

The compressors installed in the SLH units are of semi-hermetic twin screw type.

All compressors are fitted with a standard electronic control system ensuring the following functions :

- protection against high temperature and excessive load ;
- correct direction of rotation ;
- phase monitoring.

The main features of cooling capacity control of each compressor are stated below :

- compressor capacity reduction by means of solenoid valves ;
- capacity reduction steps relative to each compressor : 25% (at start-up and pump down), 50%, 75% and 100% ;
- 6 capacity steps are then provided on 2 refrigerant circuit units : 25%, 50%, 63%, 75%, 87% and 100% and 12 steps on 4 refrigerant circuit units.

Furthermore, the screw compressors are provided with control devices to make the SLH units more reliable :

- electric motor temperature sensor ;
- discharge temperature sensor ;
- liquid injection.

The compressors are complete with an external oil cooler to reduce the compressor discharge temperature; allowing then the unit to operate at higher ambient temperatures (in chiller mode) and to produce hot water at lower ambient temperatures (in heat pump mode).

The compressor oil is cooled by means of an oil/freon plate heat exchanger fed by a thermal expansion valve arranged on the offtake of the main liquid line. The thermal expansion valve is placed downstream a solenoid valve controlled by a thermostat located at the compressor discharge line.

The compressors are supplied with a Part-Winding and/or Star-Delta starting system (refer to section "Compressor electrical data").

## Evaporators

Evaporators are of dual independent circuit brazed plate type heat exchanger.

They are insulated with a 19 mm thick closed cell foam material and are fitted with an electric cable resistance on the external surface to prevent the unit from freezing at a low temperature (down to -18 °C), when the unit is off.

Water connections are of **3" male threaded** type.

Optional inlet and outlet manifolds can be supplied on the units with two evaporators (SLH 2804 to 3804) to ensure single flow and return water connections.

## Condenser coils

The condenser coils are consisting of seamless 1/2" copper tubes, arranged in staggered rows, mechanically expanded into corrugated aluminium fins.

The coil circuiting has been specially adopted to increase the performance of the refrigerant.

# Spécifications (cont'd)

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## Condenser coil fans

The condenser fans are of direct drive propeller type composed of wing contour blades. All fans have diameter of 800 mm. Each of them is fitted with a painted galvanized steel protective guard.

Each fan is equipped with a nozzle profile housing which generates low noise level during the operation of the unit.

## Fan controls

The standard units operate, in chiller mode, with an external air temperature down to -5 °C thanks to the use of a fan step controller which consists in desactivating a certain number of fans for each step.

A stepless fan speed controller can be supplied as optional in order to allow the units to operate with an external air temperature down to -18 °C.

The minimum external operating temperature on LN and ELN units is -18 °C, thanks to the stepless fan speed controller supplied as standard.

## Refrigerant circuits

Each SLH unit has 2 or 4 independent refrigerant circuits according to the models.

Each refrigerant circuit is composed of components as shown in the section "Refrigerant flow diagram".

## Electrical board

Electrical board is a metal box of IP54 weather protection, arranged inside the unit and protected by a horizontally pivoted external panel.

On models SLH 2804 to 3804, an auxiliary electrical board (IP54) in an external metal box is located at the opposite end of the unit. In this case, 2-point power supply connections will be supplied. Single point power supply connections can be provided as optional.

## Control and safety devices

All the SLH units are fitted with the following devices :

### Safety :

- Main disconnect switch equipped with an emergency stop.
- HP switches (two on each circuit) set to 26.5 bar : manual reset from control board.
- LP transducers (one on each circuit) used as pressure switches and set to 1 bar : manual reset from control board. Transducers allow also suction pressure reading.
- Anti-freeze temperature sensor (set to +3 °C).
- Maximum discharge temperature sensor (not displayed).
- Discharge line safety valve set to 29 bar.
- Evaporator safety valve set to 29 bar.
- Water differential pressure switch on evaporator, set to 104 mbar (50 mbar on models SLH 2202 and 2602), corresponding to about 50% of the nominal flow rate.

## Control :

- HP transducers (one on each circuit).
- Evaporator water inlet temperature sensor.
- Evaporator water outlet temperature sensor.
- Ambient air temperature sensor.
- Coil temperature sensor.

## Controls

The SLH units are supplied with a microprocessor based electronic control and management system ensuring the following functions :

### Management of liquid / pump down solenoid valves :

- Compressor starts when solenoid valve is energized.
- Pump down takes place when solenoid valve is de-energized.

### Management of compressor operation :

- Start-up / Stop.
- Management of delays at start-up.

**Chilled/hot water temperature control** on evaporator water return or leaving :

- Control on return water : proportional type (RWT P) or integral proportional type (RWT P+I) with integration time to be parametrized.
- Control on leaving water (LWT).

Standard control : RWT P.

### Evaporator protection.

### Fan protection.

### Automatic coil defrost management.

### Hydraulic module management.

### Management of high and low pressure alarms.

### Remote control management :

- Unit start-up and stop.
- Alarm signalling.

**Programming of 4 hour periods** with 4 different set points.

### Alarm records.

### Counting of compressor and pump (if present) operation hours.

**Operating mode "Night/Low noise"** (for versions LN and ELN only).

# Spécifications (cont'd)

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## Controls (cont'd)

The electronic controller provides for a clear signalling, on the LCD, of any unit control parameters, such as :

- Display of the circuit 1 and circuit 2 discharge pressure.
- Display of the circuit 1 and circuit 2 suction pressure.
- Display of the return water temperature.
- Display of the leaving water temperature.
- Display of the ambient air temperature.
- Display of the coil temperature.
- Display of the various alarms and operation conditions :
  - ◆ Inlet water temperature.
  - ◆ Outlet water temperature.
  - ◆ High / low pressure.
  - ◆ Ambient air temperature.
  - ◆ Evaporator anti-freeze.
  - ◆ Lack of water.
  - ◆ Phase sequence monitoring.
  - ◆ Compressor thermal protection.
  - ◆ Fan thermal protection.
  - ◆ Remote unit OFF.
- Remote ON/OFF contact.
- Contacts for the forced unloading of compressors or for the second set point.
- Contacts signalling that the compressors are running.
- Contact signalling that the unit is switched on.
- Contact signalling that the unit is alarmed.

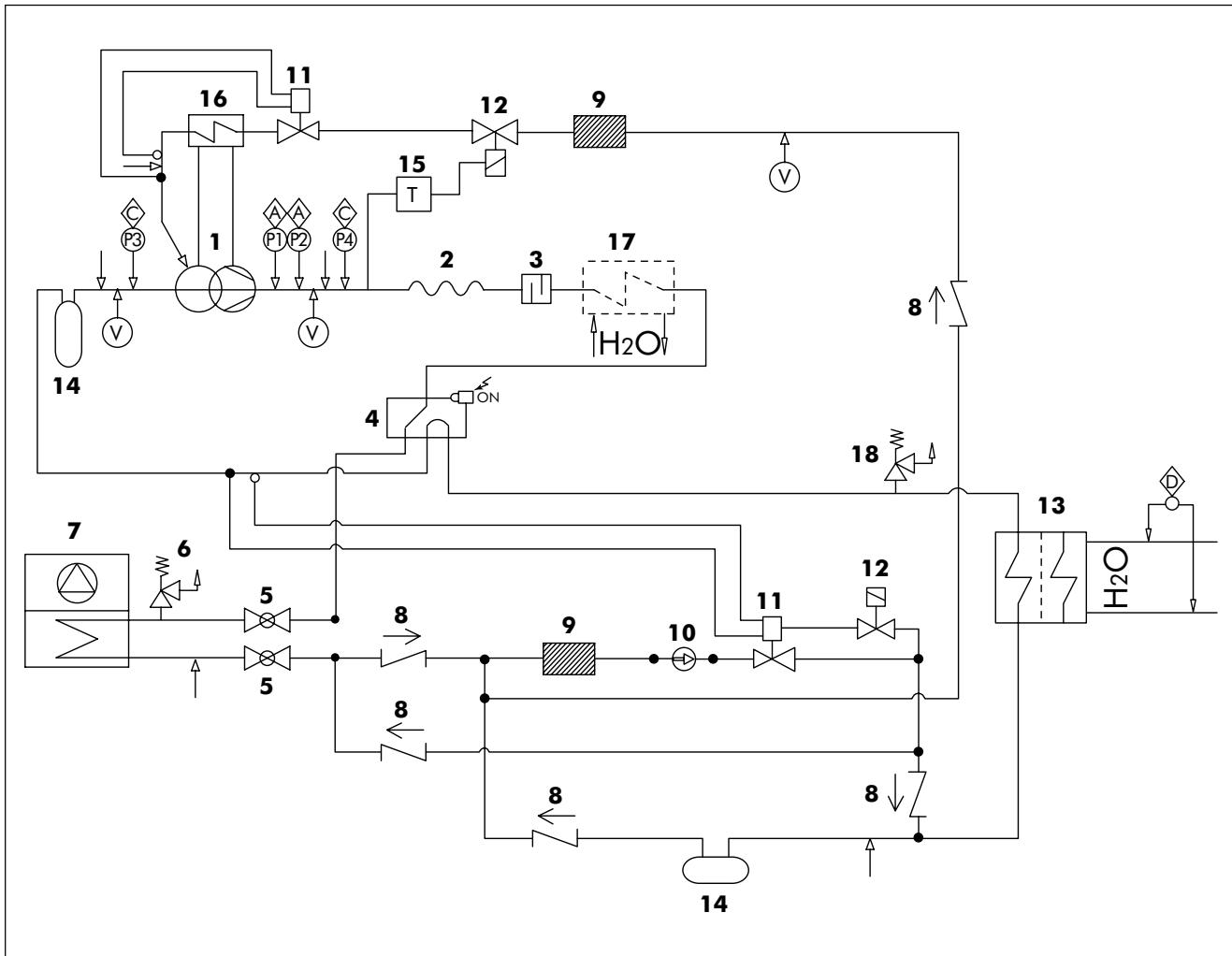
## Factory-installed options

- Condenser coils with hydrophilic coated fins.
- Condenser coils with vinyl coated fins.
- Condenser coils with polyurethane coated fins.
- Condenser coils with copper fins.
- Condenser coils with tinned copper fins.
- Manometers.
- Condenser coil guards.
- High pressure fans (80 Pa) for versions BLN and HET only.
- Low/high pressure pump kit with accessories.
- Integrated hydraulic module (with 1 or 2 low/high pressure pump(s) + accessories) equipped with an insulated water tank :
  - ◆ 750 litres : models SLH 1202 to 2002.
  - ◆ 1000 litres : models SLH 2202 to 2602.
- Fan speed controller for versions BLN and HET (not compatible with high pressure fans).

## Field-installed accessories

- Water filter.
- Flow switch.
- Spring anti-vibration mounts.
- Remote wall mounted display terminal.
- RS 485 serial communication (BMS), Modbus compatible.
- GSM modem :  
For information communication and transfer by SMS (SIM card not supplied).
- Chiller Black Box :  
Electronic board memorizing machine information intended for maintenance works :
  - Last memorized alarms (date and type).
  - Entering and leaving water temperature report.
  - Suction and discharge pressure report.
- External hydraulic module (with 1 or 2 low/high pressure pump(s) + accessories) equipped with an insulated water tank :
  - ◆ 1000 litres : model SLH 1202.
  - ◆ 1500 litres : models SLH 1402 to 2402.
  - ◆ 2500 litres : model SLH 2602.
- Single point power supply connections (for models 2804 to 3804).

# Refrigerant Flow Diagram



## Components :

- 1) Screw compressor
- 2) Flexible pipe
- 3) Muffler
- 4) Reverse cycle 4-way valve
- 5) Liquid valve
- 6) Safety valve
- 7) Condenser coil
- 8) Non-return valve
- 9) Filter-drier
- 10) Sight glass
- 11) Thermostatic expansion valve
- 12) Solenoid valve

- 13) Plate heat exchanger (evaporator)
- 14) Liquid separator
- 15) Thermostat
- 16) Oil cooler
- 17) Desuperheater (optional)
- 18) Safety valve

## Safety devices :

- (A) High pressure switch
- (B) Transducer
- (D) Water differential pressure switch

**Note :** each unit has 2 or 4 refrigerant circuits according to the models. For reasons of readability, one circuit only is shown.

# Operating Limits

SLH models			1202		1402		1602		1802		1902		2002		2202		
			Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
Chilled liquid	Liquid outlet temperature	Water outlet	°C	+5 to +15													
		Brine outlet (low liquid temperature application)	°C	Not available													
		Water temp. difference	K	3 to 8													
Ambient air	Air entering temperature	Flow rate (1)	l/s	7.8	20.8	8.7	23.3	9.8	26.0	10.6	28.2	12.0	31.9	12.6	33.5	13.6	36.3
		Pressure drop (1)	kPa	11.7	83.1	14.7	104.6	12.5	89.2	11.0	78.0	14.0	99.9	15.5	109.9	13.4	95.6
		Maximum operating pressure - Water side	bar	10													
		Cooling - BLN version	°C	-5 °C (2) to +44 °C													
		Cooling - LN version	°C	-18 °C to +44 °C													
Hot water		Cooling - ELN version	°C	-18 °C to +40 °C													
		Cooling - HET version	°C	-5 °C (2) to +46 °C													
	External static pressure	Heating	°C	-5 °C to +20 °C													
		Standard fans	Pa	0													
		High pressure fans	Pa	80													
		Liquid outlet temperature	°C	+30 °C to +50 °C													
Recommended minimum water volume of the system (water tank + installation) (3)			litres	1956		2194		2450		2658		3008		3155		3420	
Nominal supply voltage (4)			V	400 V / 3 Ph / 50 Hz													

## Notes :

- 1) Flow rate and pressure drop given for SLH BLN units.  
 2) Minimum ambient temperature : -18 °C with fan speed controller (optional).  
 3) Data given for water volume of 7.5 litres/kW.  
 4) Tolerance : 400 V ± 10 %.

SLH models			2402		2602		2804		3204		3604		3804			
			Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.		
Chilled liquid	Liquid outlet temperature	Water outlet	°C	+5 to +15												
		Brine outlet (low liquid temperature application)	°C	Not available												
		Water temp. difference	K	3 to 8												
Ambient air	Air entering temperature	Flow rate (1)	l/s	14.2	37.8	15.8	42.1	8.7	23.3	9.8	26.0	10.6	28.2	11.6	30.9	
		Pressure drop (1)	kPa	14.6	103.7	16.0	114.1	14.7	104.6	12.5	89.2	11.0	78.0	13.1	93.3	
		Maximum operating pressure - Water side	bar	10												
		Cooling - BLN version	°C	-5 °C (2) to +44 °C												
		Cooling - LN version	°C	-18 °C to +44 °C												
Hot water		Cooling - ELN version	°C	-18 °C to +40 °C												
		Cooling - HET version	°C	-5 °C (2) to +46 °C												
	External static pressure	Heating	°C	-5 °C to +20 °C												
		Standard fans	Pa	0												
		High pressure fans	Pa	80												
		Liquid outlet temperature	°C	+30 °C to +50 °C												
Recommended minimum water volume of the system (water tank + installation) (3)			litres	3562		3962		4387		4901		5316		5813		
Nominal supply voltage (4)			V	400 V / 3 Ph / 50 Hz												

## Notes :

- 1) Flow rate and pressure drop given for SLH BLN units. On models 2804 to 3804, the flow rate and pressure drop are given for each evaporator.  
 2) Minimum ambient temperature : -18 °C with fan speed controller (optional).  
 3) Data given for water volume of 7.5 litres/kW.  
 4) Tolerance : 400 V ± 10 %.

# Correction Factors

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## Fouling factors

EVAPORATOR		
Fouling factor ( $\text{m}^2 \cdot ^\circ\text{C}/\text{kW}$ )	Cooling capacity factor	Power input factor
0.044	1.000	1.000
0.088	0.987	0.995
0.176	0.964	0.985
0.352	0.915	0.962

CONDENSER		
Fouling factor ( $\text{m}^2 \cdot ^\circ\text{C}/\text{kW}$ )	Cooling capacity factor	Power input factor
0.044	1.000	1.000
0.088	0.987	1.023
0.176	0.955	1.068
0.352	0.910	1.135

## Altitude factors

Altitude (m)	Cooling capacity factor	Power input factor
0	1.000	1.000
600	0.987	1.010
1200	0.973	1.020
1800	0.958	1.029
2400	0.943	1.038

# Physical Data SLH 1202 to 2202 - BLN Version

<b>SLH BLN models</b>		<b>1202</b>	<b>1402</b>	<b>1602</b>	<b>1802</b>	<b>1902</b>	<b>2002</b>	<b>2202</b>
Nominal cooling capacity (1)	kW	260.8	292.5	326.7	354.4	401.0	420.7	456.0
Power input (3)	kW	102.2	109.2	126.7	138.0	147.9	158.1	176.6
EER		2.6	2.7	2.6	2.6	2.7	2.7	2.6
Nominal heating capacity (2)	kW	287.5	321.1	359.0	389.3	441.5	463.8	500.3
Power input (3)	kW	96.6	106.9	119.4	132.8	141.5	154.3	161.3
COP		3.0	3.0	3.0	2.9	3.1	3.0	3.1
Number of refrigerant circuits		2	2	2	2	2	2	2
Number of capacity steps					6			
<b>Compressors</b>								
Number		2	2	2	2	2	2	2
Type						Twin screw		
<b>Evaporators</b>								
Number		1	1	1	1	1	1	1
Type						Plate		
Water content per evaporator	litres	26	26	33	40	40	40	50
<b>Condensers</b>								
Number of coils		4	4	4	4	4	4	4
Face area per coil	m <sup>2</sup>	4	4	4	4	4	4	6
Number of rows		3	3	3	3	4	4	3
<b>Fans</b>								
Number of fans		4	6	6	8	8	8	8
Nominal fan speed	rpm	900	900	900	900	900	900	900
Total air flow	m <sup>3</sup> /h	95 000	134 000	134 000	160 000	150 000	150 000	183 000
Total power	kW	8.0	12.0	12.0	16.0	16.0	16.0	16.0
<b>Weight</b>								
Shipping weight	kg	3540	3960	4000	4075	4510	4880	5600
Operating weight	kg	3566	3986	4033	4115	4550	4920	5650
<b>Sound levels</b>								
Sound power levels (4)	dB(A)	96.0	97.0	97.0	98.0	98.0	98.0	98.0
Sound pressure levels at 10 m (5)	dB(A)	64.0	65.0	65.0	66.0	66.0	66.0	66.0
<b>Dimensions</b>								
Length	mm	4030	4030	4030	4030	4030	4030	6030
Width	mm	2200	2200	2200	2200	2200	2200	2200
Height	mm	2550	2550	2550	2550	2550	2550	2550

(1) Data based on leaving chilled water temperature of 7 °C and ambient air temperature of 35 °C.

(2) Data based on leaving hot water temperature of 45 °C and ambient air temperature of 7 °C/88 % HR.

(3) Data given for compressors only.

(4) Sound levels given at fully loaded conditions. Sound power level values refer to ISO 3744 and Eurovent 8/1.

(5) Sound pressure level values refer to ISO 3744.

# Physical Data SLH 2402 to 3804 - BLN Version

<b>SLH BLN models</b>		<b>2402</b>	<b>2602</b>	<b>2804</b>	<b>3204</b>	<b>3604</b>	<b>3804</b>
Nominal cooling capacity (1)	kW	474.9	528.3	585.0	653.4	708.8	775.1
Power input (3)	kW	185.2	201.0	218.4	253.4	276.0	296.1
EER		2.6	2.6	2.7	2.6	2.6	2.6
Nominal heating capacity (2)	kW	522.1	581.3	642.3	718.0	778.7	853.1
Power input (3)	kW	181.1	191.0	213.7	238.8	265.5	287.1
COP		2.9	3.0	3.0	3.0	2.9	3.0
Number of refrigerant circuits		2	2	4	4	4	4
Number of capacity steps		6			12		
<b>Compressors</b>							
Number		2	2	4	4	4	4
Type				Twin screw			
<b>Evaporators</b>							
Number		1	1	2	2	2	2
Type				Plate			
Water content per evaporator	litres	50	50	26/26	33/33	40/40	40/40
<b>Condensers</b>							
Number of coils		4	4	8	8	8	8
Face area per coil	m <sup>2</sup>	6	6	8	8	8	8
Number of rows		3	4	3	3	3	3/4
<b>Fans</b>							
Number of fans		8	8	12	12	16	16
Nominal fan speed	rpm	900	900	900	900	900	900
Total air flow	m <sup>3</sup> /h	183 000	178 000	268 000	268 000	320 000	310 000
Total power	kW	16.0	16.0	24.0	24.0	32.0	32.0
<b>Weight</b>							
Shipping weight	kg	5960	6230	7920	8000	8150	8955
Operating weight	kg	6010	6280	7973	8066	8230	9035
<b>Sound levels</b>							
Sound power levels (4)	dB(A)	98.0	98.0	100.0	100.0	101.0	101.0
Sound pressure levels at 10 m (5)	dB(A)	66.0	66.0	68.0	68.0	69.0	69.0
<b>Dimensions</b>							
Length	mm	6030	6030	8400	8400	8400	8400
Width	mm	2200	2200	2200	2200	2200	2200
Height	mm	2550	2550	2550	2550	2550	2550

(1) Data based on leaving chilled water temperature of 7 °C and ambient air temperature of 35 °C.

(2) Data based on leaving hot water temperature of 45 °C and ambient air temperature of 7 °C/88 % HR.

(3) Data given for compressors only.

(4) Sound levels given at fully loaded conditions. Sound power level values refer to ISO 3744 and Eurovent 8/1.

(5) Sound pressure level values refer to ISO 3744.

# Physical Data SLH 1202 to 2202 - LN Version

<b>SLH LN models</b>	<b>1202</b>	<b>1402</b>	<b>1602</b>	<b>1802</b>	<b>1902</b>	<b>2002</b>	<b>2202</b>	
Nominal cooling capacity (1)	kW	247.5	282.2	313.5	340.7	384.1	400.2	436.2
Power input (3)	kW	107.8	113.8	132.5	145.4	155.0	164.9	185.1
EER		2.3	2.5	2.4	2.3	2.5	2.4	2.4
Nominal heating capacity (2)	kW	278.6	312.9	348.8	380.8	427.7	456.4	484.8
Power input (3)	kW	96.0	106.3	118.8	132.5	140.7	156.0	160.4
COP		2.9	2.9	2.9	2.9	3.0	2.9	3.0
Number of refrigerant circuits		2	2	2	2	2	2	2
Number of capacity steps					6			
<b>Compressors</b>								
Number		2	2	2	2	2	2	2
Type					Twin screw			
<b>Evaporators</b>								
Number		1	1	1	1	1	1	1
Type					Plate			
Water content per evaporator	litres	26	26	33	40	40	40	50
<b>Condensers</b>								
Number of coils		4	4	4	4	4	4	4
Face area per coil	m <sup>2</sup>	4	4	4	4	4	4	6
Number of rows		3	3	3	3	4	4	3
<b>Fans</b>								
Number of fans		4	6	6	8	8	8	8
Nominal fan speed	rpm	700	700	700	700	700	700	700
Total air flow	m <sup>3</sup> /h	67 000	94 000	94 000	112 500	105 000	105 000	128 000
Total power	kW	8.0	12.0	12.0	16.0	16.0	16.0	16.0
<b>Weight</b>								
Shipping weight	kg	3540	3960	4000	4075	4510	4880	5600
Operating weight	kg	3566	3986	4033	4115	4550	4920	5650
<b>Sound levels</b>								
Sound power levels (4)	dB(A)	91.0	92.0	92.0	92.0	92.0	92.0	92.0
Sound pressure levels at 10 m (5)	dB(A)	59.0	60.0	60.0	60.0	60.0	60.0	60.0
<b>Dimensions</b>								
Length	mm	4030	4030	4030	4030	4030	4030	6030
Width	mm	2200	2200	2200	2200	2200	2200	2200
Height	mm	2550	2550	2550	2550	2550	2550	2550

(1) Data based on leaving chilled water temperature of 7 °C and ambient air temperature of 35 °C.

(2) Data based on leaving hot water temperature of 45 °C and ambient air temperature of 7 °C/88 % HR.

(3) Data given for compressors only.

(4) Sound levels given at fully loaded conditions. Sound power level values refer to ISO 3744 and Eurovent 8/1.

(5) Sound pressure level values refer to ISO 3744.

# Physical Data SLH 2402 to 3804 - LN Version

<b>SLH LN models</b>		<b>2402</b>	<b>2602</b>	<b>2804</b>	<b>3204</b>	<b>3604</b>	<b>3804</b>
Nominal cooling capacity (1)	kW	453.4	503.1	564.4	627.0	681.5	740.9
Power input (3)	kW	194.8	211.4	227.6	265.0	290.8	310.3
EER		2.3	2.4	2.5	2.4	2.3	2.4
Nominal heating capacity (2)	kW	512.8	561.0	625.8	697.6	761.5	837.1
Power input (3)	kW	183.2	189.9	212.6	237.6	265.0	288.5
COP		2.8	3.0	2.9	2.9	2.9	2.9
Number of refrigerant circuits		2	2	4	4	4	4
Number of capacity steps		6			12		
<b>Compressors</b>							
Number		2	2	4	4	4	4
Type				Twin screw			
<b>Evaporators</b>							
Number		1	1	2	2	2	2
Type				Plate			
Water content per evaporator	litres	50	50	26/26	33/33	40/40	40/40
<b>Condensers</b>							
Number of coils		4	4	8	8	8	8
Face area per coil	m <sup>2</sup>	6	6	8	8	8	8
Number of rows		3	4	3	3	3	3/4
<b>Fans</b>							
Number of fans		8	8	12	12	16	16
Nominal fan speed	rpm	700	700	700	700	700	700
Total air flow	m <sup>3</sup> /h	128 000	125 000	188 000	188 000	225 000	217 500
Total power	kW	16.0	16.0	24.0	24.0	32.0	32.0
<b>Weight</b>							
Shipping weight	kg	5960	6230	7920	8000	8150	8955
Operating weight	kg	6010	6280	7973	8066	8230	9035
<b>Sound levels</b>							
Sound power levels (4)	dB(A)	92.0	92.0	95.0	95.0	95.0	95.0
Sound pressure levels at 10 m (5)	dB(A)	60.0	60.0	63.0	63.0	63.0	63.0
<b>Dimensions</b>							
Length	mm	6030	6030	8400	8400	8400	8400
Width	mm	2200	2200	2200	2200	2200	2200
Height	mm	2550	2550	2550	2550	2550	2550

(1) Data based on leaving chilled water temperature of 7 °C and ambient air temperature of 35 °C.

(2) Data based on leaving hot water temperature of 45 °C and ambient air temperature of 7 °C/88 % HR.

(3) Data given for compressors only.

(4) Sound levels given at fully loaded conditions. Sound power level values refer to ISO 3744 and Eurovent 8/1.

(5) Sound pressure level values refer to ISO 3744.

# Physical Data SLH 1202 to 2202 - ELN Version

<b>SLH ELN models</b>		<b>1202</b>	<b>1402</b>	<b>1602</b>	<b>1802</b>	<b>1902</b>	<b>2002</b>	<b>2202</b>
Nominal cooling capacity (1)	kW	246.5	276.0	315.3	339.8	375.6	403.1	428.3
Power input (3)	kW	108.2	116.7	131.7	146.0	158.8	164.0	188.6
EER		2.3	2.4	2.4	2.3	2.4	2.5	2.3
Nominal heating capacity (2)	kW	278.4	300.2	341.7	372.8	421.4	457.5	465.2
Power input (3)	kW	96.3	105.9	118.8	132.3	140.9	155.9	159.9
COP		2.9	2.8	2.9	2.8	3.0	2.9	2.9
Number of refrigerant circuits		2	2	2	2	2	2	2
Number of capacity steps					6			
<b>Compressors</b>								
Number		2	2	2	2	2	2	2
Type					Twin screw			
<b>Evaporators</b>								
Number		1	1	1	1	1	1	1
Type					Plate			
Water content per evaporator	litres	26	26	33	40	40	40	50
<b>Condensers</b>								
Number of coils		4	4	4	4	4	4	4
Face area per coil	m <sup>2</sup>	4	4	4	4	6	6	6
Number of rows		3	4	4	4	3	3	4
<b>Fans</b>								
Number of fans		6	6	8	8	8	10	8
Nominal fan speed	rpm	500	500	500	550	500	500	500
Total air flow	m <sup>3</sup> /h	67 000	62 000	75 000	81 900	91 500	108 400	89 000
Total power	kW	7.5	7.5	10.0	10.0	10.0	12.5	10.0
<b>Weight</b>								
Shipping weight	kg	3610	4160	4270	4280	5440	5880	5850
Operating weight	kg	3636	4186	4303	4320	5480	5920	5900
<b>Sound levels</b>								
Sound power levels (4)	dB(A)	88.3	88.3	88.7	88.7	88.7	88.7	88.7
Sound pressure levels at 10 m (5)	dB(A)	56.0	56.0	57.0	57.0	57.0	57.0	57.0
<b>Dimensions</b>								
Length	mm	4030	4030	4030	4030	6030	6030	6030
Width	mm	2200	2200	2200	2200	2200	2200	2200
Height	mm	2550	2550	2550	2550	2550	2550	2550

(1) Data based on leaving chilled water temperature of 7 °C and ambient air temperature of 35 °C.

(2) Data based on leaving hot water temperature of 45 °C and ambient air temperature of 7 °C/88 % HR.

(3) Data given for compressors only.

(4) Sound levels given at fully loaded conditions. Sound power level values refer to ISO 3744 and Eurovent 8/1.

(5) Sound pressure level values refer to ISO 3744.

# Physical Data SLH 2402 to 3804 - ELN Version

<b>SLH ELN models</b>		<b>2402</b>	<b>2602</b>	<b>2804</b>	<b>3204</b>	<b>3604</b>	<b>3804</b>
Nominal cooling capacity (1)	kW	458.4	493.8	552.0	630.6	679.7	726.9
Power input (3)	kW	192.5	215.5	233.4	263.4	292.0	315.1
EER		2.4	2.3	2.4	2.4	2.3	2.3
Nominal heating capacity (2)	kW	507.0	543.0	600.4	683.4	745.6	823.7
Power input (3)	kW	185.7	189.5	211.8	237.6	264.6	292.4
COP		2.7	2.9	2.8	2.9	2.8	2.8
Number of refrigerant circuits		2	2	4	4	4	4
Number of capacity steps		6		12			
<b>Compressors</b>							
Number		2	2	4	4	4	4
Type				Twin screw			
<b>Evaporators</b>							
Number		1	1	2	2	2	2
Type				Plate			
Water content per evaporator	litres	50	50	26/26	33/33	40/40	40/40
<b>Condensers</b>							
Number of coils		4	4	8	8	8	8
Face area per coil	m <sup>2</sup>	6	6	8	8	8	8
Number of rows		4	5	4	4	4	4/5
<b>Fans</b>							
Number of fans		10	10	12	16	16	16
Nominal fan speed	rpm	500	500	500	500	550	550
Total air flow	m <sup>3</sup> /h	102 000	97 000	124 000	150 000	163 800	158 000
Total power	kW	12.5	12.5	15.0	20.0	20.0	20.0
<b>Weight</b>							
Shipping weight	kg	6280	6510	8320	8540	8560	9380
Operating weight	kg	6330	6560	8373	8606	8640	9460
<b>Sound levels</b>							
Sound power levels (4)	dB(A)	89.0	89.0	91.0	92.0	92.0	92.0
Sound pressure levels at 10 m (5)	dB(A)	56.7	56.7	59.0	60.0	60.0	60.0
<b>Dimensions</b>							
Length	mm	6030	6030	8400	8400	8400	8400
Width	mm	2200	2200	2200	2200	2200	2200
Height	mm	2550	2550	2550	2550	2550	2550

(1) Data based on leaving chilled water temperature of 7 °C and ambient air temperature of 35 °C.

(2) Data based on leaving hot water temperature of 45 °C and ambient air temperature of 7 °C/88 % HR.

(3) Data given for compressors only.

(4) Sound levels given at fully loaded conditions. Sound power level values refer to ISO 3744 and Eurovent 8/1.

(5) Sound pressure level values refer to ISO 3744.

# Physical Data SLH 1202 to 2202 - HET Version

<b>SLH HET models</b>		<b>1202</b>	<b>1402</b>	<b>1602</b>	<b>1802</b>	<b>1902</b>	<b>2002</b>	<b>2202</b>
Nominal cooling capacity (1)	kW	269.4	299.2	341.2	365.8	415.8	437.2	471.3
Power input (3)	kW	98.6	106.2	120.5	132.2	146.1	152.4	169.9
EER		2.7	2.8	2.8	2.8	2.8	2.9	2.8
Nominal heating capacity (2)	kW	293.7	319.8	363.2	390.3	449.8	471.5	500.6
Power input (3)	kW	97.5	107.1	120.0	132.8	140.5	153.4	161.9
COP		3.0	3.0	3.0	2.9	3.2	3.1	3.1
Number of refrigerant circuits		2	2	2	2	2	2	2
Number of capacity steps					6			
<b>Compressors</b>								
Number		2	2	2	2	2	2	2
Type						Twin screw		
<b>Evaporators</b>								
Number		1	1	1	1	1	1	1
Type						Plate		
Water content per evaporator	litres	26	26	33	40	40	40	50
<b>Condensers</b>								
Number of coils		4	4	4	4	4	4	4
Face area per coil	m <sup>2</sup>	4	4	4	4	6	6	6
Number of rows		3	4	4	4	3	3	4
<b>Fans</b>								
Number of fans		6	6	8	8	8	10	8
Nominal fan speed	rpm	900	900	900	900	900	900	900
Total air flow	m <sup>3</sup> /h	134 000	124 000	150 000	150 000	183 000	216 800	178 000
Total power	kW	12.0	12.0	16.0	16.0	16.0	20.0	16.0
<b>Weight</b>								
Shipping weight	kg	3610	4160	4270	4280	5440	5880	5850
Operating weight	kg	3636	4186	4303	4320	5480	5920	5900
<b>Sound levels</b>								
Sound power levels (4)	dB(A)	96.7	96.7	98.0	98.0	98.0	98.0	98.0
Sound pressure levels at 10 m (5)	dB(A)	64.4	64.4	66.0	66.0	66.0	66.0	66.0
<b>Dimensions</b>								
Length	mm	4030	4030	4030	4030	6030	6030	6030
Width	mm	2200	2200	2200	2200	2200	2200	2200
Height	mm	2550	2550	2550	2550	2550	2550	2550

(1) Data based on leaving chilled water temperature of 7 °C and ambient air temperature of 35 °C.

(2) Data based on leaving hot water temperature of 45 °C and ambient air temperature of 7 °C/88 % HR.

(3) Data given for compressors only.

(4) Sound levels given at fully loaded conditions. Sound power level values refer to ISO 3744 and Eurovent 8/1.

(5) Sound pressure level values refer to ISO 3744.

# Physical Data SLH 2402 to 3804 - HET Version

<b>SLH HET models</b>		<b>2402</b>	<b>2602</b>	<b>2804</b>	<b>3204</b>	<b>3604</b>	<b>3804</b>
Nominal cooling capacity (1)	kW	499.3	546.5	598.4	682.4	731.7	792.0
Power input (3)	kW	174.1	192.3	212.4	241.0	264.4	288.1
EER		2.9	2.8	2.8	2.8	2.8	2.7
Nominal heating capacity (2)	kW	525.3	585.6	639.6	726.4	780.6	852.0
Power input (3)	kW	180.6	191.8	214.2	240.0	265.5	287.6
COP		2.9	3.1	3.0	3.0	2.9	3.0
Number of refrigerant circuits		2	2	4	4	4	4
Number of capacity steps		6			12		
<b>Compressors</b>							
Number		2	2	4	4	4	4
Type				Twin screw			
<b>Evaporators</b>							
Number		1	1	2	2	2	2
Type				Plate			
Water content per evaporator	litres	50	50	26/26	33/33	40/40	40/40
<b>Condensers</b>							
Number of coils		4	4	8	8	8	8
Face area per coil	m <sup>2</sup>	6	6	8	8	8	8
Number of rows		4	5	4	4	4	4/5
<b>Fans</b>							
Number of fans		10	10	12	16	16	16
Nominal fan speed	rpm	900	900	900	900	900	900
Total air flow	m <sup>3</sup> /h	204 000	194 000	248 000	300 000	300 000	288 500
Total power	kW	20.0	20.0	24.0	32.0	32.0	32.0
<b>Weight</b>							
Shipping weight	kg	6280	6510	8320	8540	8560	9380
Operating weight	kg	6330	6560	8373	8606	8640	9460
<b>Sound levels</b>							
Sound power levels (4)	dB(A)	98.0	98.0	100.0	100.0	101.0	101.0
Sound pressure levels at 10 m (5)	dB(A)	65.7	65.7	68.0	68.0	69.0	69.0
<b>Dimensions</b>							
Length	mm	6030	6030	8400	8400	8400	8400
Width	mm	2200	2200	2200	2200	2200	2200
Height	mm	2550	2550	2550	2550	2550	2550

(1) Data based on leaving chilled water temperature of 7 °C and ambient air temperature of 35 °C.

(2) Data based on leaving hot water temperature of 45 °C and ambient air temperature of 7 °C/88 % HR.

(3) Data given for compressors only.

(4) Sound levels given at fully loaded conditions. Sound power level values refer to ISO 3744 and Eurovent 8/1.

(5) Sound pressure level values refer to ISO 3744.

# Electrical Data - SLH 1202 to 2602

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## Compressors electrical data

SLH models	Circuits	Starting type (*)	Power input at nominal conditions (kW)	Curr. input at nominal conditions (A)	Power input at max. conditions (kW)	Curr. input at max. conditions FLA (A)	Starting current LRA (A)	Crankcase heater 230 V/1 Ph (W)	Nominal power factor
1202	1	P/W	49	87.4	58.3	96	373	200	0.81
	2	P/W	49	87.4	58.3	96	373	200	0.81
1402	1	P/W	56.9	101.5	67.7	124	280	200	0.81
	2	P/W	56.9	101.5	67.7	124	280	200	0.81
1602	1	P/W	65.1	116.1	77.4	140	351	200	0.81
	2	P/W	65.1	116.1	77.4	140	351	200	0.81
1802	1	P/W	75	129.0	96	162	423	200	0.84
	2	P/W	75	129.0	96	162	423	200	0.84
1902	1	P/W	78.6	140.2	93.5	168	495	200	0.81
	2	P/W	78.6	140.2	93.5	168	495	200	0.81
2002	1	P/W	87	149.7	110	180	520	300	0.84
	2	P/W	87	149.7	110	180	520	300	0.84
2202	1	S/D	94.6	168.8	112.6	196	276	200	0.81
	2	S/D	94.6	168.8	112.6	196	276	200	0.81
2402	1	S/D	102	175.5	132	216	314	300	0.84
	2	S/D	102	175.5	132	216	314	300	0.84
2602	1	S/D	111.3	198.6	132.3	225	354	275	0.81
	2	S/D	111.3	198.6	132.3	225	354	275	0.81

(\*) P/W : Part-Winding ; S/D : Star/Delta.

## Fans electrical data

SLH models	1202	1402	1602	1802	1902	2002	2202	2402	2602
Number of fans	4	6	6	8	8	8	8	8	8
<b>Standard fans - BLN and LN versions</b>									
Nominal power per fan kW	2	2	2	2	2	2	2	2	2
Maximum running current A	4	4	4	4	4	4	4	4	4
Total power kW	8.0	12.0	12.0	16.0	16.0	16.0	16.0	16.0	16.0
Total maximum current A	16.0	24.0	24.0	32.0	32.0	32.0	32.0	32.0	32.0

SLH models	1202	1402	1602	1802	1902	2002	2202	2402	2602
Nombre de ventilateurs	6	6	8	8	8	10	8	10	10
<b>Standard fans - ELN version</b>									
Nominal power per fan kW	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Maximum running current A	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Total power kW	7.5	7.5	10.0	10.0	10.0	12.5	10.0	12.5	12.5
Total maximum current A	13.8	13.8	18.4	18.4	18.4	23.0	18.4	23.0	23.0

SLH models	1202	1402	1602	1802	1902	2002	2202	2402	2602
Number of fans	6	6	8	8	8	10	8	10	10
<b>Standard fans - HET version</b>									
Nominal power per fan kW	2	2	2	2	2	2	2	2	2
Maximum running current A	4	4	4	4	4	4	4	4	4
Total power kW	12.0	12.0	16.0	16.0	16.0	20.0	16.0	20.0	20.0
Total maximum current A	24.0	24.0	32.0	32.0	32.0	40.0	32.0	40.0	40.0

## Electrical Data - SLH 1202 to 2602 (cont'd)

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### Units electrical data

<b>SLH BLN &amp; LN models</b>	<b>1202</b>	<b>1402</b>	<b>1602</b>	<b>1802</b>	<b>1902</b>	<b>2002</b>	<b>2202</b>	<b>2402</b>	<b>2602</b>	
Maximum current input	A	208.0	272.0	304.0	356.0	368.0	392.0	424.0	464.0	482.0
Maximum power input	kW	124.6	147.4	166.8	208.0	203.0	236.0	241.2	280.0	280.6
Maximum starting current	A	456.2	390.8	473.0	568.4	644.6	678.0	445.2	497.2	543.5
Unit aM fuses	A	315	315	315	400	400	400	500	500	630
Phase cable cross section	mm <sup>2</sup>	240	240	240	2 x 120	2 x 120	2 x 120	2 x 150	2 x 150	2 x 185

<b>SLH ELN models</b>	<b>1202</b>	<b>1402</b>	<b>1602</b>	<b>1802</b>	<b>1902</b>	<b>2002</b>	<b>2202</b>	<b>2402</b>	<b>2602</b>	
Maximum current input	A	205.8	261.8	298.4	342.4	354.4	383.0	410.4	455.0	473.0
Maximum power input	kW	124.1	142.9	164.8	202	197	232.5	235.2	276.5	277.1
Maximum starting current	A	454	380.6	467.4	554.8	631	669	431.6	488.2	534.5
Unit aM fuses	A	315	315	315	400	400	400	500	500	630
Phase cable cross section	mm <sup>2</sup>	240	240	240	2 x 120	2 x 120	2 x 120	2 x 150	2 x 150	2 x 185

<b>SLH HET models</b>	<b>1202</b>	<b>1402</b>	<b>1602</b>	<b>1802</b>	<b>1902</b>	<b>2002</b>	<b>2202</b>	<b>2402</b>	<b>2602</b>	
Maximum current input	A	216.0	272.0	312.0	356.0	368.0	400.0	424.0	472.0	490.0
Maximum power input	kW	128.6	147.4	170.8	208	203	240	241.2	284	284.6
Maximum starting current	A	464.2	390.8	481	568.4	644.6	686	445.2	505.2	551.5
Unit aM fuses	A	315	315	315	400	400	500	500	500	630
Phase cable cross section	mm <sup>2</sup>	240	240	240	2 x 120	2 x 120	2 x 150	2 x 150	2 x 150	2 x 185

# Electrical Data - SLH 2804 to 3804

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## Compressors electrical data

SLH models	Circuits	Starting type (*)	Power input at nominal conditions (kW)	Curr. input at nominal conditions (A)	Power input at max. conditions (kW)	Curr. input at max. conditions FLA (A)	Starting current LRA (A)	Crankcase heater 230 V/1 Ph (W)	Nominal power factor
2804	1	P / W	56.9	101.5	67.7	124.0	280.0	200.0	0.81
	2	P / W	56.9	101.5	67.7	124.0	280.0	200.0	0.81
	3	P / W	56.9	101.5	67.7	124.0	280.0	200.0	0.81
	4	P / W	56.9	101.5	67.7	124.0	280.0	200.0	0.81
3204	1	P / W	65.1	116.1	77.4	140.0	351.0	200.0	0.81
	2	P / W	65.1	116.1	77.4	140.0	351.0	200.0	0.81
	3	P / W	65.1	116.1	77.4	140.0	351.0	200.0	0.81
	4	P / W	65.1	116.1	77.4	140.0	351.0	200.0	0.81
3604	1	P / W	75	129.0	96	162.0	423.0	200.0	0.84
	2	P / W	75	129.0	96	162.0	423.0	200.0	0.84
	3	P / W	75	129.0	96	162.0	423.0	200.0	0.84
	4	P / W	75	129.0	96	162.0	423.0	200.0	0.84
3804	1	P / W	87	149.7	110	180.0	520.0	300.0	0.84
	2	P / W	87	149.7	110	180.0	520.0	300.0	0.84
	3	P / W	75	129.0	96	162.0	423.0	200.0	0.84
	4	P / W	75	129.0	96	162.0	423.0	200.0	0.84

(\*) P/W : Part-Winding.

## Fans electrical data

SLH models	2804	3204	3604	3804
Number of fans	12	12	16	16
<b>Standard fans - BLN &amp; LN versions</b>				
Nominal power per fan kW	2	2	2	2
Maximum running current A	4	4	4	4
Total power kW	24.0	24.0	32.0	32.0
Total maximum current A	48.0	48.0	64.0	64.0

SLH models	2804	3204	3604	3804
Nombre de ventilateurs	12	16	16	16
<b>Standard fans - ELN version</b>				
Nominal power per fan kW	1.25	1.25	1.25	1.25
Maximum running current A	2.3	2.3	2.3	2.3
Total power kW	15.0	20.0	20.0	20.0
Total maximum current A	27.6	36.8	36.8	36.8

SLH models	2804	3204	3604	3804
Number of fans	12	16	16	16
<b>Standard fans - HET version</b>				
Nominal power per fan kW	2	2	2	2
Maximum running current A	4	4	4	4
Total power kW	24.0	32.0	32.0	32.0
Total maximum current A	48.0	64.0	64.0	64.0

## Electrical Data - SLH 2804 to 3804 (cont'd)

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### Units electrical data

<b>SLH BLN &amp; LN models</b>	<b>2804</b>	<b>3204</b>	<b>3604</b>	<b>3804</b>
Maximum current input A	544.0	608.0	712.0	748.0
Maximum power input kW	295.0	334.0	416.0	444.0
Maximum starting current A	588.0	693.0	827.0	937.0
Unit aM fuses A	315 + 315	315 + 315	400 + 400	500 + 400
Phase cable cross section mm <sup>2</sup>	240 + 240	240 + 240	2 x 120 + 2 x 120	2 x 150 + 2 x 120

<b>SLH ELN models</b>	<b>2804</b>	<b>3204</b>	<b>3604</b>	<b>3804</b>
Maximum current input A	524.0	597.0	685.0	721.0
Maximum power input kW	286.0	330.0	404.0	432.0
Maximum starting current A	568.0	682.0	800.0	910.0
Unit aM fuses A	315 + 315	315 + 315	400 + 400	500 + 400
Phase cable cross section mm <sup>2</sup>	240 + 240	240 + 240	2 x 120 + 2 x 120	2 x 150 + 2 x 120

<b>SLH HET models</b>	<b>2804</b>	<b>3204</b>	<b>3604</b>	<b>3804</b>
Maximum current input A	544.0	624.0	736.0	800.0
Maximum power input kW	295.0	342.0	406.0	480.0
Maximum starting current A	588.0	709.0	827.0	937.0
Unit aM fuses A	315 + 315	315 + 315	400 + 400	500 + 400
Phase cable cross section mm <sup>2</sup>	240 + 240	240 + 240	2 x 120 + 2 x 120	2 x 150 + 2 x 120

# Sound Data

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## SLH 1202 to 3804 - BLN Version

SLH models	Frequencies (Hz)							Lw global dB(A)	Lp global dB(A) *
	125	250	500	1000	2000	4000	8000		
<b>1202</b>	90.0	89.0	96.8	90.5	85.0	69.5	58.3	<b>96</b>	<b>64</b>
<b>1402</b>	91.0	90.0	97.8	91.5	86.0	70.5	59.3	<b>97</b>	<b>65</b>
<b>1602</b>	91.0	90.0	97.8	91.5	86.0	70.5	59.3	<b>97</b>	<b>65</b>
<b>1802</b>	92.0	91.0	98.8	92.5	87.0	71.5	60.3	<b>98</b>	<b>66</b>
<b>1902</b>	92.0	91.0	98.8	92.5	87.0	71.5	60.3	<b>98</b>	<b>66</b>
<b>2002</b>	92.0	91.0	98.8	92.5	87.0	71.5	60.3	<b>98</b>	<b>66</b>
<b>2202</b>	92.0	91.0	98.8	92.5	87.0	71.5	60.3	<b>98</b>	<b>66</b>
<b>2402</b>	92.0	91.0	98.8	92.5	87.0	71.5	60.3	<b>98</b>	<b>66</b>
<b>2602</b>	92.0	91.0	98.8	92.5	87.0	71.5	60.3	<b>98</b>	<b>66</b>
<b>2804</b>	94.0	93.0	100.8	94.5	89.0	73.5	62.3	<b>100</b>	<b>68</b>
<b>3204</b>	94.0	93.0	100.8	94.5	89.0	73.5	62.3	<b>100</b>	<b>68</b>
<b>3604</b>	95.0	94.0	101.8	95.5	90.0	74.5	63.3	<b>101</b>	<b>69</b>
<b>3804</b>	95.0	94.0	101.8	95.5	90.0	74.5	63.3	<b>101</b>	<b>69</b>

(\*) Sound pressure levels given at 10 meters in free field conditions according to ISO 3744.

## SLH 1202 to 3804 - LN Version

SLH models	Frequencies (Hz)							Lw global dB(A)	Lp global dB(A) *
	125	250	500	1000	2000	4000	8000		
<b>1202</b>	85.0	84.0	91.8	85.5	80.0	64.5	53.3	<b>91</b>	<b>59</b>
<b>1402</b>	86.0	85.0	92.8	86.5	81.0	65.5	54.3	<b>92</b>	<b>60</b>
<b>1602</b>	86.0	85.0	92.8	86.5	81.0	65.5	54.3	<b>92</b>	<b>60</b>
<b>1802</b>	86.0	85.0	92.8	86.5	81.0	65.5	54.3	<b>92</b>	<b>60</b>
<b>1902</b>	86.0	85.0	92.8	86.5	81.0	65.5	54.3	<b>92</b>	<b>60</b>
<b>2002</b>	86.0	85.0	92.8	86.5	81.0	65.5	54.3	<b>92</b>	<b>60</b>
<b>2202</b>	86.0	85.0	92.8	86.5	81.0	65.5	54.3	<b>92</b>	<b>60</b>
<b>2402</b>	86.0	85.0	92.8	86.5	81.0	65.5	54.3	<b>92</b>	<b>60</b>
<b>2602</b>	86.0	85.0	92.8	86.5	81.0	65.5	54.3	<b>92</b>	<b>60</b>
<b>2804</b>	89.0	88.0	95.8	89.5	84.0	68.5	57.3	<b>95</b>	<b>63</b>
<b>3204</b>	89.0	88.0	95.8	89.5	84.0	68.5	57.3	<b>95</b>	<b>63</b>
<b>3604</b>	89.0	88.0	95.8	89.5	84.0	68.5	57.3	<b>95</b>	<b>63</b>
<b>3804</b>	89.0	88.0	95.8	89.5	84.0	68.5	57.3	<b>95</b>	<b>63</b>

(\*) Sound pressure levels given at 10 meters in free field conditions according to ISO 3744.

## Sound Data (cont'd)

### SLH 1202 to 3804 - ELN Version

SLH models	Frequencies (Hz)							Lw global dB(A)	Lp global dB(A) *
	125	250	500	1000	2000	4000	8000		
<b>1202</b>	82.3	81.3	89.1	82.8	77.3	61.8	50.6	<b>88</b>	<b>56</b>
<b>1402</b>	82.3	81.3	89.1	82.8	77.3	61.8	50.6	<b>88</b>	<b>56</b>
<b>1602</b>	82.7	81.7	89.5	83.2	77.7	62.2	51.0	<b>89</b>	<b>57</b>
<b>1802</b>	82.7	81.7	89.5	83.2	77.7	62.2	51.0	<b>89</b>	<b>57</b>
<b>1902</b>	82.7	81.7	89.5	83.2	77.7	62.2	51.0	<b>89</b>	<b>57</b>
<b>2002</b>	82.7	81.7	89.5	83.2	77.7	62.2	51.0	<b>89</b>	<b>57</b>
<b>2202</b>	82.7	81.7	89.5	83.2	77.7	62.2	51.0	<b>89</b>	<b>57</b>
<b>2402</b>	82.7	81.7	89.5	83.2	77.7	62.2	51.0	<b>89</b>	<b>57</b>
<b>2602</b>	83.0	82.0	89.8	83.5	78.0	62.5	51.3	<b>89</b>	<b>57</b>
<b>2804</b>	85.0	84.0	91.8	85.5	80.0	64.5	53.3	<b>91</b>	<b>59</b>
<b>3204</b>	86.0	85.0	92.8	86.5	81.0	65.5	54.3	<b>92</b>	<b>60</b>
<b>3604</b>	86.0	85.0	92.8	86.5	81.0	65.5	54.3	<b>92</b>	<b>60</b>
<b>3804</b>	86.0	85.0	92.8	86.5	81.0	65.5	54.3	<b>92</b>	<b>60</b>

(\*) Sound pressure levels given at 10 meters in free field conditions according to ISO 3744.

### SLH 1202 to 3804 - HET Version

SLH models	Frequencies (Hz)							Lw global dB(A)	Lp global dB(A) *
	125	250	500	1000	2000	4000	8000		
<b>1202</b>	90.7	89.7	97.5	91.2	85.7	70.2	59.0	<b>97</b>	<b>64</b>
<b>1402</b>	90.7	89.7	97.5	91.2	85.7	70.2	59.0	<b>97</b>	<b>64</b>
<b>1602</b>	92.0	91.0	98.8	92.5	87.0	71.5	60.3	<b>98</b>	<b>66</b>
<b>1802</b>	92.0	91.0	98.8	92.5	87.0	71.5	60.3	<b>98</b>	<b>66</b>
<b>1902</b>	92.0	91.0	98.8	92.5	87.0	71.5	60.3	<b>98</b>	<b>66</b>
<b>2002</b>	92.0	91.0	98.8	92.5	87.0	71.5	60.3	<b>98</b>	<b>66</b>
<b>2202</b>	92.0	91.0	98.8	92.5	87.0	71.5	60.3	<b>98</b>	<b>66</b>
<b>2402</b>	92.0	91.0	98.8	92.5	87.0	71.5	60.3	<b>98</b>	<b>66</b>
<b>2602</b>	92.0	91.0	98.8	92.5	87.0	71.5	60.3	<b>98</b>	<b>66</b>
<b>2804</b>	94.0	93.0	100.8	94.5	89.0	73.5	62.3	<b>100</b>	<b>68</b>
<b>3204</b>	94.0	93.0	100.8	94.5	89.0	73.5	62.3	<b>100</b>	<b>68</b>
<b>3604</b>	95.0	94.0	101.8	95.5	90.0	74.5	63.3	<b>101</b>	<b>69</b>
<b>3804</b>	95.0	94.0	101.8	95.5	90.0	74.5	63.3	<b>101</b>	<b>69</b>

(\*) Sound pressure levels given at 10 meters in free field conditions according to ISO 3744.

# Cooling Capacities - SLH BLN

SLH models	LWT (°C)	Condenser entering air temperature - °C													
		25		30		32		35		38		40		44	
		Cool. cap. (kW)	Power input (kW)	Cool. cap. (kW)	Power input (kW)	Cool. cap. (kW)	Power input (kW)	Cool. cap. (kW)	Power input (kW)	Cool. cap. (kW)	Power input (kW)	Cool. cap. (kW)	Power input (kW)	Cool. cap. (kW)	Power input (kW)
1202 BLN	5	281.4	82.9	262.2	91.5	254.9	94.9	244.3	99.9	234.3	104.8	227.7	108.0	215.2	114.6
	6	290.0	84.0	270.6	92.6	263.2	96.0	252.5	101.0	242.4	105.9	235.7	109.2	223.2	115.7
	7	298.9	85.1	279.3	93.6	271.7	97.1	260.8	102.2	250.5	107.1	243.8	110.3	231.0	116.8
	8	307.8	86.2	288.0	94.8	280.3	98.2	269.2	103.2	258.7	108.2	251.9	111.5		
	9	316.8	87.4	296.7	96.0	289.0	99.3	277.7	104.5	267.1	109.3	260.2	112.6		
	10	325.8	88.6	305.4	97.2	297.8	100.6	286.1	105.6	275.4	110.5	268.4	113.7		
	11	335.1	89.8	314.5	98.4	306.6	101.8	295.0	106.8	283.9	111.7	276.7	114.9		
1402 BLN	12	344.3	91.2	323.6	99.7	315.4	103.1	303.9	107.9	292.5	112.8	285.1	115.9		
	13	353.8	92.4	332.9	101.3	324.7	104.9	313.0	111.2	299.7	116.0	292.0	118.2		
	14	363.2	93.6	341.6	102.5	333.4	106.2	321.7	112.5	308.7	117.3	299.3	120.5		
	15	372.8	95.2	351.0	103.7	342.6	106.9	330.2	111.6	318.0	116.2				
	16	382.4	96.8	360.3	105.3	352.1	109.0	340.3	116.7	327.7	121.1	315.3	118.5		
	17	392.0	98.0	369.0	106.5	360.8	110.2	352.0	120.4	340.0	122.7	329.2	124.9		
	18	401.6	99.2	378.7	107.8	369.5	114.1	360.7	124.7	349.7	126.7	338.0	127.0		
1602 BLN	19	411.2	100.4	387.4	109.3	379.2	116.1	370.3	127.5	358.5	131.0	345.0	130.3		
	20	420.7	101.6	396.1	110.5	387.9	120.5	373.0	132.2	347.8	132.9	334.6	135.5		
	21	430.2	102.8	404.9	111.7	396.7	119.0	382.5	134.7	358.3	133.0	345.0	137.0		
	22	440.1	104.2	413.7	113.0	408.1	119.8	395.0	127.8	380.6	133.8	366.3	139.9		
	23	449.7	105.4	422.5	114.4	419.8	111.4	393.9	122.1	384.0	126.2	365.6	134.6		
	24	459.2	106.6	431.3	115.3	436.9	118.0	405.4	123.6	395.0	127.8	376.0	141.0		
	25	468.7	107.8	440.1	116.3	446.9	118.0	439.6	128.6	429.1	132.5	413.6	138.4		
1802 BLN	26	478.2	110.4	448.9	117.4	458.4	116.4	439.3	128.0	420.9	131.2	404.4	144.6		
	27	487.8	111.6	457.7	118.1	467.8	118.1	440.3	129.6	432.7	134.7	395.6	146.2		
	28	497.3	112.8	467.2	119.6	475.3	121.3	449.4	131.3	434.7	137.4	374.2	147.6		
	29	506.8	114.0	476.7	121.3	485.3	123.1	453.0	134.6	428.5	139.2	414.2	148.7		
	30	516.3	115.2	485.8	123.1	495.3	121.3	462.3	134.6	438.5	142.9	397.4	150.8		
	31	525.8	116.4	495.8	124.7	506.5	128.5	476.9	140.0	465.5	144.4	448.7	150.7		
	32	535.3	117.6	505.3	126.3	516.1	128.5	476.9	144.4	448.7	150.7	432.1	157.0		
1902 BLN	33	544.8	118.8	515.2	130.0	526.7	130.0	483.4	142.5	471.3	147.4	453.5	154.4		
	34	554.3	120.0	525.7	131.9	536.1	131.9	497.6	144.3	484.8	149.2	467.2	156.2		
	35	563.8	121.2	535.3	133.8	545.7	132.7	508.6	150.4	526.7	154.7	507.7	161.5		
	36	573.3	122.4	545.3	135.3	556.1	134.7	519.1	160.4	532.6	154.7	507.7	168.2		
	37	582.8	123.6	555.3	137.1	566.1	136.3	531.9	162.4	542.7	155.7	513.0	177.3		
	38	592.3	124.8	565.8	138.8	576.1	137.8	545.6	164.0	552.6	158.0	513.0	182.5		
	39	601.8	126.0	575.3	140.7	586.1	139.7	558.6	165.4	562.6	161.7	513.0	187.3		
2002 BLN	40	611.3	127.2	585.3	142.5	596.1	141.6	568.0	167.0	576.1	165.7	513.0	192.5		
	41	620.8	128.4	595.3	144.4	606.1	143.5	580.6	168.7	586.1	164.7	513.0	197.3		
	42	630.3	129.6	605.3	146.3	616.1	145.4	593.9	170.7	596.1	167.4	513.0	202.1		
	43	640.8	130.8	615.3	148.2	626.1	147.3	606.6	172.7	606.1	169.5	513.0	206.9		
	44	650.3	132.0	625.3	150.1	636.1	149.2	617.9	174.7	616.1	171.6	513.0	211.7		
	45	660.8	133.2	635.3	152.0	646.1	151.1	628.6	176.7	626.1	173.5	513.0	216.5		
	46	670.3	134.4	645.3	153.9	656.1	152.0	640.6	178.7	636.1	175.4	513.0	221.3		
2202 BLN	47	680.8	135.6	655.3	155.8	666.1	153.8	650.6	180.7	646.1	177.3	513.0	226.1		
	48	690.3	136.8	665.3	157.6	676.1	155.7	659.0	182.7	646.1	179.2	513.0	230.9		
	49	700.8	138.0	675.3	159.5	686.1	157.6	671.7	184.7	656.0	181.2	513.0	235.7		
	50	710.3	139.2	685.3	161.4	696.1	159.5	680.6	186.7	666.0	183.0	513.0	240.5		
	51	720.8	140.4	695.3	163.3	706.1	161.4	693.9	188.7	676.0	185.0	513.0	245.3		
	52	730.3	141.6	705.3	165.2	716.1	163.3	708.0	190.7	686.0	186.9	513.0	250.1		
	53	740.8	142.8	715.3	167.1	726.1	165.1	719.7	192.7	696.0	188.7	513.0	254.9		

Notes : - LWT : Leaving water temperature.  
- Power input given for compressors only.

## Cooling Capacities - SLH BLN (cont'd)

SLH models	LWT (°C)	Condenser entering air temperature - °C													
		25		30		32		35		38		40		44	
		Cool. cap. (kW)	Power input (kW)	Cool. cap. (kW)	Power input (kW)	Cool. cap. (kW)	Power input (kW)	Cool. cap. (kW)	Power input (kW)	Cool. cap. (kW)	Power input (kW)	Cool. cap. (kW)	Power input (kW)	Cool. cap. (kW)	Power input (kW)
2402 BLN	5	512.4	150.3	477.4	165.9	464.2	172.0	444.7	181.0	426.5	190.0	414.5	195.8	391.8	207.7
	6	528.0	152.3	492.7	167.8	479.3	173.9	459.8	183.1	441.3	192.0	429.1	197.9	406.4	209.7
	7	544.2	154.3	508.5	169.7	494.7	176.0	474.9	185.2	456.2	194.1	443.8	200.0	420.5	211.8
	8	560.4	156.2	524.4	171.8	510.4	178.0	490.2	187.1	471.1	196.2	458.7	202.1		
	9	576.7	158.5	540.2	173.9	526.2	180.0	505.6	189.4	486.4	198.1	473.8	204.0		
	10	593.3	160.6	556.0	176.2	542.2	182.3	520.9	191.5	501.4	200.3	488.7	206.1		
	11	610.2	162.8	572.5	178.4	558.2	184.6	537.1	193.6	516.9	202.4	503.8	208.2		
	12	626.9	165.2	589.3	180.7	574.2	186.8	553.3	195.7	532.5	204.5	519.1	210.2		
	15	678.7	172.5	639.1	187.9	623.8	193.7	601.3	202.3	579.1	210.6				
2602 BLN	5	570.0	163.1	531.1	180.0	516.4	186.7	494.7	196.5	474.5	206.2	461.2	212.5	435.9	225.5
	6	587.4	165.3	548.1	182.1	533.2	188.8	511.5	198.7	490.9	208.3	477.3	214.8	452.0	227.6
	7	605.4	167.4	565.7	184.2	550.3	191.0	528.3	201.0	507.5	210.6	493.7	217.1	467.8	229.8
	8	623.4	169.5	583.3	186.5	567.7	193.1	545.3	203.1	524.1	212.9	510.3	219.4		
	9	641.6	172.0	600.9	188.8	585.3	195.4	562.5	205.5	541.0	215.0	527.1	221.4		
	10	660.0	174.3	618.5	191.2	603.1	197.9	579.5	207.8	557.8	217.4	543.7	223.7		
	11	678.8	176.7	636.9	193.7	620.9	200.3	597.5	210.1	575.0	219.7	560.5	226.0		
	12	697.4	179.3	655.5	196.1	638.7	202.7	615.5	212.4	592.4	222.0	577.4	228.1		
	15	755.0	187.2	710.9	204.0	693.9	210.3	668.9	219.5	644.2	228.6				
2804 BLN	5	631.1	177.2	588.1	195.6	571.8	202.8	547.8	213.5	525.4	224.1	510.6	230.9	482.6	245.0
	6	650.4	179.7	606.9	197.9	590.4	205.1	566.4	215.9	543.6	226.4	528.6	233.4	500.6	247.3
	7	670.3	181.9	626.4	200.2	609.4	207.6	585.0	218.4	561.9	228.8	546.7	235.9	518.0	249.7
	8	690.3	184.2	645.9	202.6	628.7	209.9	603.8	220.7	580.3	231.3	565.1	238.3		
	9	710.4	186.9	665.4	205.1	648.2	212.3	622.9	223.3	599.1	233.6	583.7	240.6		
	10	730.8	189.3	684.9	207.8	667.9	215.0	641.7	225.8	617.7	236.3	602.0	243.1		
	11	751.6	192.0	705.3	210.4	687.6	217.6	661.6	228.3	636.7	238.7	620.6	245.6		
	12	772.2	194.9	725.9	213.1	707.3	220.3	681.5	230.7	656.0	241.2	639.4	247.8		
	15	836.1	203.4	787.2	221.6	768.4	228.5	740.7	238.5	713.3	248.4				
3204 BLN	5	704.9	205.6	656.9	227.0	638.6	235.3	611.9	247.7	586.9	260.0	570.3	267.9	539.1	284.2
	6	726.4	208.4	677.9	229.6	659.4	238.0	632.6	250.5	607.1	262.7	590.4	270.8	559.1	286.9
	7	748.7	211.1	699.7	232.2	680.7	240.8	653.4	253.4	627.6	265.5	610.6	273.7	578.6	289.8
	8	771.0	213.7	721.4	235.1	702.2	243.5	674.4	256.0	648.1	268.4	631.1	276.5		
	9	793.5	216.8	743.2	238.0	723.9	246.3	695.7	259.1	669.2	271.0	651.9	279.2		
	10	816.2	219.7	765.0	241.1	746.0	249.4	716.7	262.0	689.9	274.1	672.4	282.0		
	11	839.5	222.8	787.7	244.1	768.0	252.5	739.0	264.9	711.2	277.0	693.2	284.9		
	12	862.5	226.1	810.7	247.2	790.0	255.6	761.2	267.7	732.7	279.8	714.2	287.6		
	15	933.8	236.0	879.3	257.1	858.3	265.1	827.3	276.8	796.7	288.2				
3604 BLN	5	764.7	223.9	712.6	247.2	692.8	256.3	663.8	269.8	636.6	283.2	618.7	291.8	584.8	309.6
	6	788.0	227.0	735.4	250.1	715.3	259.2	686.3	272.9	658.6	286.1	640.4	295.0	606.5	312.5
	7	812.2	229.9	759.0	253.0	738.4	262.3	708.8	276.0	680.8	289.2	662.4	298.1	627.7	315.6
	8	836.3	232.8	782.6	256.1	761.7	265.2	731.6	278.9	703.1	292.3	684.6	301.2		
	9	860.8	236.2	806.2	259.2	785.3	268.3	754.7	282.2	725.9	295.2	707.2	304.1		
	10	885.5	239.3	829.8	262.6	809.2	271.7	777.5	285.4	748.4	298.6	729.4	307.2		
	11	910.7	242.6	854.5	265.9	833.1	275.0	801.6	288.5	771.5	301.7	751.9	310.3		
	12	935.7	246.2	879.5	269.3	857.0	278.4	825.8	291.6	794.8	304.8	774.7	313.2		
	15	1013.0	257.0	953.8	280.1	931.0	288.7	897.4	301.4	864.3	313.9				
3804 BLN	5	836.2	240.2	779.3	265.2	757.6	275.0	725.8	289.4	696.2	303.8	676.6	313.1	639.5	332.1
	6	861.7	243.6	804.2	268.3	782.2	278.1	750.5	292.8	720.2	306.9	700.3	316.4	663.2	335.2
	7	888.2	246.7	830.0	271.4	807.4	281.4	775.1	296.1	744.5	310.3	724.4	319.8	686.4	338.6
	8	914.6	249.8	855.8	274.7	833.0	284.5	800.0	299.2	768.9	313.6	748.7	323.1		
	9	941.3	253.4	881.6	278.1	858.8	287.9	825.3	302.8	793.8	316.7	773.3	326.2		
	10	968.3	256.7	907.4	281.7	884.9	291.5	850.2	306.1	818.4	320.3	797.7	329.6		
	11	995.9	260.3	934.5	285.3	911.0	295.1	876.6	309.5	843.6	323.7	822.3	332.9		
	12	1023.2	264.2	961.8	288.9	937.1	298.7	903.0	312.8	869.2	327.0	847.2	336.0		
	15	1107.8	275.8	1043.1	300.5	1018.1	309.7	981.3	323.4	945.1	336.8				

Notes : - LWT : Leaving water temperature.  
- Power input given for compressors only.

# Heating Capacities - SLH BLN

SLH models	LWT (°C)	Ambient air temperature (°C)													
		-5		-3		0		5		7		10			
		Heat. cap. (kW)	Power input (kW)	Heat. cap. (kW)	Power input (kW)	Heat. cap. (kW)	Power input (kW)	Heat. cap. (kW)	Power input (kW)	Heat. cap. (kW)	Power input (kW)	Heat. cap. (kW)	Power input (kW)		
1202 BLN	30	216.5	64.0	230.7	64.5	253.7	65.6	294.7	67.8	312.9	68.8	341.5	70.6	394.5	74.0
	35	207.9	73.8	222.6	74.2	245.7	75.1	286.0	77.2	303.7	78.2	331.6	79.9	382.8	83.3
	40	201.5	84.5	216.1	84.0	238.7	84.6	278.0	86.5	295.1	87.5	322.2	89.2	371.9	92.6
	45					232.8	93.8	270.8	95.5	287.5	96.6	313.9	98.3	362.1	101.8
1402 BLN	30	241.8	70.8	257.7	71.4	283.5	72.5	329.2	75.0	349.5	76.1	381.5	78.1	440.7	81.9
	35	232.2	81.6	248.6	82.1	274.5	83.1	319.5	85.4	339.2	86.6	370.4	88.4	427.7	92.2
	40	225.1	93.5	241.4	92.9	266.7	93.5	310.5	95.7	329.7	96.8	360.0	98.7	415.5	102.4
	45					260.1	103.8	302.5	105.7	321.1	106.9	350.7	108.8	404.5	112.6
1602 BLN	30	270.4	79.1	288.1	79.7	316.9	81.0	368.1	83.8	390.7	85.1	426.5	87.2	492.7	91.5
	35	259.6	91.2	278.0	91.7	306.9	92.9	357.2	95.5	379.3	96.7	414.1	98.8	478.1	103.0
	40	251.7	104.5	269.9	103.8	298.1	104.5	347.2	106.9	368.6	108.1	402.5	110.2	464.5	114.4
	45					290.8	116.0	338.2	118.1	359.0	119.4	392.1	121.5	452.2	125.8
1802 BLN	30	293.2	88.0	312.4	88.7	343.6	90.2	399.1	93.2	423.7	94.6	462.5	97.0	534.2	101.8
	35	281.5	101.4	301.4	102.0	332.7	103.3	387.3	106.2	411.2	107.6	449.1	109.9	518.4	114.5
	40	272.9	116.3	292.6	115.5	323.2	116.3	376.4	118.9	399.7	120.3	436.4	122.6	503.7	127.3
	45					315.3	129.0	366.7	131.4	389.3	132.8	425.1	135.2	490.4	140.0
1902 BLN	30	332.5	93.7	354.2	94.5	389.7	96.1	452.6	99.3	480.5	100.8	524.5	103.4	605.9	108.4
	35	319.3	108.1	341.8	108.7	377.3	110.1	439.3	113.1	466.4	114.6	509.3	117.1	588.0	122.0
	40	309.5	123.9	331.9	123.0	366.6	123.9	426.9	126.7	453.2	128.2	494.9	130.7	571.2	135.6
	45					357.6	137.4	415.8	140.0	441.5	141.5	482.1	144.0	556.1	149.1
2002 BLN	30	349.3	102.2	372.1	103.1	409.4	104.8	475.5	108.3	504.8	110.0	551.0	112.7	636.5	118.2
	35	335.4	117.9	359.1	118.5	396.4	120.1	461.4	123.4	489.9	125.0	535.0	127.7	617.7	133.1
	40	325.1	135.1	348.6	134.1	385.1	135.1	448.5	138.1	476.1	139.8	519.9	142.5	600.1	147.9
	45					375.6	149.9	436.8	152.6	463.8	154.3	506.5	157.1	584.2	162.6
2202 BLN	30	376.7	106.8	401.4	107.7	441.6	109.5	512.9	113.2	544.4	114.9	594.3	117.9	686.5	123.6
	35	361.8	123.2	387.3	123.9	427.6	125.5	497.7	129.0	528.5	130.7	577.1	133.4	666.2	139.1
	40	350.7	141.2	376.1	140.2	415.4	141.2	483.7	144.4	513.6	146.1	560.8	148.9	647.3	154.6
	45					405.2	156.7	471.2	159.5	500.3	161.3	546.3	164.2	630.1	170.0
2402 BLN	30	393.2	120.0	418.9	121.0	460.8	122.9	535.2	127.1	568.2	129.1	620.3	132.3	716.5	138.8
	35	377.5	138.3	404.2	139.1	446.2	140.9	519.5	144.8	551.5	146.7	602.2	149.8	695.3	156.2
	40	366.0	158.5	392.5	157.4	433.5	158.6	504.9	162.1	536.0	164.1	585.2	167.2	675.5	173.6
	45					422.9	175.9	491.7	179.1	522.1	181.1	570.1	184.4	657.6	190.9
2602 BLN	30	437.7	126.5	466.4	127.6	513.1	129.7	595.9	134.0	632.6	136.1	690.6	139.6	797.7	146.3
	35	420.3	145.9	450.0	146.7	496.8	148.6	578.3	152.7	614.0	154.7	670.5	158.0	774.1	164.7
	40	407.5	167.2	437.0	166.0	482.7	167.2	562.1	171.0	596.7	173.0	651.6	176.4	752.1	183.1
	45					470.8	185.5	547.5	188.9	581.3	191.0	634.7	194.4	732.2	201.3
2804 BLN	30	483.6	141.6	515.3	142.8	566.8	145.1	658.4	150.0	698.9	152.4	763.0	156.2	881.3	163.8
	35	464.4	163.3	497.2	164.3	548.9	166.4	638.9	170.9	678.4	173.2	740.8	176.9	855.2	184.4
	40	450.2	187.2	482.7	185.9	533.2	187.2	621.0	191.4	659.3	193.7	719.9	197.4	830.9	204.9
	45					520.1	207.7	604.9	211.5	642.2	213.8	701.3	217.6	808.9	225.4
3204 BLN	30	540.7	158.2	576.1	159.5	633.7	162.1	736.1	167.5	781.4	170.2	853.0	174.5	985.3	183.0
	35	519.2	182.4	555.9	183.5	613.7	185.8	714.4	190.9	758.5	193.5	828.2	197.6	956.2	206.0
	40	503.3	209.0	539.7	207.6	596.2	209.1	694.3	213.8	737.1	216.3	804.8	220.5	929.0	228.9
	45					581.5	232.0	676.3	236.2	718.0	238.8	784.0	243.1	904.4	251.7
3604 BLN	30	586.4	175.9	624.8	177.3	687.3	180.2	798.3	186.3	847.5	189.2	925.1	194.0	1068.6	203.4
	35	563.1	202.8	602.9	204.0	665.6	206.6	774.8	212.3	822.6	215.1	898.2	219.7	1037.0	229.0
	40	545.9	232.4	585.3	230.8	646.6	232.5	753.0	237.7	799.4	240.5	872.9	245.2	1007.5	254.5
	45					630.7	257.9	733.4	262.6	778.7	265.5	850.3	270.3	980.9	279.8
3804 BLN	30	642.4	190.2	684.5	191.8	753.0	194.9	874.6	201.4	928.4	204.6	1013.5	209.8	1170.7	220.0
	35	616.9	219.3	660.4	220.6	729.1	223.4	848.8	229.6	901.2	232.6	984.0	237.6	1136.1	247.6
	40	598.1	251.3	641.3	249.6	708.4	251.4	824.9	257.0	875.8	260.1	956.3	265.1	1103.8	275.2
	45					690.9	278.9	803.5	284.0	853.1	287.1	931.6	292.3	1074.6	302.6

**Notes :** - LWT : Leaving water temperature.  
- Power input given for compressors only.













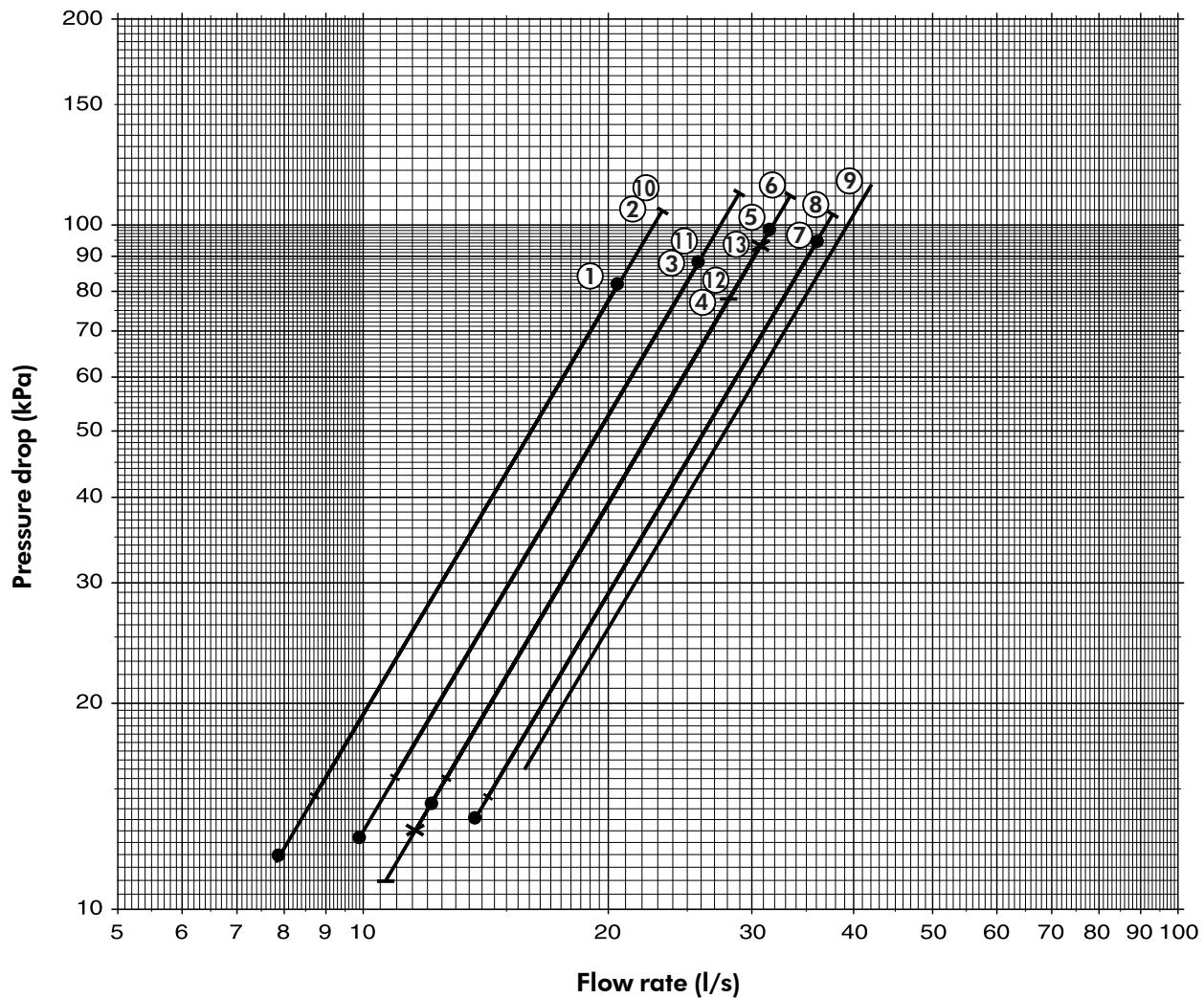






# Water Pressure Drops

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Curve 1 : SLH 1202      Curve 8 : SLH 2402

Curve 2 : SLH 1402      Curve 9 : SLH 2602

Curve 3 : SLH 1602      Curve 10 : SLH 2804

Curve 4 : SLH 1802      Curve 11 : SLH 3204

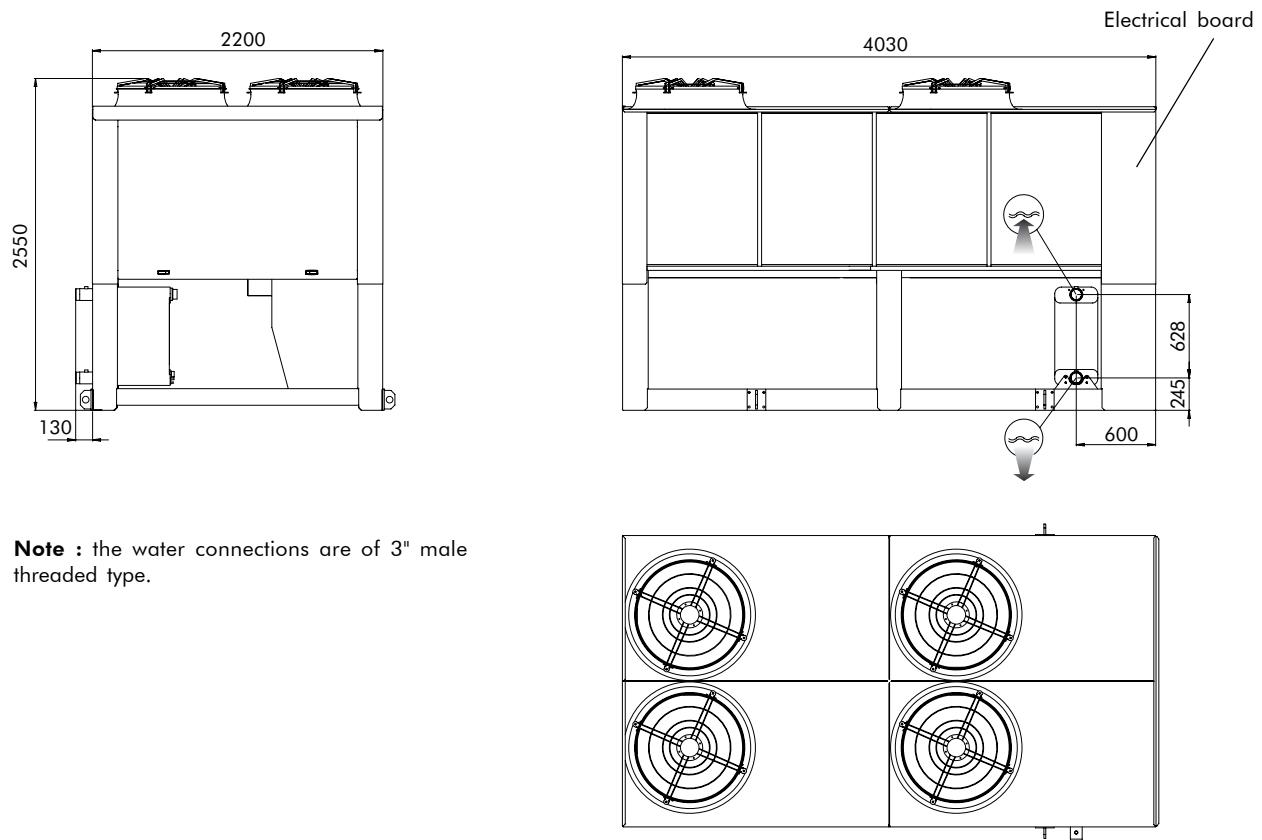
Curve 5 : SLH 1902      Curve 12 : SLH 3604

Curve 6 : SLH 2002      Curve 13 : SLH 3804

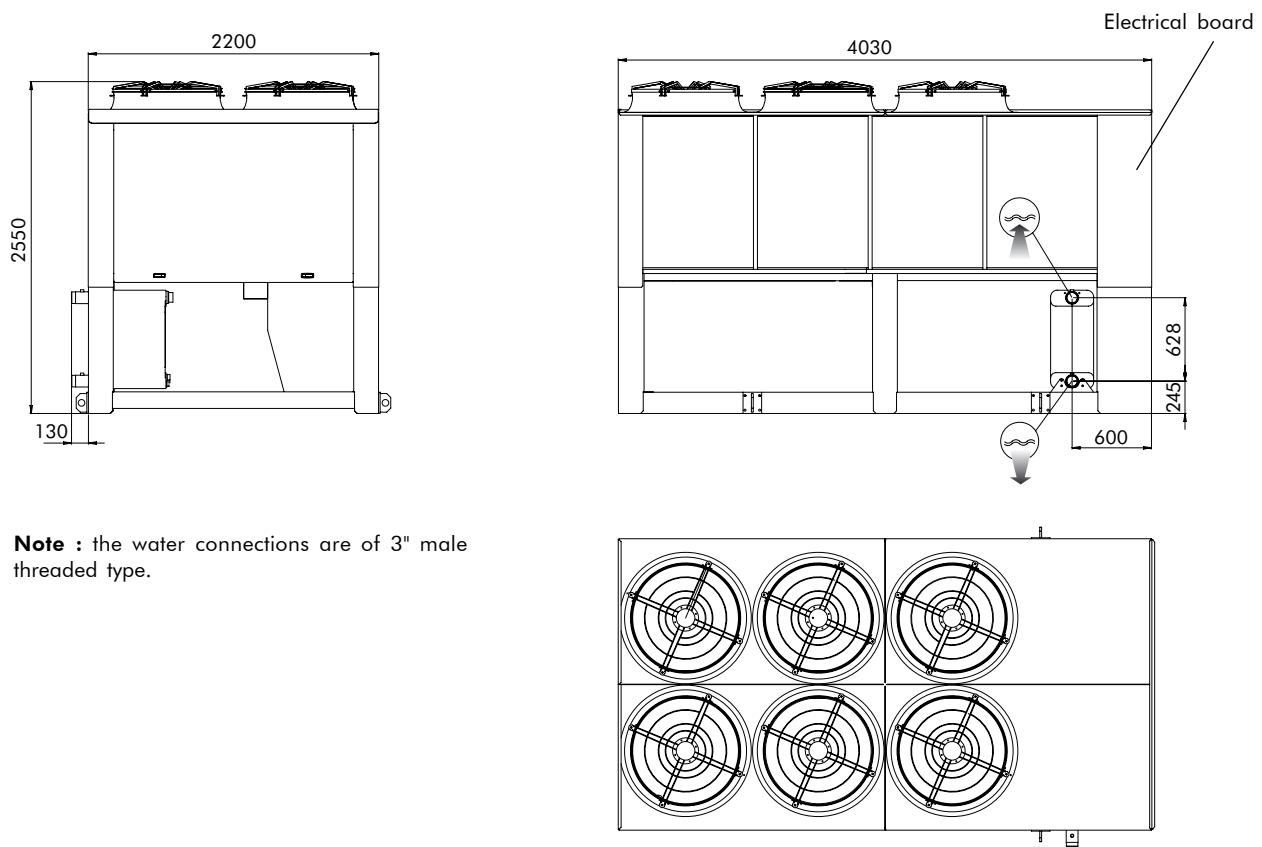
Curve 7 : SLH 2202

**Note :** for models SLH 2804 to 3804, the water pressure drops correspond to the unit water flow rate divided by 2.

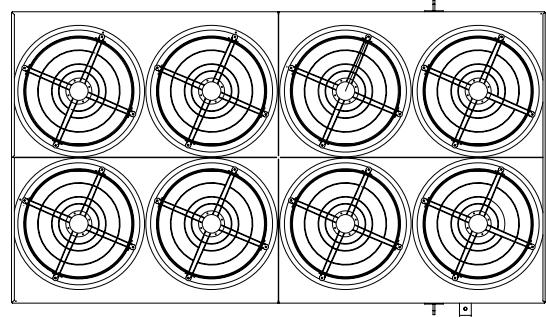
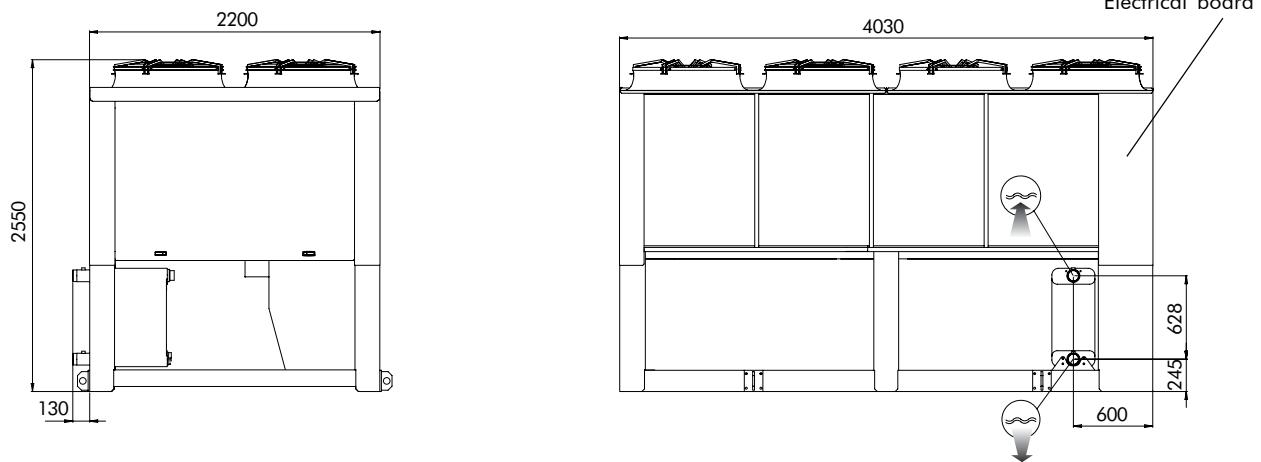
## Dimensions - SLH 1202 BLN & LN



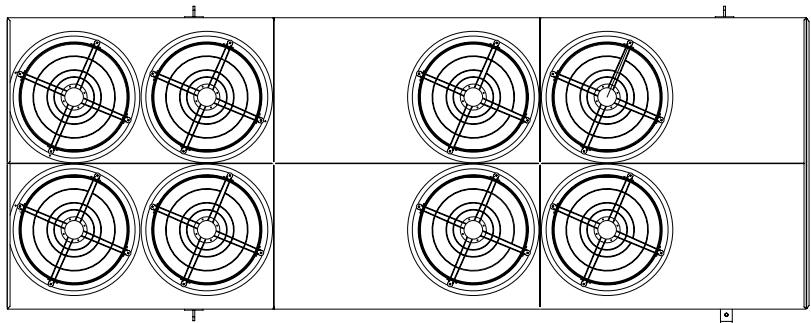
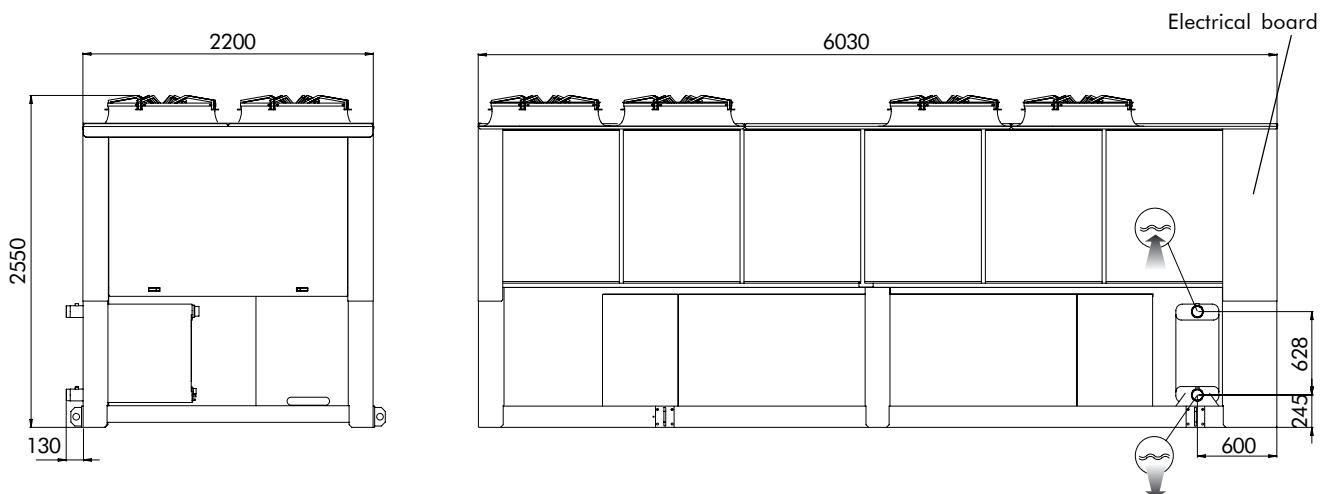
## Dimensions - SLH 1402, 1602 BLN & LN - SLH 1202, 1402 ELN & HET



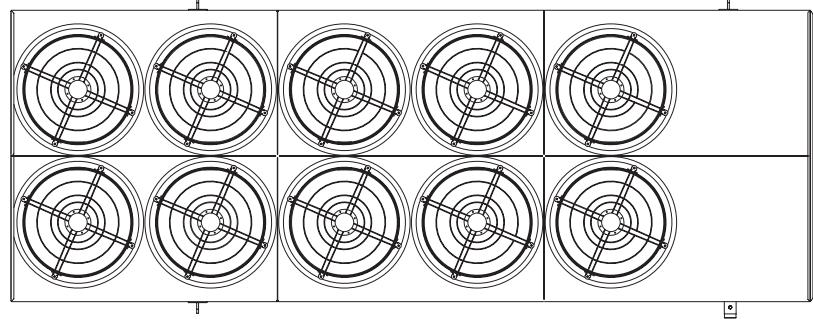
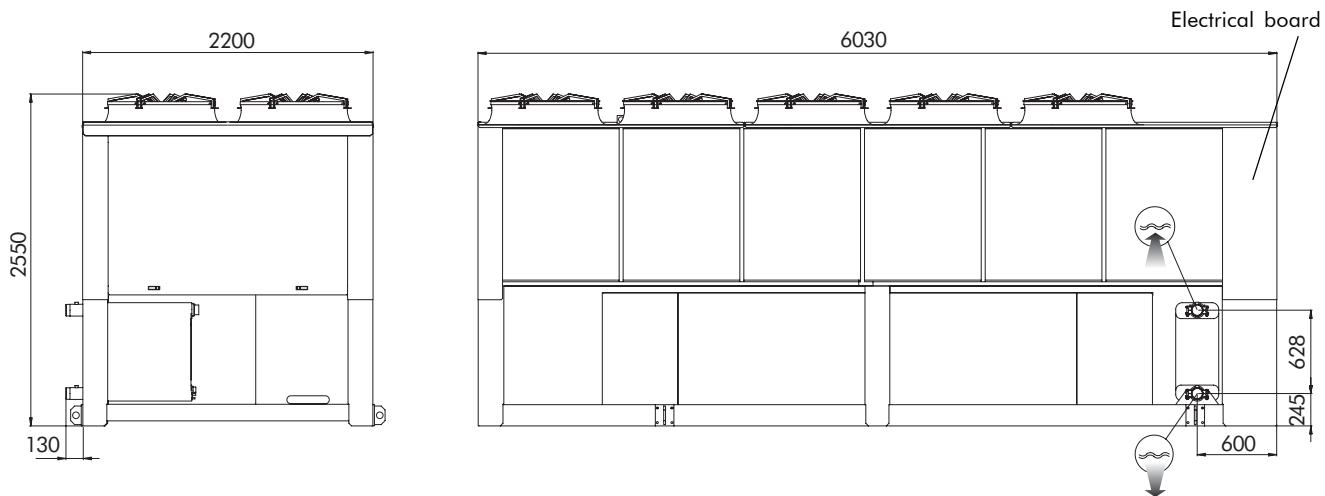
## Dimensions - SLH 1802, 1902, 2002 BLN & LN - SLH 1602, 1802 ELN & HET



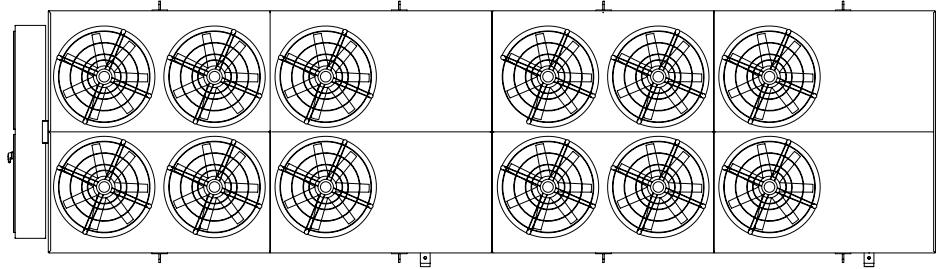
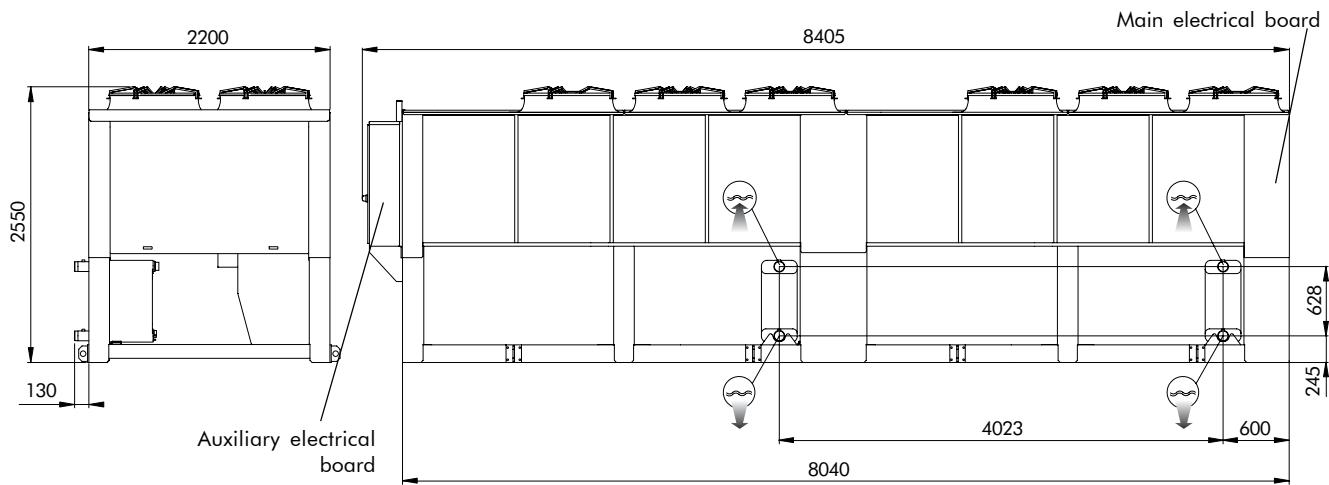
## Dimensions - SLH 2202, 2402, 2602 BLN & LN - SLH 1902, 2202 ELN & HET



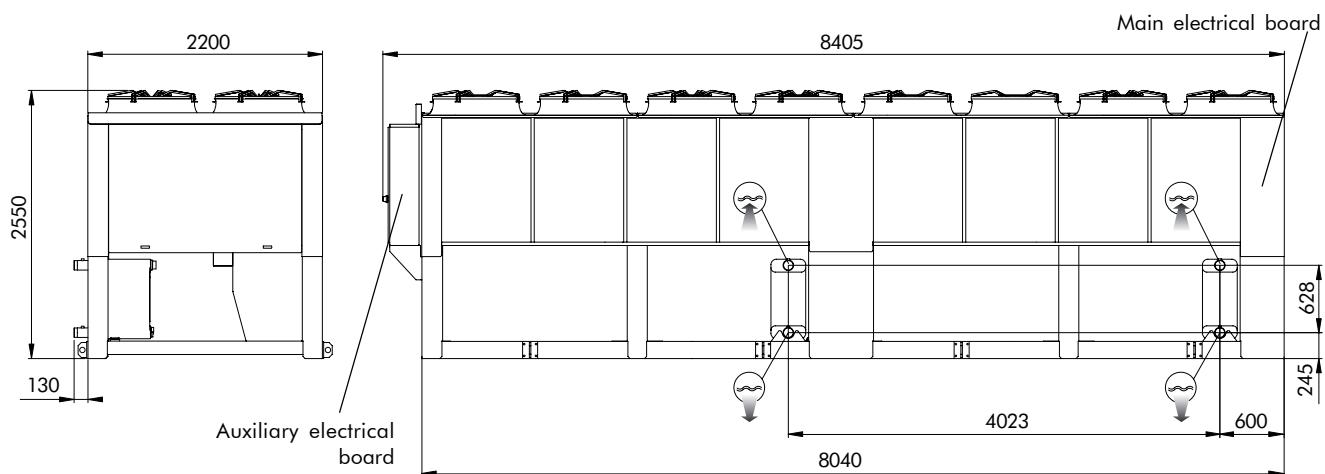
## Dimensions - SLH 2002, 2402, 2602 ELN & HET



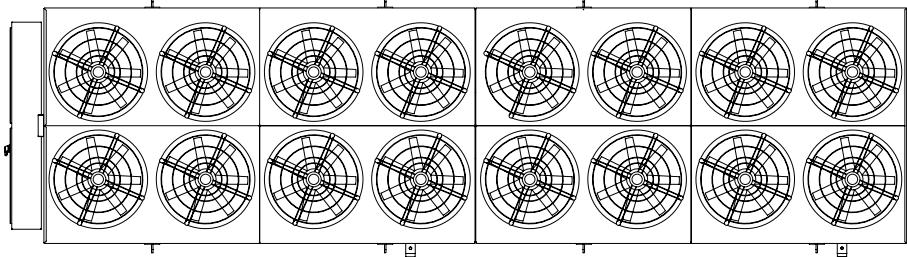
## Dimensions - SLH 2804, 3204 BLN & LN - SLH 2804 ELN & HET



## Dimensions - SLH 3604, 3804 BLN & LN - SLH 3204 to 3804 ELN & HET



**Note :** the water connections are of 3" male threaded type.





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