Heat pump Aqua HP 9 kW & 12 kW
Item no. 14983109 & 14983112

Pahlén swimming pool equipment

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The Pahlén heat pump is intended to heat swimming pools and spa pools.
(The models with Pahlén item no 14983109-01 and 14983112-01 also have cooling function.)

Read the instructions carefully before installing the heat pump.
The capacity of the heat pump depends on e.g. the water flow, the air and pool temperature. On cold days and nights the heat pump may run longer before the pool water reaches the right temperature than on hot days.
It is always economical to cover the pool when it is not in use, especially at night. About 60-70% of the heat is lost from the pool water surface. Covering the pool also shortens the operating time of the heat pump.

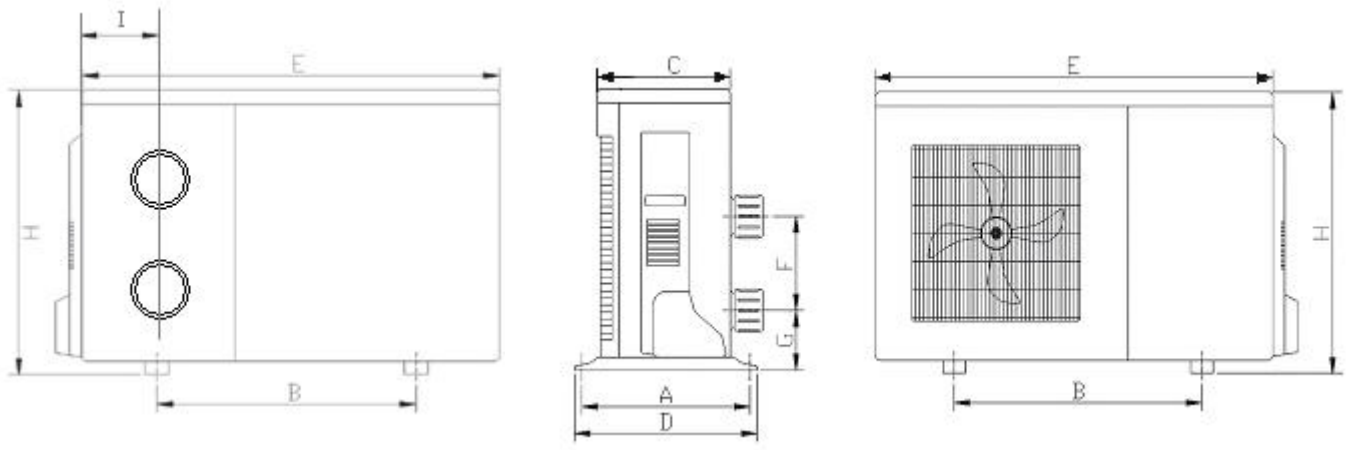
Properties
This heat pump has an effective titanium heat exchanger and is equipped with a digital thermostat for control and display of the water temperature. The refrigerant is R410A. The heat pump has a built-in protection against a too high or too low gas pressure and an automatic stop when a too low outdoor temperature. It has also temperature control for automatic defrosting.

Technical parameters

Function	14983109	14983109-01	14983112	14983112-01
Heating capacity	9kW		12kW	
Cooling capacity	-	5,5kW	-	7,5kW
Rated power/Max. power	1.4/1.8kW		1.8/2.4kW	
C.O.P. (warming)	≦6.2			
C.O.P. (cooling)	-	≦3.8	-	≦3.8
Power supply	220-240V/1phase/50Hz			
Rated current/Max. current	6.4/8.2A		8.2/11.5A	
Noise	≦48 dB(A)		≦48 dB(A)	
Net weight/Gross weight	44/48 kg		52/56 kg	
Water pipe in-out	50 mm			
Advised water flux	4-6m³/h		5-7m³/h	

Notice!
This product works well in air temperatures between +7°C och 40°C to achieve a pool temperature of 18-35°C.
Please take into consideration that the pool heater performance and parameters are different under various conditions.
See the rating plate for detailed information.

Dimensions



	A	B	C	D	E	F	G	H	I
Item no. 14983109 Heat pump Aqua HP 9kW	305-320	500	325	350	850	280	110	625	90
Item no. 14983112 Heat pump Aqua HP 12kW	305-320	500	325	350	850	280	110	625	90

N.B.! We reserve the right to make changes to technical data without previous notice.

ENGLISH

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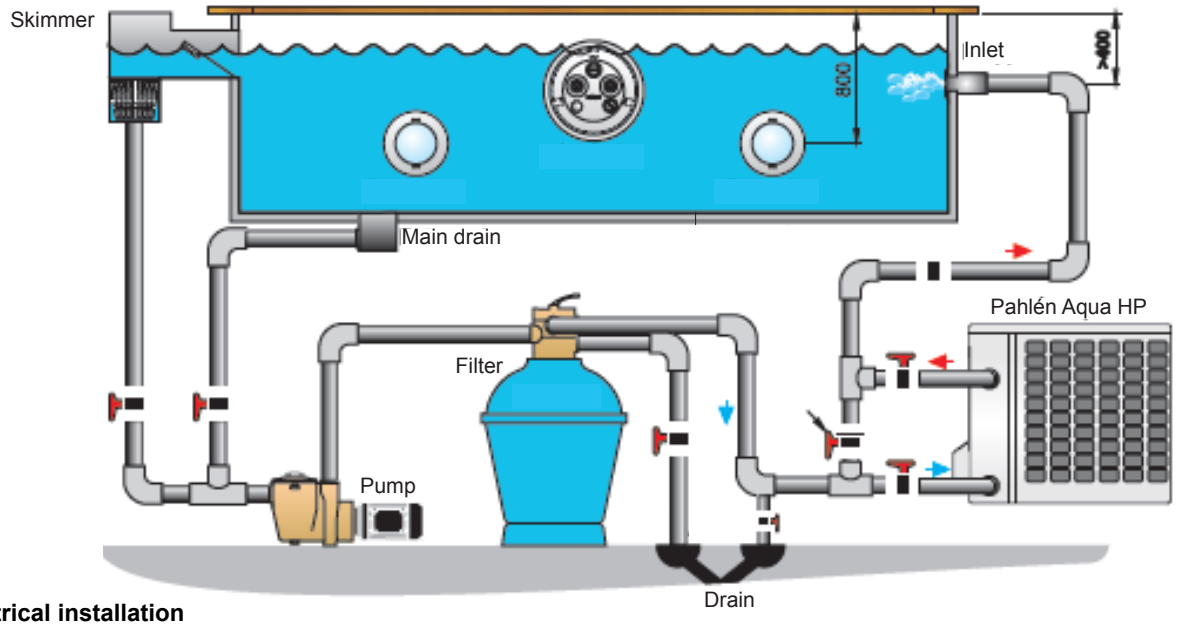
Installation

The heat pump shall be installed by a qualified professional.
The Pahlén heat pump must be installed outdoors, as it takes its energy from the surrounding air. It must be placed in a well ventilated area. Do not place anything by the heat pump that can stop the air flow at the air intake or outlet. Behind the heat pump there has to be a free space of 50 cm or the capacity of the heat pump can be reduced or even disappear. If the air between the air inlet and the air outlet affect one another the efficiency can be deteriorated.

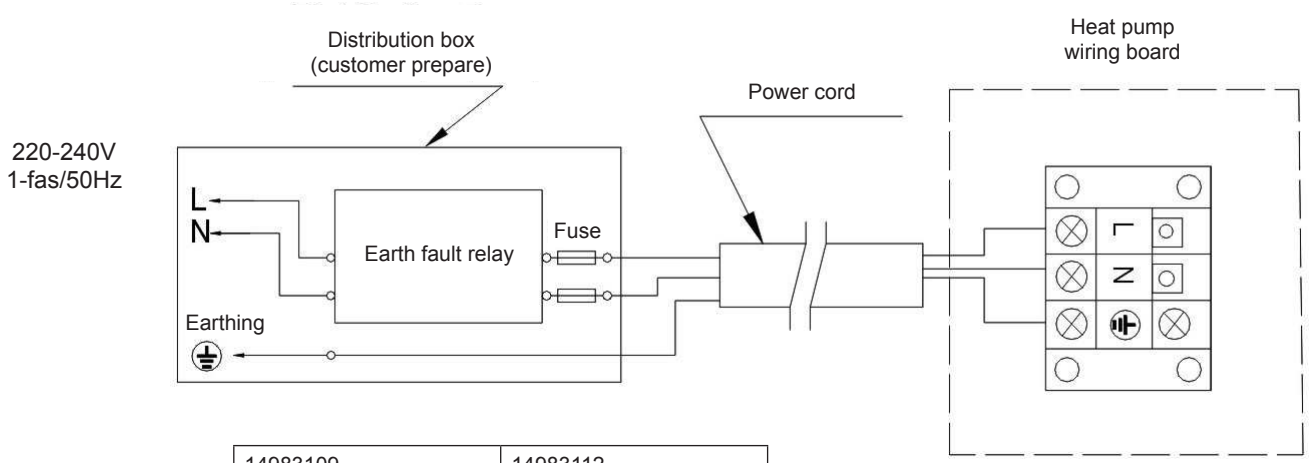
The frame must be fixed with bolts (M10) in a concrete base or fittings.

Note that when the heat pump is in operation there will be condence water at the bottom of the heat pump. Put in and fix the drain nozzle in the hole underneath. Connect the pipe to drain the condence water.



Electrical installation

The electrical installation shall be made by a qualified electrician according to the wiring diagram below and shall be preceded by an earth fault relay. Do not start the heat pump until all cables are connected and the after-check has been completed.



	14983109	14983112
Fuse	16A	16A
Wire	3x2,5 mm²	3x2,5 mm²

Note!
The data above is according to a power cable less than 10 m.
If the power cable is more than 10 m the cable diameter must be increased.

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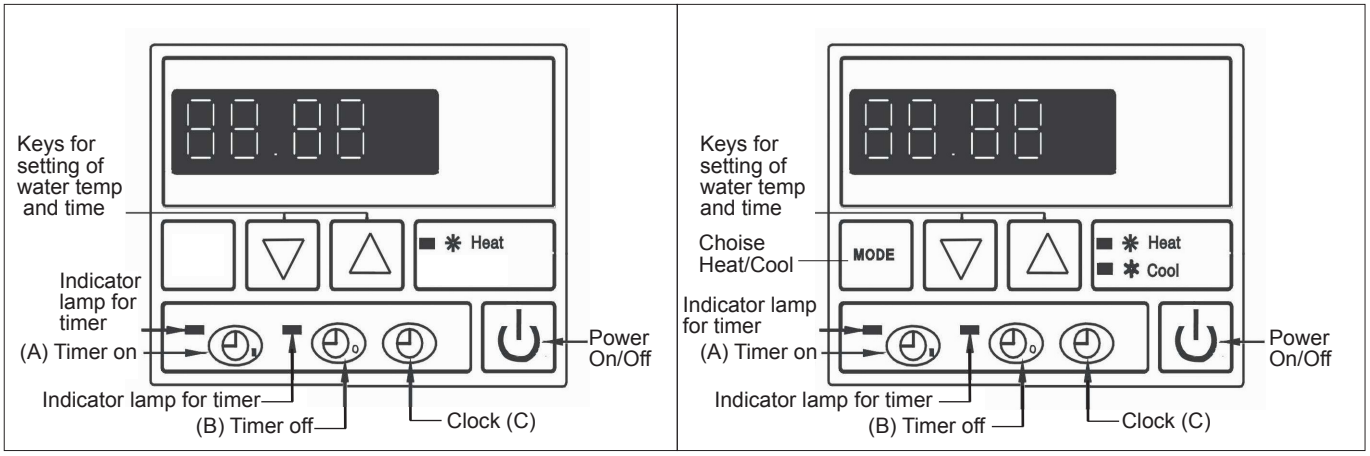
Operating instruction

Display

The display shows current time when the heat pump is off and the pool water temperature when the heat pump is on.



Water temperature setting

This can be done regardless of the heat pump beeing on or off.
To set the temperature, press △ or ▽. The controller twinkles the temperature.
Press △ or ▽ to adjust to required water temperature. After 5 seconds the display returns to normal mode.

Time setting - C

This can be done regardless of the heat pump beeing on or off.
Press C to set time. When the clock on the display is twinkling, press C again to set the hour.
Use △ or ▽ to adjust. Before the twinkling stops, press C to set minutes. Use △ or ▽ to adjust.
Press C again and the water temperature will be seen. After 30 seconds the display returns to normal mode.

C 

Timer on - A

Press A to set the timer. When the indicator light is on and the time is twinkling, press A again to set the hour.
Use △ or ▽ to adjust. Before the twinkling stops, press A to set minutes. Use △ or ▽ to adjust.
Press A and the water temperature will be seen. After 30 seconds the display returns to normal mode.

A 

Timer off - B

Press B to set the timer off. When the indicator light is on and the time is twinkling, press B again to set the hour.
Use △ or ▽ to adjust. Before the twinkling stops, press B to set minutes. Use △ or ▽ to adjust.
Press B and the water temperature will be seen. After 30 seconds the display returns to normal mode.

B 

Cancel timer on and off - A alt. B+C

Press A or B to cancel timer on and off. When the number is twinkling, press C.
When the timer indicator lamp is off and the display shows the water temperature, the timer on and off is cancelled. After 30 seconds the display returns to normal mode.

A 
B 
C 

Shift between heating ✳ **or cooling** ❄**.**
Press Mode (D) button.

Inspection before use

Check: - that the installation and connection of the heat pump is done according to the reference drawing of the pipe connection.
- that the electric wiring is done according to the electric wiring diagram and the grounding is proper made.
- that the main power switch is off.
- the temperature setting.
- that the air inlet and outlet are not blocked.

Trial

Always start the pump before the heat pump and turn off the heat pump before the pump or the heat pump will be damaged.
Start the pump and check for any leakage of water. Set suitable temperature and switch on the power supply.
The heat pump is equipped with a time lag starting function. When starting the heat pump the fan will run one minute earlier than the compressor.
When the heat pump has been started up, check for any abnormal noise.

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Precautions

Attention

Do not place objects that can block the air intake or outlet of the heat pump close to the heat pump, as the capacity can be reduced or even disappear.
Do never put a hand into the heat pump fan exhaust and do never take away the protection in front of the fan.
If anything abnormal as noise, odour, smoke or leakage current should appear, shut off the heat pump and contact the retailer.
Do not try to repair the heat pump yourself.
Do not use or store inflammable gas or liquid, such as thinner, paint or fuel, close to the heat pump. To optimize the heating capacity it is advisable to use a pool cover.
The connecting pipes to the swimming pool and the heat pump should be as short as possible.
Maximum capacity of the heat pump is reached at a temperature between +15°C and +25°C.

Safety

Keep the main power supply switch away from children.
When there is a power-cut during operation, and later when the power recures, the heat pump will start up automatically.
During thunderstorms please switch off the main power supply to prevent damage caused by lightning.
If the heat pump is shut off for a long time, please switch off the power and drain the water from the heat pump by opening the tap on the inlet pipe.

Maintenance

Switch off the power to the heat pump before any inspection or repair.
In winter season, please switch off the power and drain water from the heat pump. Cover the body of the heat pump with plastic foil to avoid dust.
Before the summer and before starting the heat pump, remove from the air intake any leaves, pine needles and other dirt which may obstruct the circulation.
Clean the heat pump with household detergents or clean water, NEVER gasoline, thinner or any similar fuel.
Check bolts, cables and connections regularly.

Trouble shouting

Fault	Reason	Solution
Heat pump not starting	Main power is off	Wait for power to recur
	Power (switch) shut off	Switch on power
	Burnt out fuse	Replace fuse
	Circuit breaker drops out	Switch circuit breaker back on
There is air outlet but the heating is not satisfactory.	Air inlet is blocked	Clean out the obstacle
	Air outlet is blocked	Clean out the obstacle
	3 min time lag protection	Please wait
	Temperature set to low	Increase temp. setting accordingly

If the above mentioned faults cannot be solved, please contact your retailer, inform them of model and detailed failure report.
Attention! Please don´t disassemble or repair the heat pump by yourself - leave it to the authorized professionals.

Failure code

No	Failure code	Failure description
1	EE 1	High pressure protection
2	EE 2	Low pressure protection
3	EE 3	Low water protection
4	EE 4	3 phase sequence protection (only available for 3 phase heat pumps)
5	PP 1	Temp.sensor failure: pool water
6	PP 2	Temp.sensor failure: exhaust (from compressor)
		Model -01: Temp.sensor failure: cool from coil
7	PP 3	Temp.sensor failure: evaporator
8	PP 4	Temp.sensor failure: gas return
9	PP 5	Temp. sensor failure: air
10	PP 6	Compressor exhaust overload protection
11	PP 7	Auto stop protection when the temperature is < 7°C (Not a failure)

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