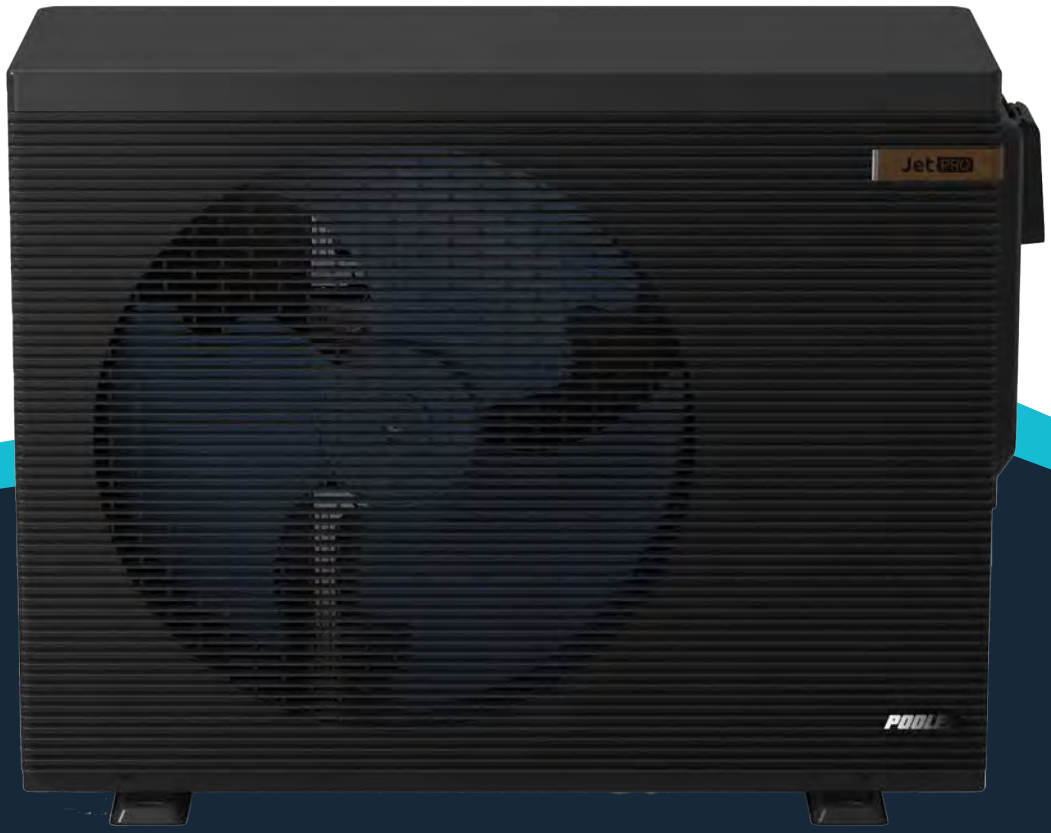
Poolstar
Source d'innovation

POOLEX
Jet PRO



FULL INVERTER

INSTALLATION AND OPERATION MANUAL

www.poolstar.fr

WARNING

This heat pump contains R32 flammable refrigerant.

Prior approval must be obtained before any procedure is performed on the refrigerant circuit.

To ensure user safety, the following precautions must be followed before any procedure is performed on the refrigerant circuit.

1. Work procedure

All work must be carried out in accordance with strict guidelines in order to minimise the risk of gas or flammable vapour escaping during the execution of the work.

2. General workplace conditions

All persons present in the work area must be informed as to the nature of the work being carried out. Avoid performing work in confined spaces. The area surrounding the work space must be cordoned off and particular attention must be paid to nearby sources of heat or flames.

3. Monitoring the presence of refrigerant

The area must be monitored for the presence of refrigerant, using an appropriate detector, before and after any work takes place in order to ensure that no potentially flammable gas has escaped. Ensure the equipment used for detecting leaks is suitable for flammable refrigerants, i.e., does not generate sparks, the device is properly sealed or equipped with internal safety measures.

4. Fire extinguishers

If hot work is being performed on the refrigeration system, or any related system, appropriate fire extinguishing equipment must be available. Install a dry powder or CO2 fire extinguisher near the work area.

5. No sources of heat, open flames or sparks

The presence of heat sources, open flames or sparks in close proximity to one or more parts/pipework containing or having contained flammable refrigerant is strictly prohibited. All sources of sparks, including smoking, must be located sufficiently far away from the site of installation, repairs, removal and disposal, during which flammable refrigerant could escape into the surrounding environment. Before beginning work, the environment surrounding the equipment must be verified to ensure there is no source of ignition. “No smoking” signs must be displayed.

6. Ventilated area

Ensure that the workplace is open to the air, or properly ventilated, before performing any work on the system or carrying out hot work. Sufficient ventilation must be maintained throughout the period of work.

7. Inspection of refrigeration equipment

When electrical components are replaced, they must be suitable for their intended use and meet the relevant specifications. Replacements must be genuine or OEM parts. If in doubt, contact the manufacturer’s customer support team.

Inspections must be performed on installations using flammable refrigerants:

– Refrigerant charge must be appropriate for the size of the space in which the refrigeration system is installed..

– The ventilation system and air vents must function correctly and must not be obstructed.

– If an indirect refrigeration system is being used, the secondary circuit must also be inspected.

– Equipment markings must be clearly visible and legible. Illegible signs and markings must be corrected.

– Refrigerant pipework and components must be installed in locations with no risk of exposure to substances capable of corroding components containing refrigerant fluid.

8. Inspection of electrical appliances

Repairs and maintenance performed on electrical appliances must include preliminary safety tests and inspection of components. In the event a fault is detected which is capable of compromising safety, electrical power must be disconnected from the circuit until the problem is resolved.

Preliminary safety tests must include the following:

• Ensuring the condensers are fully discharged: this must performed in a safe manner to avoid the risk of ignition;

• Ensuring that no wires or electrical components are exposed at the time of charging, recovery, or purging the system of refrigerant gas.

• Ground continuity test.

PLEASE READ CAREFULLY

These installation instructions form an integral part of the product.
They must be provided to the installer and kept in a safe place by the user.
If you lose this manual, please visit our website:

www.poolex.fr

The indications and warnings contained in this manual should be carefully read and understood as they provide important information regarding the safe handling and operation of the heat pump. Keep this manual handy for future reference.

Installation must be performed by a qualified professional in accordance with regulations in force and the manufacturer's instructions. Errors made during installation can cause physical injuries to people and animals, as well as mechanical damage for which the manufacturer shall not be held liable.

After unpacking the heat pump, please check the contents for any signs of damage.

Before plugging in the heat pump, ensure that the instructions provided in this manual are compatible with the actual installation conditions and do no exceed the maximum authorised limits for the product in question.

In the event of a defect and/or malfunction of the heat pump, electrical power must be shut off and no attempts to repair the fault should be made.
Repairs must be carried out by an authorised technician using original spare parts. Non-compliance with the aforementioned clauses can negatively impact the safe operation of the heat pump.

In order to guarantee the efficiency and ensure the proper functioning of the heat pump, it must be regularly maintained in accordance with the instructions provided.

In the event the heat pump is sold or transferred to a third party, please ensure that all technical documentation is given to the new owner alongside the equipment.

This heat pump has been designed to only heat the water of a spa. Any other use is considered inappropriate, incorrect and potentially dangerous.

All contractual and extra-contractual liability on the part of the manufacturer / distributor shall be considered null and void in the event of damage caused by errors in installation or operation, or due to non-compliance with the instructions provided in this manual, or the standards in force for the installation of equipment discussed in this document.

NOTE: The images in this manual are for illustrative purposes only. Please refer to the actual product.

CONTENTS

CONTENTS

1. SAFETY PRECAUTIONS

Read these instructions carefully before installation. Keep this manual in a convenient place for future reference.

Caution:Risk of fire/ flammable materials for IEC/EN 60335-2-40 except IEC 60335-2-40：2018

Warning:Risk of fire/ flammable materials for IEC 60335-2-40：2018 only

This appliance uses a flammable refrigerant. If the refrigerant leaks and is exposed to an external ignition source, there is a risk of fire.

- Improper installation of the equipment or accessories may result in electric shock, short circuit, leakage, fire or other damage to the equipment. Be sure to use only accessories manufactured by the supplier, which are specifically designed for the equipment, and ensure that installation is carried out by a professional.
- All activities described in this manual must be carried out by an authorised technician. Be sure to wear adequate personal protective equipment such as gloves and safety glasses when installing the unit or performing maintenance activities.
- Contact your dealer for further assistance.
- Maintenance must only be carried out in accordance with the equipment manufacturer's recommendations. Maintenance and repairs requiring the assistance of qualified personnel must be carried out under the supervision of the person competent in the use of flammable refrigerants.

When electrical components are changed, they must be fit for their intended purpose and to the correct specification. The manufacturer's care and maintenance instructions must always be followed. If in doubt, contact the manufacturer's technical service for assistance.

Unplug the appliance from its power source during servicing and when replacing parts.

These units are heat pumps that comply with the requirements for partial units in this international standard.

- Before touching any parts of the electrical terminals, switch off the electrical switch.
- When maintenance panels are removed, live parts can easily be accidentally touched.
- Never leave the unit unattended during installation or servicing if the service panel has been removed.
- Do not touch the gas pipes during and immediately after operation as the pipes may be hot and burn your hands. To avoid injury, allow the pipework to cool to normal temperature or make sure you wear protective gloves.
- Do not touch any switches with wet fingers. This could cause an electric shock.
- Before touching electrical parts, disconnect all power to the unit.
- Ask your dealer or qualified personnel to carry out the installation work in accordance with this manual. Do not install the unit yourself. Improper installation may result in water leakage, electric shock or fire.
- Only use the accessories and parts specified for the installation work. Failure to use the specified parts may result in water leakage, electric shock, fire or the unit falling from its stand.
- Install the unit on a base that can support its weight. Insufficient physical strength may cause the equipment to fall and cause injury.
- Carry out the specified installation work taking into account strong winds, hurricanes or earthquakes.
- Ensure that all electrical work is carried out by qualified personnel, in accordance with local laws and regulations and this manual, using a separate circuit. Insufficient capacity of the supply circuit or incorrect electrical construction may result in electric shock or fire.
- Ensure that an earth leakage circuit breaker is installed in accordance with local laws and regulations to prevent electric shock or fire.

1. SAFETY PRECAUTIONS

- Ensure that all wiring is secure. Use the specified wires and ensure that terminal connections or wires are protected against water and other adverse external forces. Incomplete connection or securing may result in fire.
- When wiring the power supply, lay the wires so that the front panel can be securely fastened. If the front panel is not in place, terminal overheating, electric shock or fire may occur.
- After completing the installation work, check that there are no leaks of refrigerant.
- Never touch leaking refrigerant directly, as this could cause severe frostbite.
- Do not touch the refrigerant pipes during and immediately after operation as the refrigerant pipes may be hot or cold, depending on the state of the refrigerant circulating through the refrigerant piping, the compressor and other parts of the refrigerant cycle. There is a risk of burns or frostbite if you touch the refrigerant pipes. To avoid injury, allow the pipes to cool to a normal temperature or, if you must touch them, make sure you wear protective gloves.
- Do not touch internal parts (pump, emergency heater, etc.) during and immediately after operation. Touching internal parts can cause burns. To avoid injury, allow the internal parts to return to normal temperature or, if you must touch them, make sure you wear protective gloves.

REBUTTAL : Do not dispose of this product with unsorted household waste. The collection of this waste must be done separately for a suitable treatment if necessary. Do not throw away electrical appliances with household waste, use individual collection facilities. Contact your local government for information on available collection systems. If electrical appliances are disposed of in landfills or dumps, hazardous substances can seep into groundwater and enter the food chain, which will harm your health and well-being.

Wiring must be carried out by professional technicians in accordance with national wiring regulations and the circuit diagram. An omnipolar disconnecting device with at least 3 mm separation distance in all poles and a residual current device (RCD) with a rated power not exceeding 30 mA must be incorporated in the fixed wiring in accordance with national regulations.

The appliance must be installed in accordance with current national wiring regulations.

Confirm that the installation area (ground) is safe, with no hidden hazards such as water, electricity or gas, before connecting the pipes.

Before installation, check that the user’s electrical supply meets the unit’s electrical installation requirements (including reliable earthing, leakage system and wire diameter electrical load, etc.).

If the product’s electrical installation requirements are not met, the product may not be installed until the problem has been rectified.

About fluorinated gases

This heat pump contains fluorinated gases. For specific information on the type of gas and quantity, please refer to the relevant label on the unit. Observe national gas regulations.

Installation, servicing, maintenance and repair of this unit must be **carried out by a certified technician**.

The product must be uninstalled and recycled **by a certified technician**.

If a leak detection system is fitted to the system, it should be checked for leaks at least every 12 months. When the unit is checked for leaks, it is strongly recommended that all checks are properly recorded.

The equipment complies with standard IEC 61000-3-12.

Storage

The appliance must be stored :

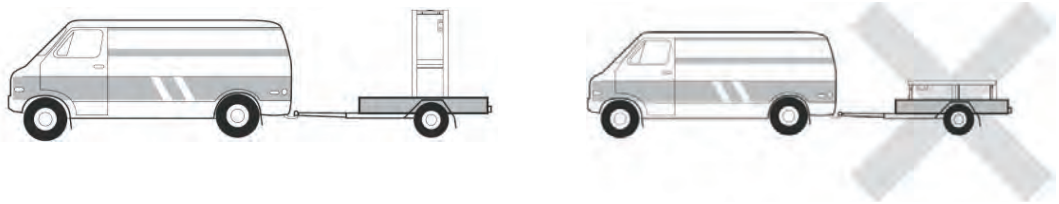
- in a well-ventilated place where the size of the room corresponds to the specified area for operation.
- in a room without open flames in permanent operation (for example, a gas appliance in operation) and without ignition sources (for example, an electric heater in operation).
- so as to avoid mechanical damage.

2. GENERAL

2.1 General terms and conditions of delivery

All products and packaging, even those delivered carriage paid, travel at the risk of the recipient.

Persons responsible for accepting delivery of the device must perform a visual inspection to make a note of any damage that may have occurred during transportation (refrigeration circuit, casing, electric box, frame). Any damage occurring during transportation must be noted by the recipient on the delivery receipt of the carrier, and confirmed by registered post sent to the carrier within 48 hours.



The device must be stored and transported upright at all times, on a pallet, and in its original packaging. If the device has been transported in a horizontal position, please wait at least 24 hours prior to connecting it.

2.2 Operating principle

These units are used to heat and cool pool water. They can maintain the water temperature of the stable pool at the set temperature to ensure comfortable bathing conditions according to the seasons.

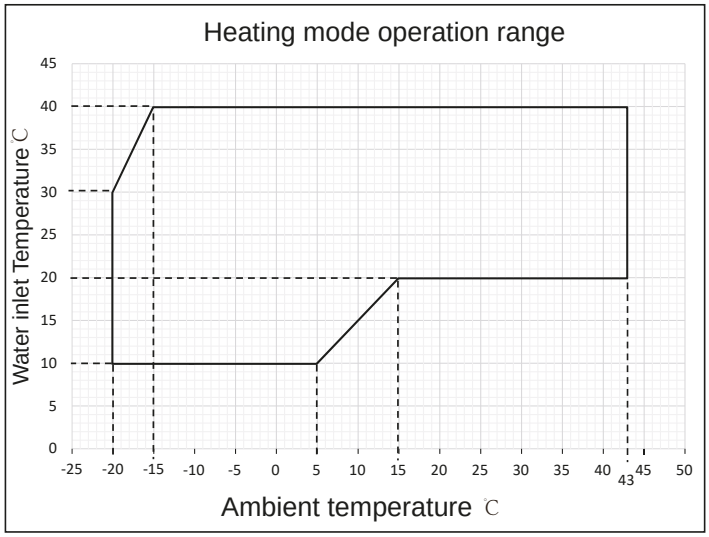
A wired control is provided with the unit.

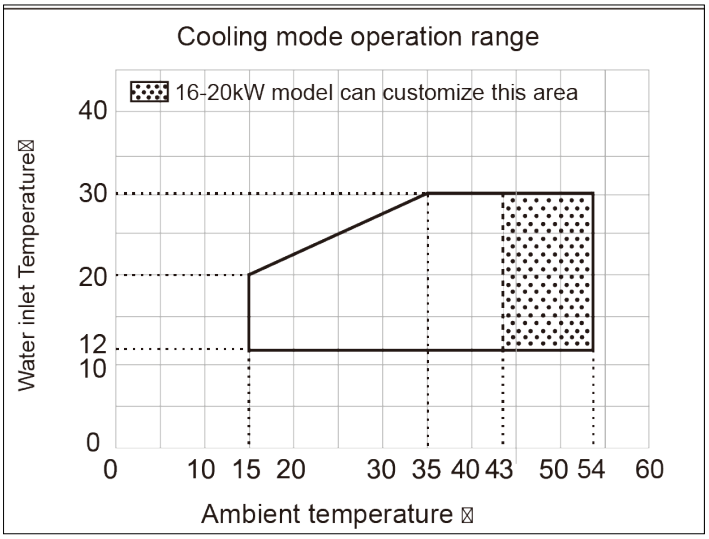
The maximum length of communication cables between the unit and the controller is 10 m.

Power cords and communication wiring must be arranged separately; they cannot be placed in the same conduit. Otherwise, it may cause electromagnetic interference. Power cords and communication cables should not come into contact with the refrigerant hose to prevent the high temperature hose from damaging the cables.

Communication cables must use shielded lines.

Operating ranges





2.3 Water treatment

Poolex heat pumps for spas can be used with all types of water treatment systems.

Nevertheless, it is essential that the treatment system (chlorine, pH, bromine and/or salt chlorinator metering pumps) is installed after the heat pump in the hydraulic circuit.

To avoid any deterioration to the heat pump, the water's pH must be maintained between 6.8 and 7.8.

3. DESCRIPTION

3.1 Operating limits

For the heat pump to operate normally, the ambient air temperature must be between -20°C and 43°C. However, we recommend winterising your spa if the water temperature falls below 10°C.

Thanks to the Full Inverter system, the SPA heat pump automatically adapts its power according to its settings and the external environment. So, when the water temperature rises (this phase can last up to a week after installation), the SPA heat pump will use all the power available; and once the target temperature has been reached, the SPA heat pump will reduce its energy consumption.

3.2 Package contents

At reception, please check that your package contains the following:

- ✓ heat pump
- ✓ a wired control box
- ✓ a 10m cable extension lead
- ✓ 2 connectors (loose joint)
- ✓ a condensate drainage kit
- ✓ this installation and user manual

3.3 General characteristics

A Poolex heat pump has the following features:

- ✓ High performance with up to 80% energy savings compared to a conventional heating system.
- ✓ Clean, efficient and environmentally friendly R32 refrigerant.
- ✓ Reliable high output leading brand compressor.
- ✓ Wide hydrophilic aluminum evaporator for use at low temperatures.
- ✓ User-friendly intuitive control panel.
- ✓ Heavy duty shell, anti-UV treated and easy to maintain.
- ✓ CE certification.

3. DESCRIPTION

3.4 Technical characteristics

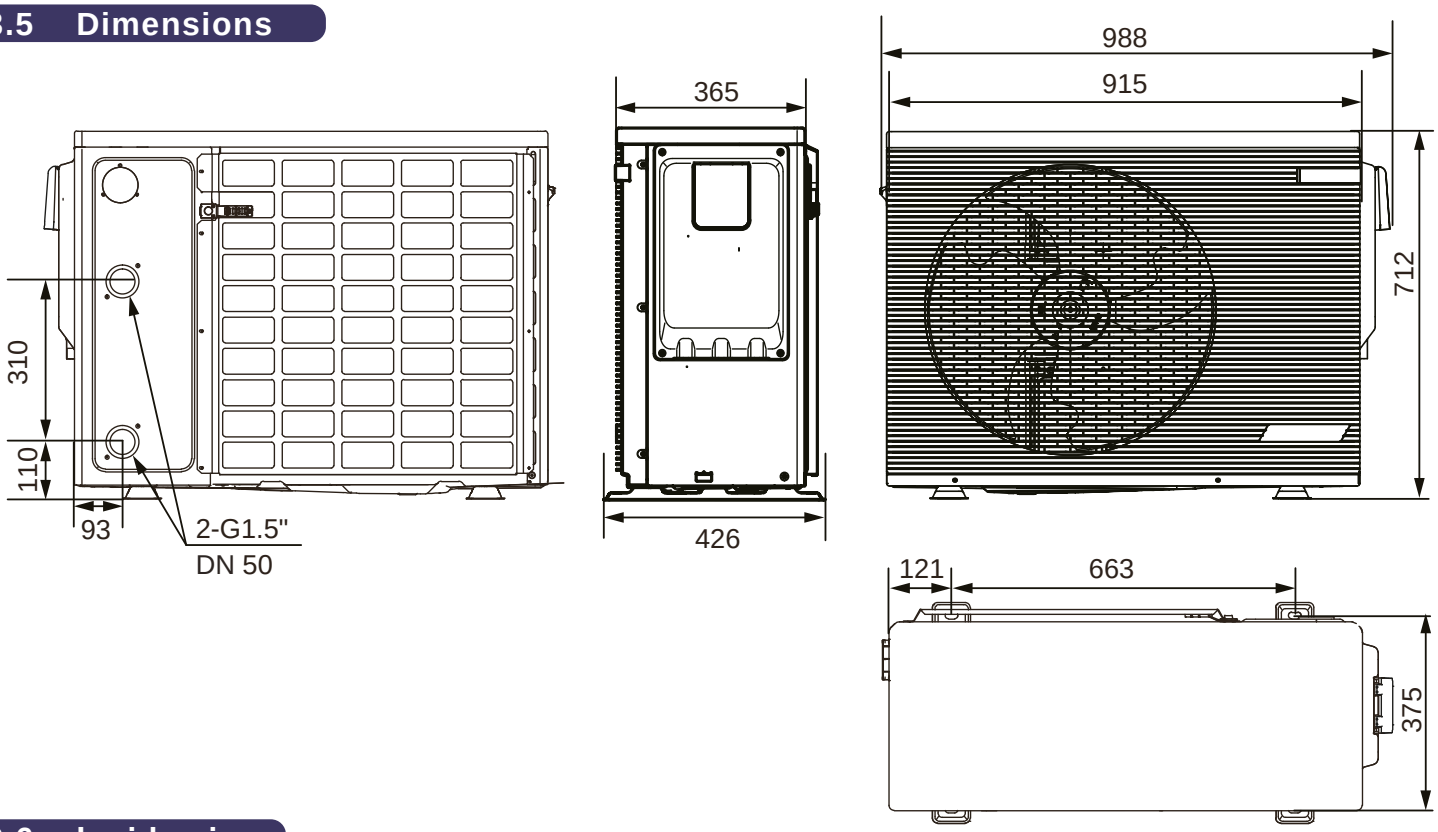
Test conditions		Jet Pro 75	95	125	155	180	155T	180T
Air [1] 27°C Water [2] 26°C	Heating power (kW)	2.9-10.3	2.9-12.8	3.8-16.0	3.8-18.7	3.8-21.8	3.8-18.7	3.8-21.8
	Consumption (kW)	0.24-1.56	0.24-2.13	0.31-2.67	0.31-3.30	0.31-4.00	0.31-3.30	0.31-4.00
	COP (Coeff. of performance)	**12.1-6.6**	**12.1-6.0**	**12.4-6.0**	**12.4-5.7**	**12.4-5.5**	**12.4-5.7**	**12.4-5.5**
Air [1] 15°C Water [2] 26°C	Heating power (kW)	1.9-7.3	1.9-9.3	3.5-12.8	3.5-15.0	3.5-17.0	3.5-15.0	3.5-17.0
	Consumption (kW)	0.29-1.56	0.29-2.09	0.46-2.84	0.46-3.40	0.46-4.00	0.46-3.40	0.46-4.00
	COP (Coeff. of performance)	**6.55-4.69**	**6.55-4.45**	**7.6-4.5**	**7.6-4.5**	**7.6-4.3**	**7.6-4.5**	**7.6-4.3**
Air [1] 35°C Water [2] 27°C	Cooling capacity (kW)	1.6-4.25	1.6-4.8	2.0-7.8	2.0-8.4	2.0-8.8	2.0-8.4	2.0-8.8
	Consumption (kW)	0.38-1.13	0.38-1.6	0.53-2.6	0.53-3.23	0.53-3.67	0.53-3.23	0.53-3.67
	EER	**4.2-4.0**	**4.2-3.0**	**3.8-3.0**	**3.8-2.6**	**3.8-2.4**	**3.8-2.6**	**3.8-2.4**
SCOP		**A**			**A**		**A**	
Power supply		Single phase 208-230V ~ 50/60Hz					Triphase 380-415V ~ 50/60Hz	
Maximum power (kW)		2,2	2,6	4,2	4,2	5,3	4,2	5,3
Maximum current (A)		10.5	11	18	18	23	7.5	9.0
Heating temperature range		15°C ~ 40°C						
Cooling temperature range		12 °C ~ 35 °C						
Operating ambient temperature range		-20°C ~ 43°C						
Unit dimensions L x W x H (mm)		988 x 365 x 712						
Unit weight (kg)		46		53				
Recommended pool size with cover (m^3)		40-55	50-70	65-95	80-115	110-135	80-115	110-135
Sound pressure level at 1m (dBA)		< 48	< 52	< 56	< 56	< 58	< 56	< 58
Sound pressure level at 3m (dBA)		< 39	< 43	< 47	< 47	< 49	< 47	< 49
Sound pressure level at 10m (dBA) [3]		< 28	< 32	< 36	< 36	< 38	< 36	< 38
Hydraulic connections (mm)		D50						
Heat exchanger		Titanium heating coil						
Water flow rate (m^3/h)		3,1	3,9	6,9	6,9	8,3	6,9	8,3
Compressor brand		GMCC						
Compressor type		Rotary						
Refrigerant		R32						
Refrigerant volume (g)		550		780				
Minimum pressure (MPa)		0,14						
Maximum pressure (MPa)		4.3		4.3				
Protection rating		IP24						
Load loss (kPa)		4,6	7,3	22	22,0	28,0	22,0	28,0
Control panel		LCD display						
Operating modes		Heating/Cooling/Circulation pump						

The technical specifications of our heat pumps are provided for information purposes only. We reserve the right to make changes without prior notice.

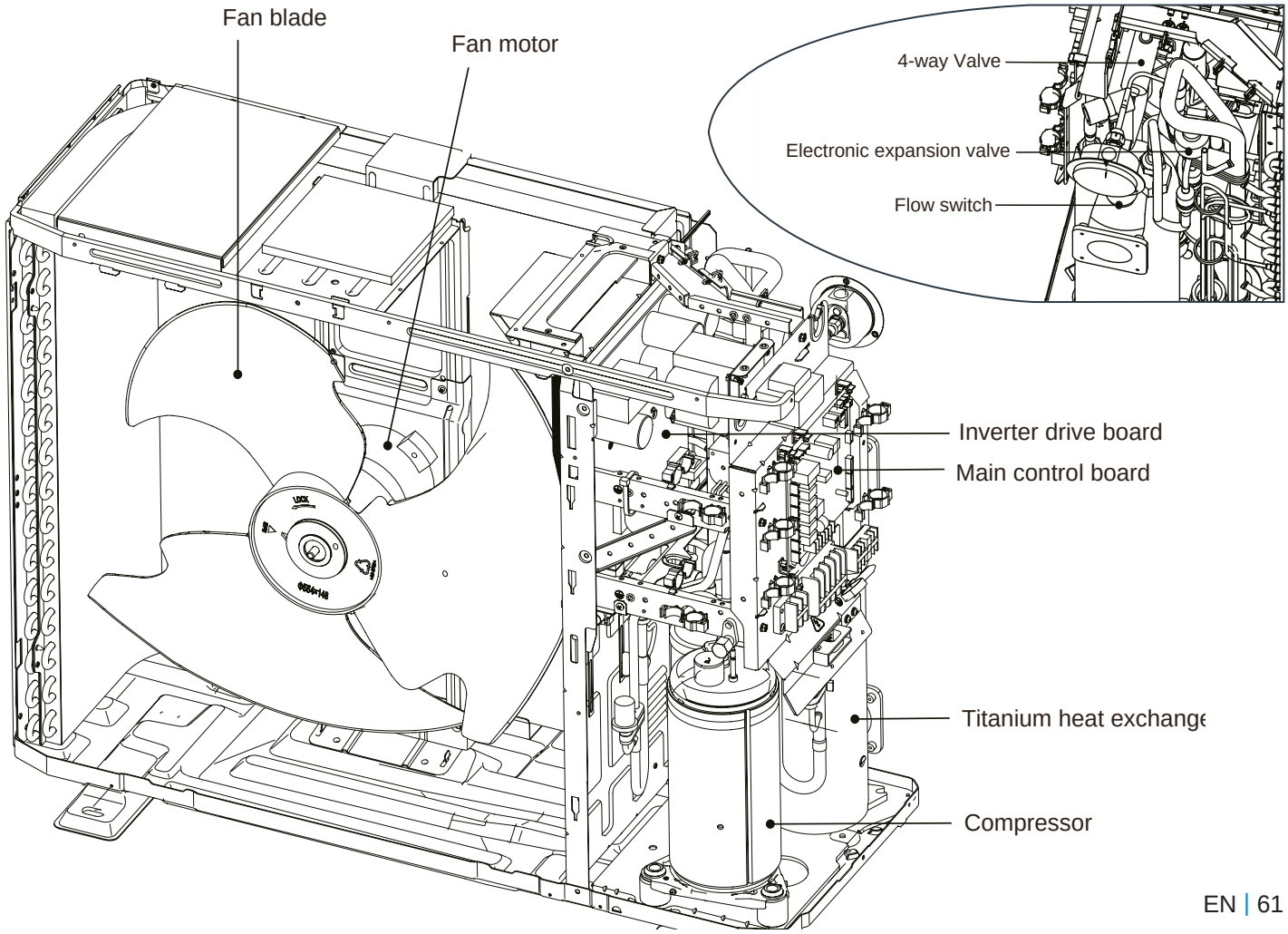
[1] Ambient air temperature
[2] Initial water temperature
[3] Noise level at a distance of 10 m in accordance with international standards EN ISO 3741 and EN ISO 354

3. DESCRIPTION

3.5 Dimensions

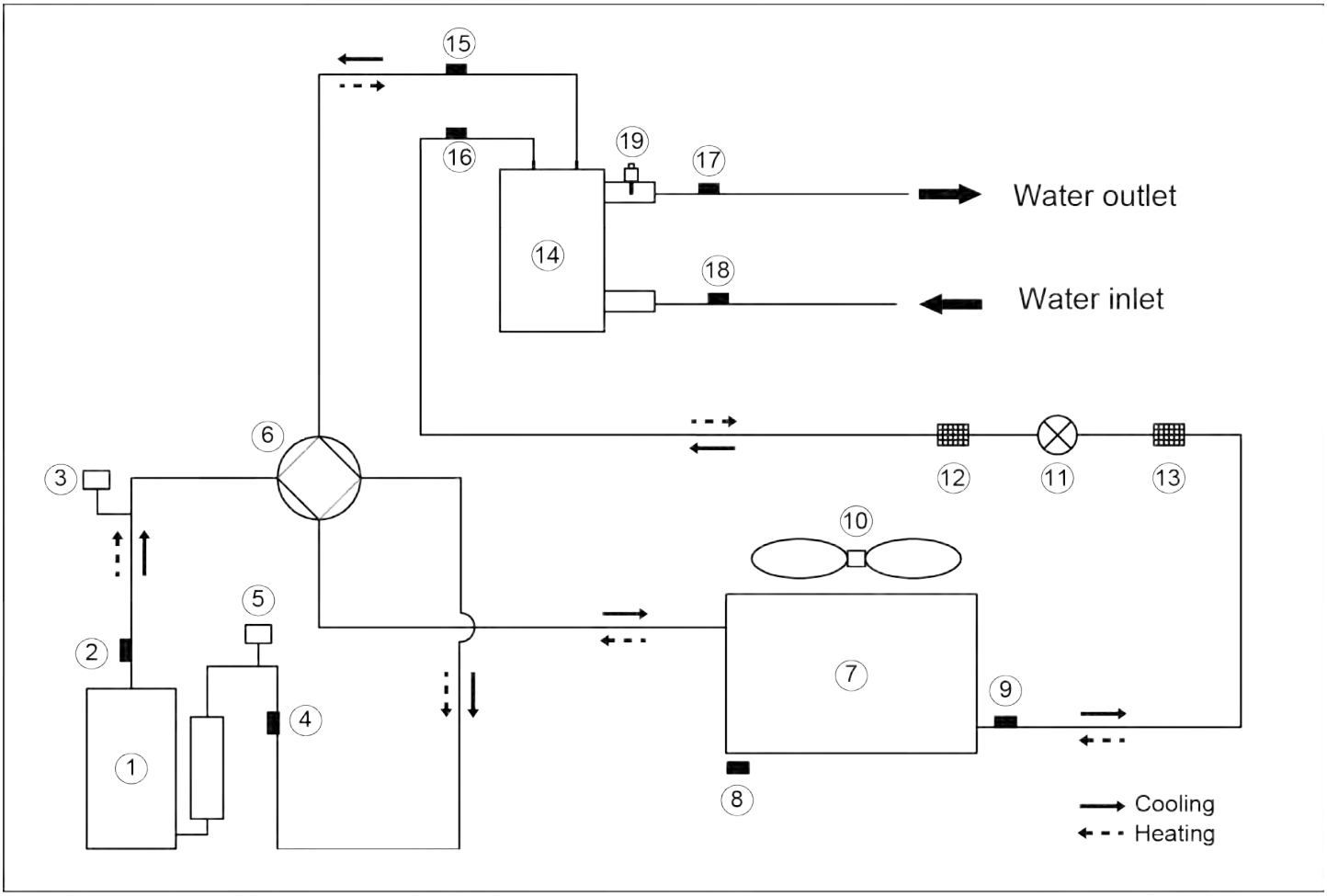


3.6 Inside view



3. DESCRIPTION

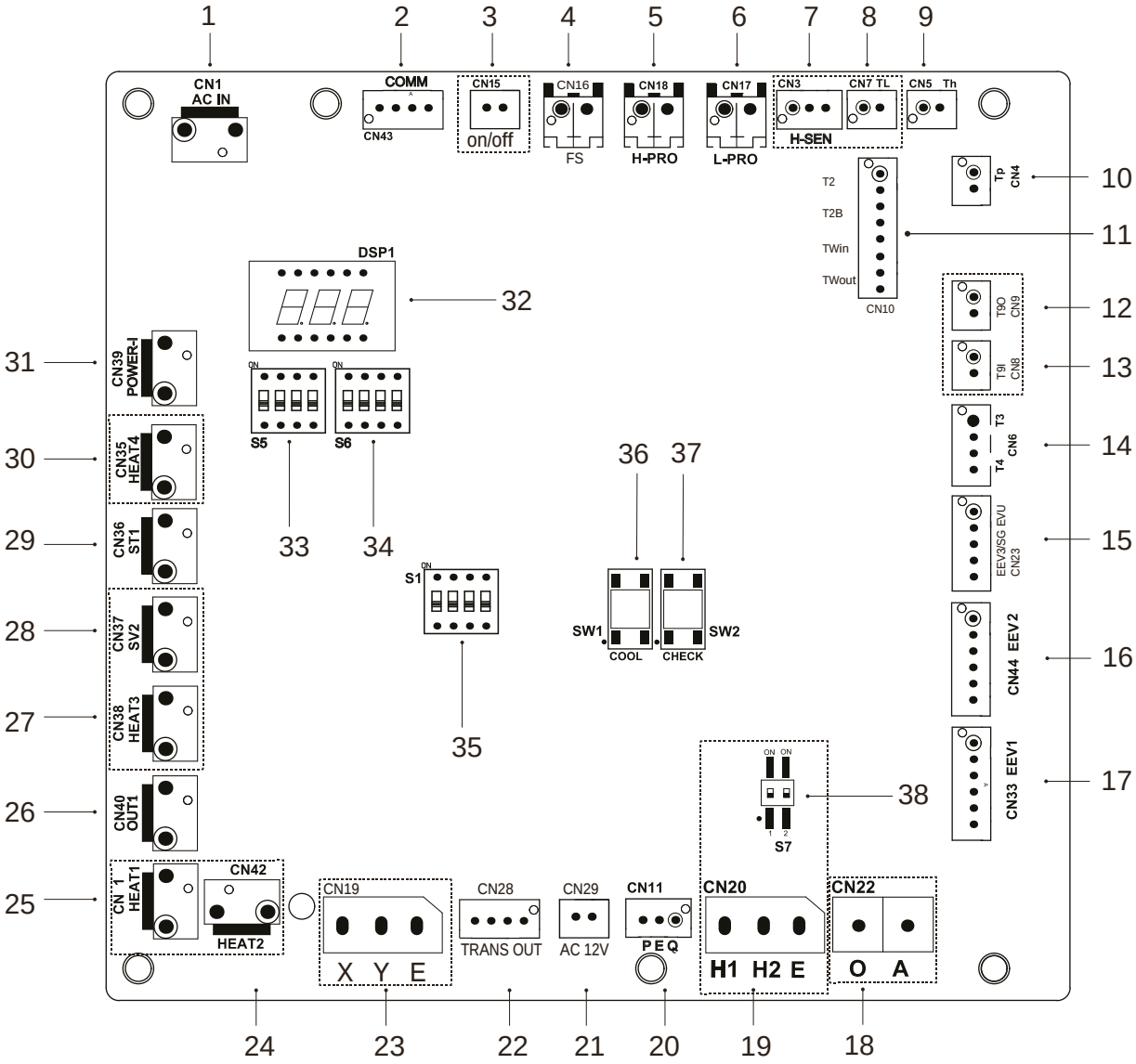
3.7 Refrigerant cycle



1. Compressor
2. Discharge temperature sensor (TP°
3. High pressure switch
4. Suction temperature sensor (TH)
5. Low pressure switch
6. 4-way valve
7. Fin-coil heat exchanger
8. Ambient temperature sensor (T4)
9. Coil temperature sensor (T3)
10. DC-fan
11. Electronic expansion valve
12. Filter
13. Filter
14. Titanium heat exchanger
15. Gas refrigerant temperature sensor (T2B)
16. Liquid refrigerant temperature sensor (T2)
17. Water outlet temperature sensor (TW-out)
18. Water inlet temperature sensor (TW-in)
19. Water flow switch

3. DESCRIPTION

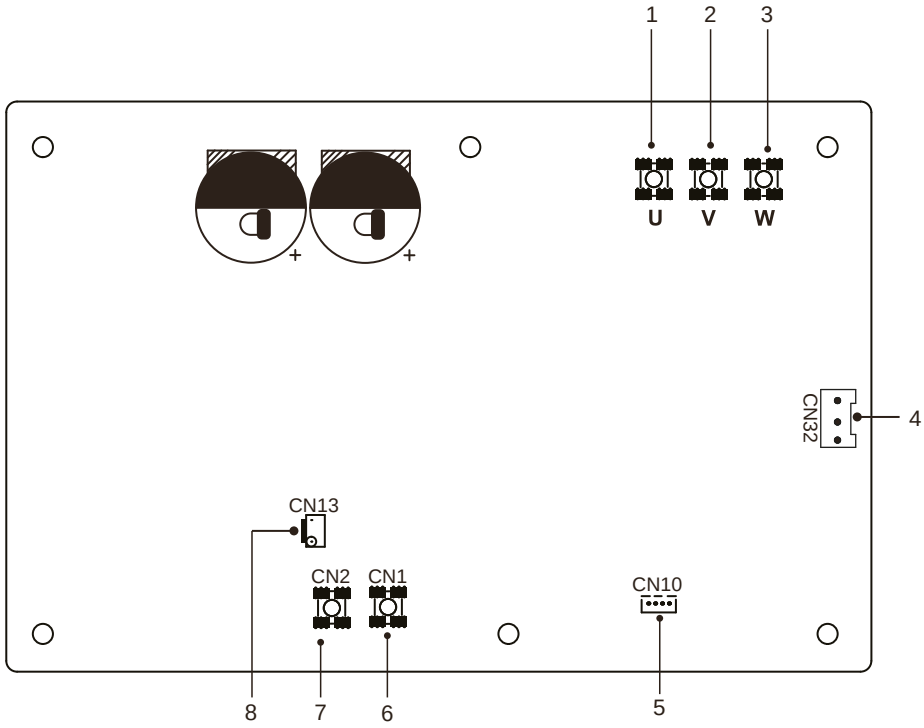
3.8 Main Control Board



1. Power input port from Main control board (CN1)
2. Port for communication with Inverter module (CN43)
3. Flow remote switch((CN15)
4. Flow switch(CN16)
5. High pressure switch (CN18)
6. Low pressure switch (CN17)
7. Reserved (CN3)
8. Reserved (CN7)
9. TH temp.sensor (CN5)
10. TP temp.sensor (CN4)
11. T2,T2B,TW-in,TW-out temp.sensor(CN10)
12. Reserved (CN9)
13. Reserved (CN8)
14. T3,T4 temp.sensor(CN6)
15. EEV3/SG EVU(CN23)
16. EEV / Running status LED light
17. EEV (CN33)
18. Reserved (CN22)
19. Reserved (CN20)
20. Port for communication with control box PQE(CN11)
21. Port for communication with wire controller AB (CN29)
22. Transformer output (CN28)
23. Central Control Monitor (CN19)
24. Reserved (CN42)
25. Reserved (CN41)
26. Transformer input (CN40)
27. Reserved (CN38)
28. Reserved (CN37)
29. 4-way valve (CN36)
30. Reserved (CN35)
31. PUMP (CN39)
32. Digital display (DSP1)
33. Dip switch S5
34. Dip switch S6
35. Dip switch S1
36. Port for forced cooling (SW1)
37. Port for point check(SW2)
38. Dip switch S7 (Reserved)

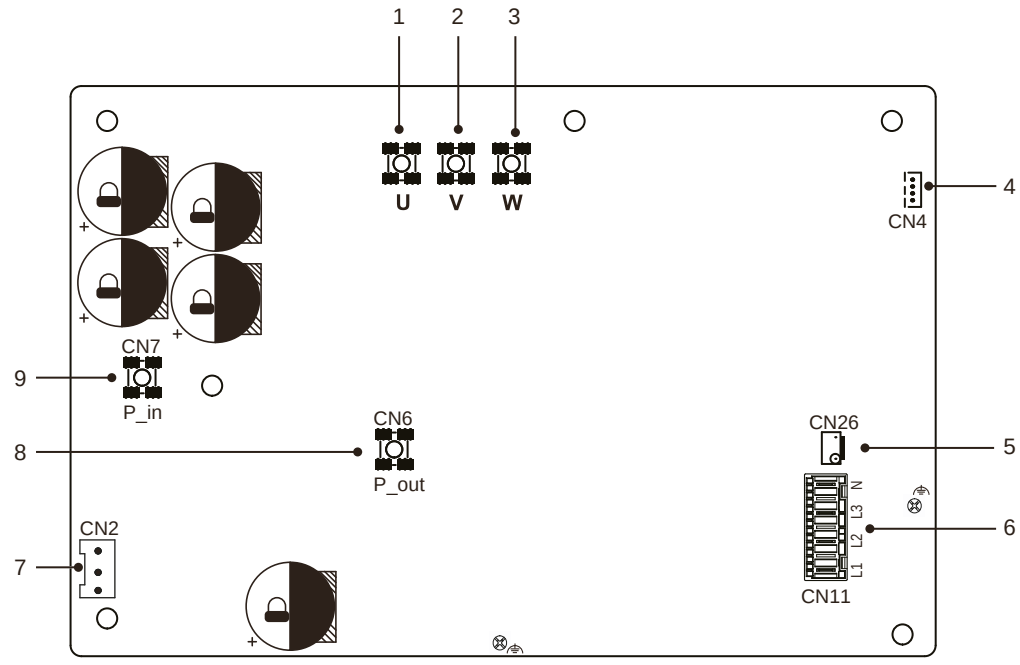
3.9 Inverter Drive Board

For single phase model



1. Compressor connection port U
2. Compressor connection port V
3. Compressor connection port W
4. Port for fan (CN32)
5. Port for communication with main control board (CN10)
6. Input port L for rectifier bridge (CN1)
7. Input port N for rectifier bridge (CN2)
8. Power supply port to Main control board (CN13)

For three-phase model



1. Compressor connection port U
2. Compressor connection port V
3. Compressor connection port W
4. Port for communication with main control board
5. Power supply port to Main control board
6. Connecting the Power Supply (CN11)
7. Port for fan (CN2)
8. Bus entrance port (CN6)
9. Bus output port (CN7)

4. INSTALLATION

4.1 General requirements

Select an installation site where the following condtions are satisfied and one that meets with your customer's approval.

- ✓ Places that are well-ventilated.
- ✓ Places where the unit does not disturb neighbors.
- ✓ Safe places which can bear the unit's weight and vibration and where the unit can be installed at an even level.
- ✓ Places where there is no possibility of flammable gas or product leak.
- ✓ The equipment is not intended for use in a potentially explosive atmosphere.
- ✓ Places where servicing space can be well ensured.
- ✓ Places where the units' piping and wiring lengths come within the allowable ranges.
- ✓ Places where water leaking from the unit cannot cause damage to the location (e.g. in case of a blocked drain pipe).
- ✓ Places where rain can be avoided as much as possible.
- ✓ Do not install the unit in places often used as a work space. In case of construction work (e.g. grinding etc.) where a lot of dust is created, the unit must be covered.
- ✓ Do not place any object or equipment on top of the unit (top plate).
- ✓ Do not climb, sit or stand on top of the unit.
- ✓ Be sure that sufficient precautions are taken in case of refrigerant leakage according to relevant local laws and regulations.
- ✓ Don't install the unit near the sea or where there is corrosion gas.

When installing the unit in a place exposed to strong wind, pay special attention to the following.

Strong winds of 5 m/sec or more blowing against the unit's air outlet causes a short circuit (suction of discharge air), and this may have the following consequences:

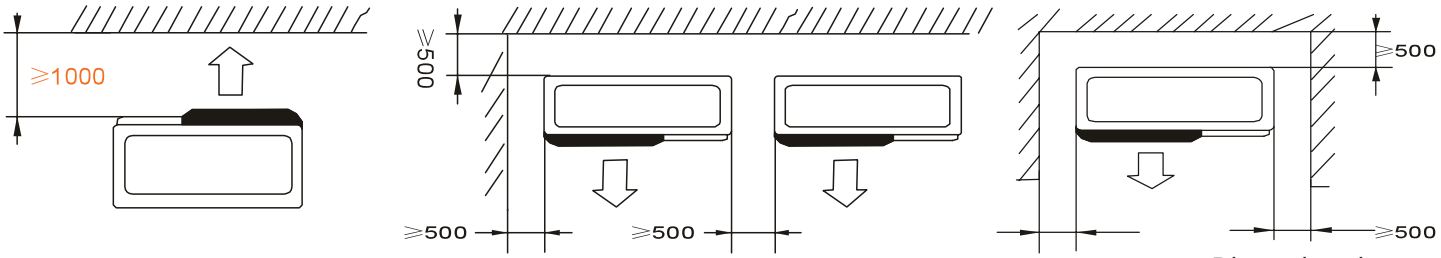
- Deterioration of the operational capacity.
- Frequent frost acceleration in heating operation.
- Disruption of operation due to rise of high pressure.
- When a strong wind blows continuously on the front of the unit, the fan can start rotating very fast until it breaks.

4.2 Location

Please comply with the following rules concerning the choice of heat pump location.

1. The unit's future location must be easily accessible for convenient operation and maintenance.
2. It must be installed on the ground, fixed ideally on a level concrete floor. Ensure that the floor is sufficiently stable and can support the weight of the unit.
3. A water drainage device must be provided close to the unit in order to protect the area where it is installed.
4. If necessary, the unit may be raised by using suitable mounting pads designed to support its weight.
5. Check that the unit is properly ventilated, that the air outlet is not facing the windows of neighbouring buildings and that the exhaust air cannot return. In addition, provide sufficient space around the unit for servicing and maintenance operations.
6. The unit must not be installed in an area exposed to oil, flammable gases, corrosive products, sulphurous compounds or close to high frequency equipment.
7. To prevent mud splashes, do not install the unit near a road or track.
8. To avoid causing nuisance to neighbours, make sure the unit is installed so that it is positioned towards the area that is least sensitive to noise.
9. Keep the unit as much as possible out of the reach of children.

4. INSTALLATION



Dimensions in mm

Place nothing less than one metre in front of the heat pump.

Leave 50 cm of empty space around the sides and rear of the heat pump.

Do not leave any obstacle above or in front of the unit!

Location selection in direct sunlight

As the outdoor temperature is measured via the unit's ambient temperature sensor, make sure to install the unit in the shade or under a canopy to avoid direct sunlight, so that it is not influenced by the sun's heat, otherwise the unit may be protected.

When operating the unit in cold climates, be sure to follow the instructions described below.

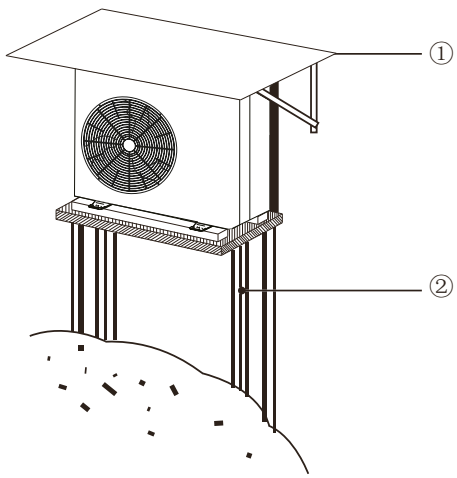
Location selection in cold climates

To prevent exposure to wind, install the unit with its suction side facing the wall.

Never install the unit at a site where the suction side may be exposed directly to wind.

To prevent exposure to wind, install a baffle plate on the air discharge side of the unit.

In heavy snowfall areas, it is very important to select an installation site where the snow will not affect the unit. If lateral snowfall is possible, make sure that the heat exchanger coil is not affected by the snow (if necessary construct a lateral canopy).

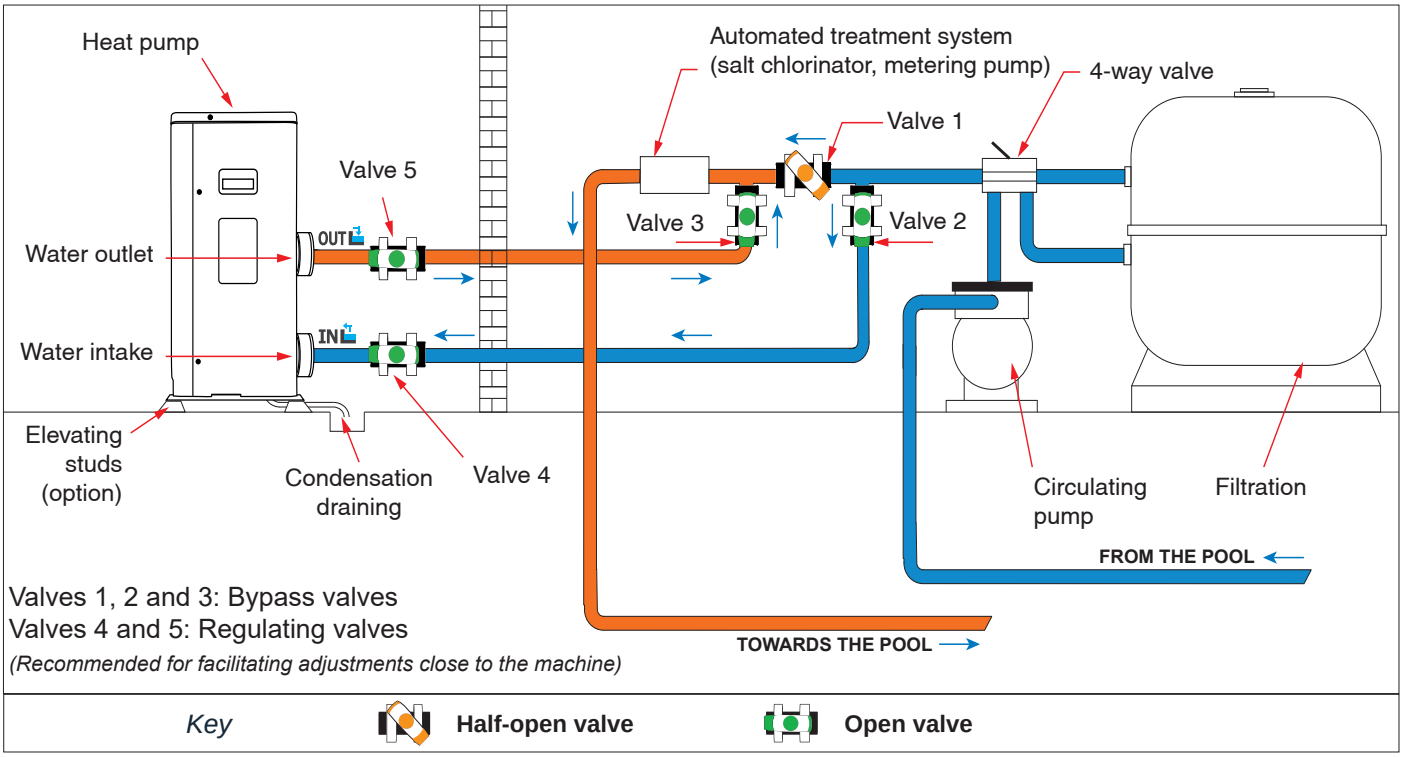


1. Construct a large canopy.
2. Construct a pedestal.
3. Install the unit high enough off the ground to prevent it from being buried in snow. (The height of the pedestal must be larger than the largest thickness of the snow in the local history plus 10cm or more)

4. INSTALLATION

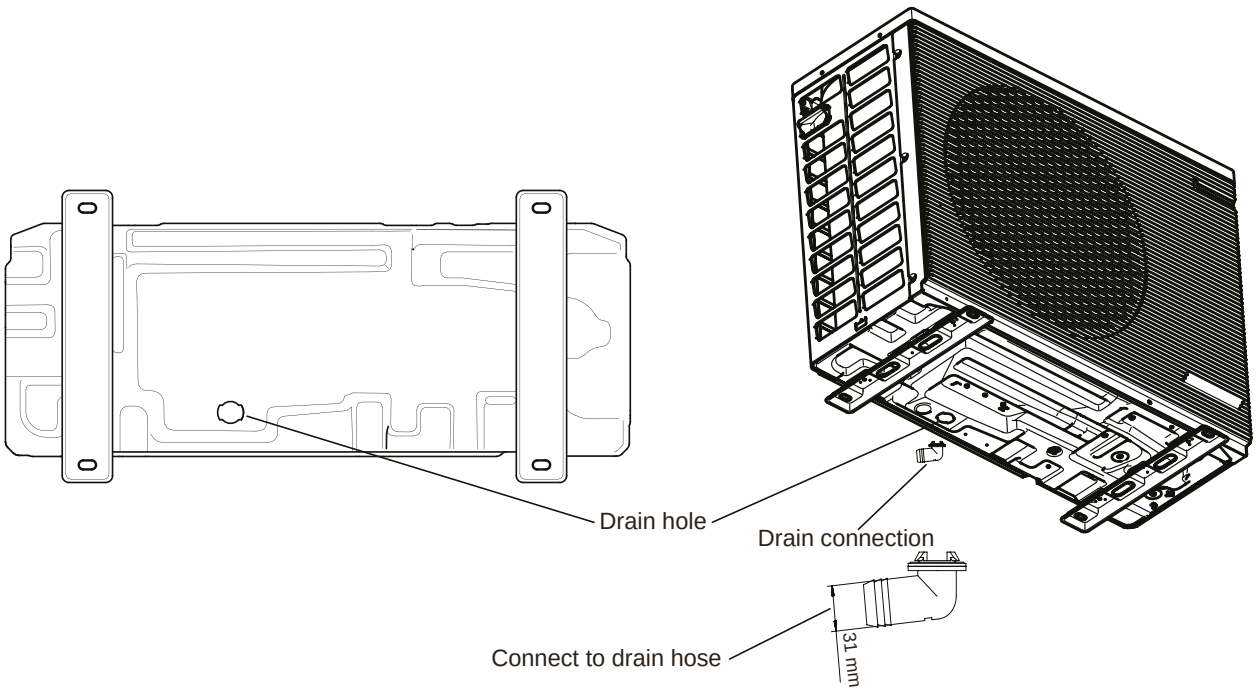
4.3 Hydraulic installation

Water inlet and outlet connection



Condensation draining kit

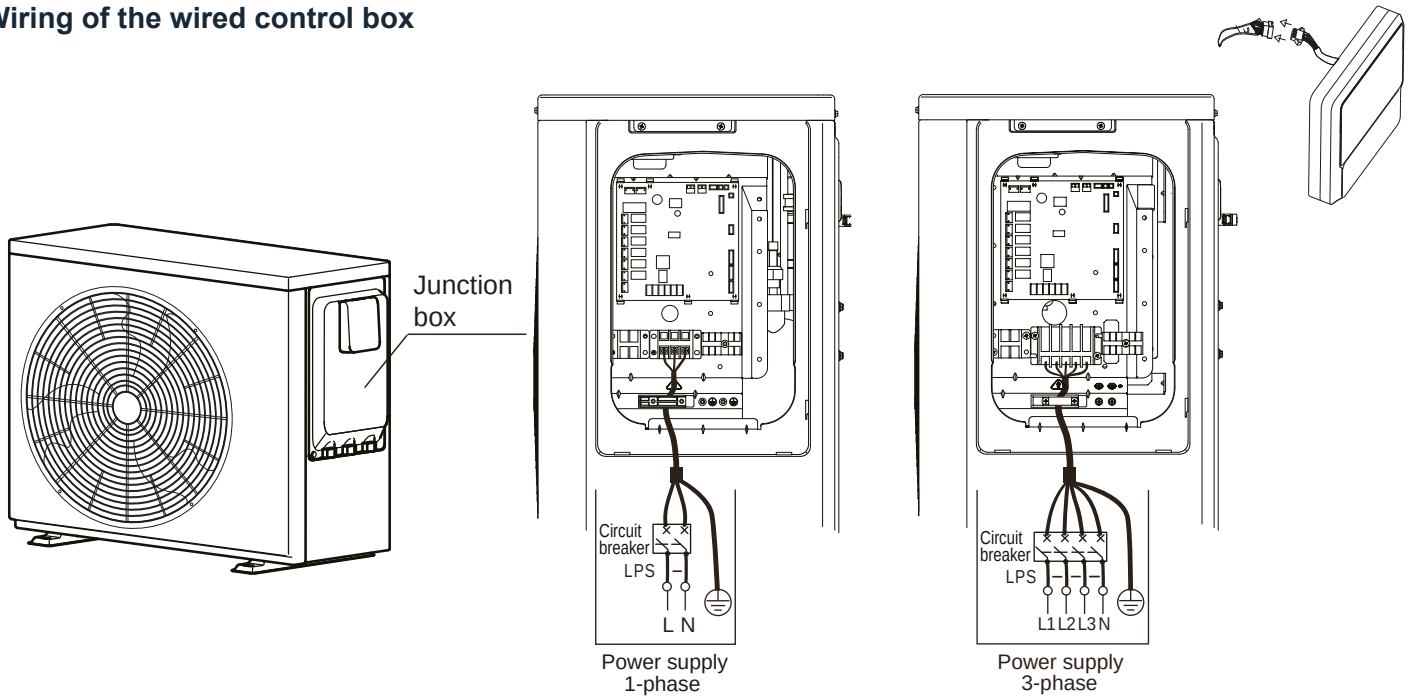
To collect the condensation water and drain it centrally, please connect the unit drain port to the drain pipe (30 mm) using the supplied drain connection which included in the accessory..



4. INSTALLATION

4.4 Electrical installation

Wiring of the wired control box



The ground fault circuit interrupter must be 1 high-speed type of 30mA (<0.1s).
Stated values are maximum values (see electrical data for exact values).
Leakage protection switch must be installed to the power supply of the unit.
Equipment must be grounded.
All high-voltage external load, if it is metal or a grounded port, must be grounded.

When connecting to the power supply terminal, use the circular wiring terminal with the insulation casing (see Figure 1).
Use power cord that conforms to the specifications and connect the power cord firmly. To prevent the cord from being pulled out by external force, make sure it is fixed securely.
The power cord type designation is H05RN-F or H07RN-F.
If circular wiring terminal with the insulation casing cannot be used, please make sure that:
Do not connect two power cords with different diameters to the same power supply terminal (may cause overheating of wires due to loose wiring) (See Figure 2).

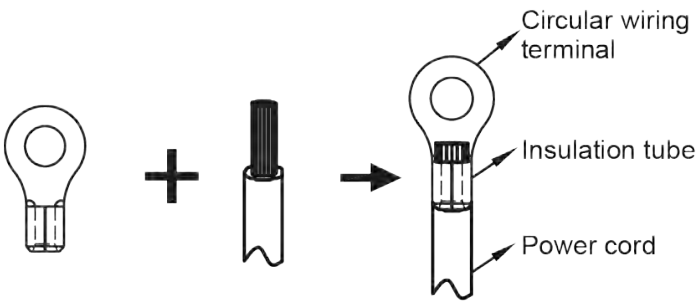


Figure 1

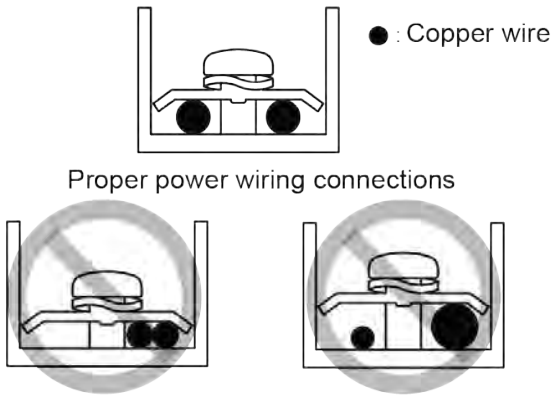


Figure 2

4. INSTALLATION

Safety device requirement

1. For each unit, select the wire diameters according to the Wire select table and select breaker according to the MFA* value of Breaker select table. In case the MCA* exceeds 63A, the wire diameters should be selected according to the national wiring regulation.
2. For 3 phase units, maximum allowable voltage range variation between phases is 2% .
3. Select circuit breaker that having a contact separation in all poles not less than 3 mm providing full disconnection, where MFA* is used to select the current circuit breakers and residual current operation breakers.

Wire select table

Rated current of appliance: (A)	Nominal cross-sectional area (mm^2)	
	Flexible cords	Cable for fixed wiring
≤ 3	0.5 - 0.75	1 - 2.5
> 3 and ≤ 6	0.75 - 1	
> 6 and ≤ 10	1 - 1.5	
> 10 and ≤ 16	1.5 - 2.5	1.5 - 4
> 16 and ≤ 25	2.5 - 4	2.5 - 6
> 25 and ≤ 32	4 - 6	4 - 10
> 32 and ≤ 50	6 - 10	6 - 16
> 50 and ≤ 63	10 - 16	10 - 25

Breaker select table

Model	Power supply		Power current			Compressor		Fan motor	
	Voltage	Hz	MCA	TOCA	MFA	MSC	FLA	kW	FLA
75	220 - 240 V	50	10.5	14	16	6.8	0.05	0.4	0.4
95			11	14	16	9.3	0.08	0.5	0.5
125			18	25	32	16.2	0.11	0.7	0.7
155			18	25	32	16.2	0.11	0.7	0.7
180			23	25	32	22.7	0.11	0.7	0.7
155T	380 - 415 V		7.5	12	16	6.9	0.11	0.7	
180T			9	12	16	8.5	0.11	0.7	

* MCA : Minimum. Circuit Amps. (A)
TOCA : Total Over-current Amps. (A)
MFA : Max. Fuse Amps. (A)
MSC : Max. Starting Amps. (A)
RLA : In nominal cooling or heating test condition, the input Amps of compressor where MAX. Hz can operate Rated Load Amps. (A)
kW : Rated Motor Output
FLA : Full Load Amps. (A)

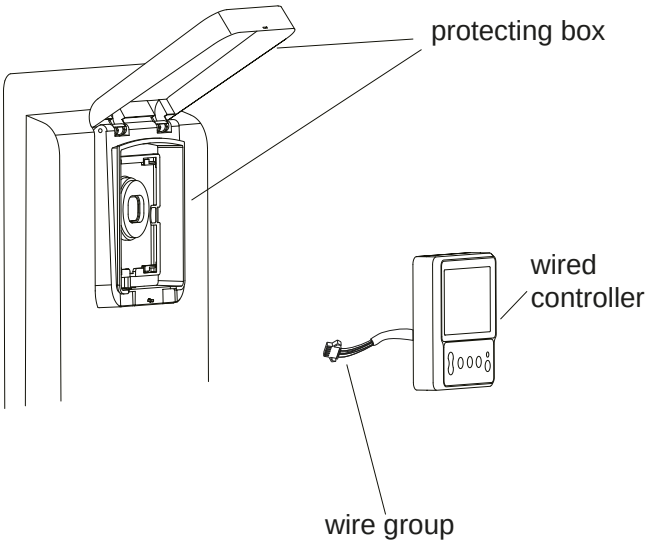
4. INSTALLATION

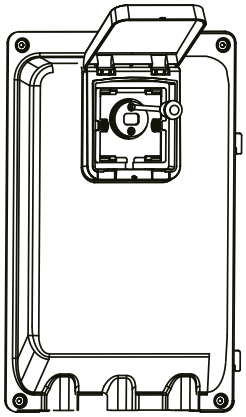
4.5 Installing the wired controller

Option 1: on heat pump

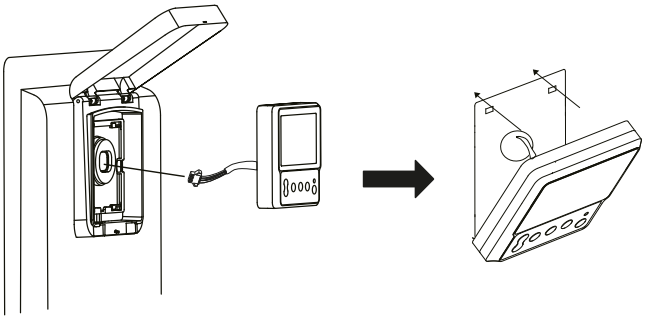
The controller should installed inside the protect box. The cover protects the controller from water and sunlight damage.

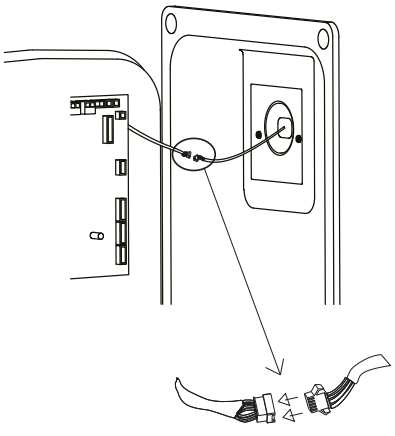
After operating the wired controller, close the protecting box cover to prevent damage caused by water and sunlight.





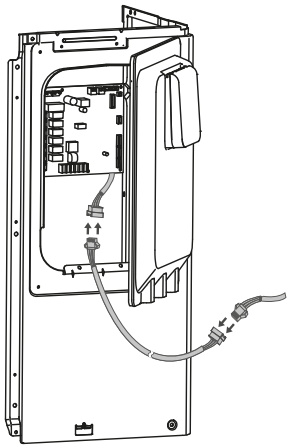
1. Open the cover of protecting box and lift it up.
2. Use a screwdriver to remove the small metal part.
3. Pass the connecting wire through the hole in the protecting box and press firmly to fix the controller.
4. Connecting the wire.





4. INSTALLATION

Option 2: remote box



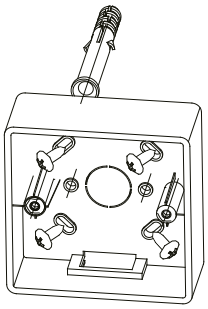
You can also attach the remote control box to a wall. However, choose a piece of wall protected from rain, water splashes and sun.

Never tighten the screws too hard, as this may dent the cover or break the control box screen.

Leave enough cable length for maintenance of the control box.

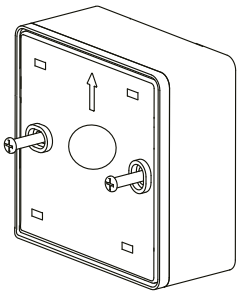
Do not use in wet areas.

1. Screw the controller bracket to the wall previously chosen according to our recommendations.

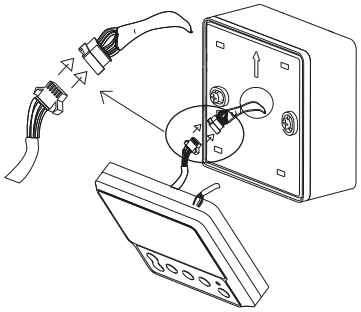


Recommended screws : ST3.9*25

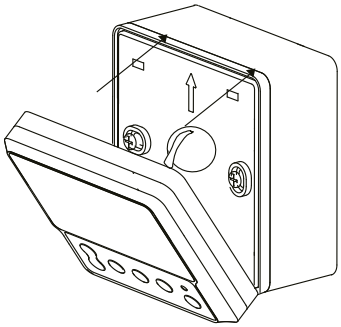
2. Run the cables through the tray hole. Attach the controller tray to its holder.



3. Connect the cables to the controller terminal.



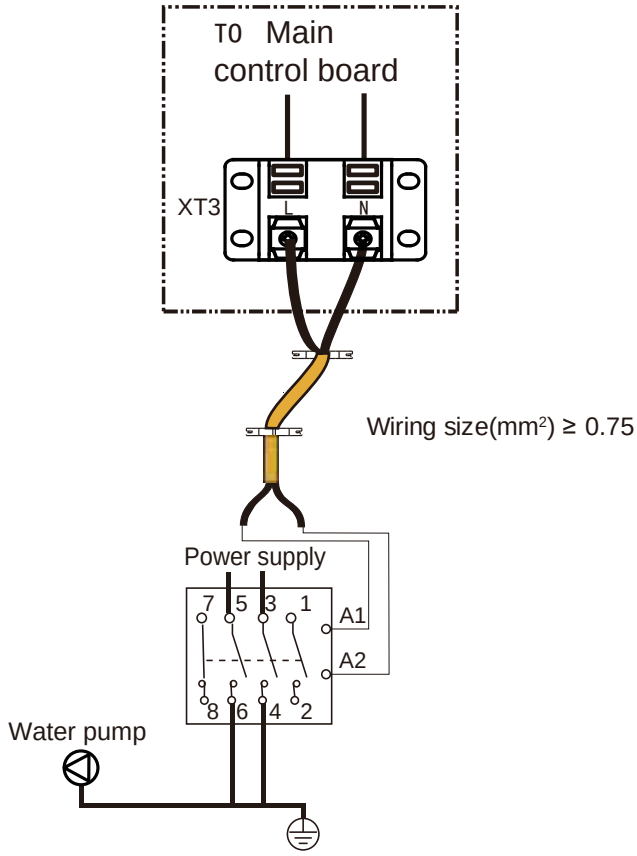
4. Nest the terminal on the support and check that it is well maintained.



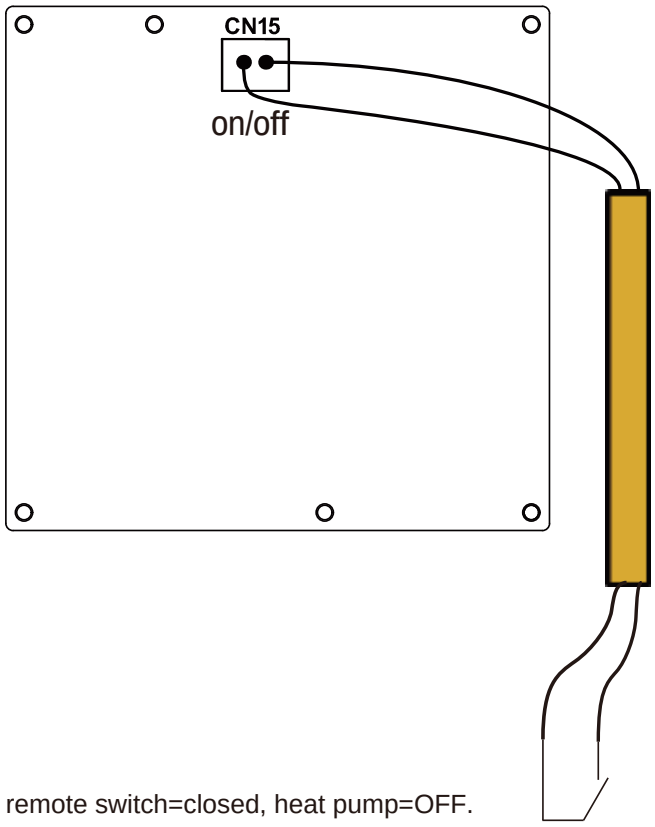
4.6 Connecting an optional function

For outdoor pump (force filtration)

Only connect an auxiliary circulation pump to these terminals. Otherwise, there is a risk of short-circuiting the main control board.



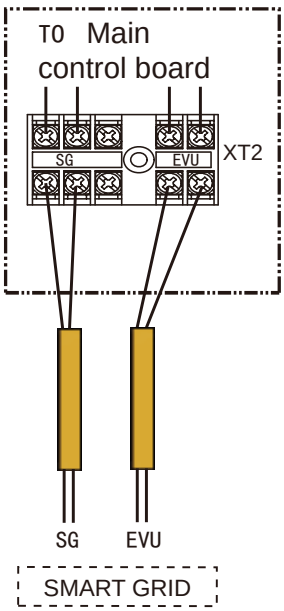
For the remote switch (home automation)



remote switch=closed, heat pump=OFF.
remote switch=opened, heat pump=ON.

For SMART GRID

The unit has smart grid function, there are two ports on PCB to connect SG signal and EVU signal as following:



1) SG = ON, EVU = ON.

In heating mode, the heat pump automatically activates the «Boost» function.

2) SG = OFF, EVU = ON.

In heating mode, the heat pump automatically activates the «Boost» function.

3) SG = ON, EVU = OFF.

The unit operates normally.

4) SG = OFF, EVU = OFF.

The heat pump will operate normally when the operating time does not exceed SMART GRID RUNNING TIME, otherwise the unit will reduce power consunption.

SMART GRID RUNNING TIME inital value is 2, range 0-255.

5. USE

5.1 Initial Start-up

The unit should be configured by the installer to match the installation environment (outdoor climate, installed options, etc.) and user expertise.

Pre-operation checks

After the installation of the unit, check the following before switching on the circuit breaker:

- ✓ Field wiring: Make sure that the field wiring between the local supply panel and unit and valves (when applicable) have been connected according to the wiring diagrams and to local laws and regulations.
- ✓ Fuses, circuit breakers, or protection devices Check that the fuses or the locally installed protection devices are of the size and type specified in “TECHNICAL SPECIFICATIONS”.
- ✓ Make sure that no fuses or protection devices have been bypassed.
- ✓ Ground wiring: Make sure that the ground wires have been connected properly and that the ground terminals are tightened.
- ✓ Internal wiring: Visually check the switch box for loose connections or damaged electrical components.
- ✓ Mounting: Check that the unit is properly mounted, to avoid abnormal noises and vibrations when starting up the unit.
- ✓ Damaged equipment: Check the inside of the unit for damaged components or squeezed pipes.
- ✓ Refrigerant leak: Check the inside of the unit for refrigerant leakage. If there is a refrigerant leak, call your local dealer.
- ✓ Power supply voltage: Check the power supply voltage on the local supply panel. The voltage must correspond to the voltage on the identification label of the unit.
- ✓ Shut-off valves: Make sure that the shut-off valves are fully open.

Failure diagnosis at first installation

If nothing is displayed on the user interface, it is necessary to check for any of the following abnormalities before diagnosing possible error codes.

- ✓ Disconnection or wiring error (between power supply and unit and between unit and user interface).
- ✓ The fuse on the PCB may be broken.

If the user interface shows «E8» or «E0» as an error code, there is a possibility that there is air in the system, or the water level in the system is less than the required minimum.

If the error code E2 is displayed on the user interface, check the wiring between the user interface and unit.

More error code and failure causes can be found in «7. Troubleshooting», page 97.

Final checks and test run

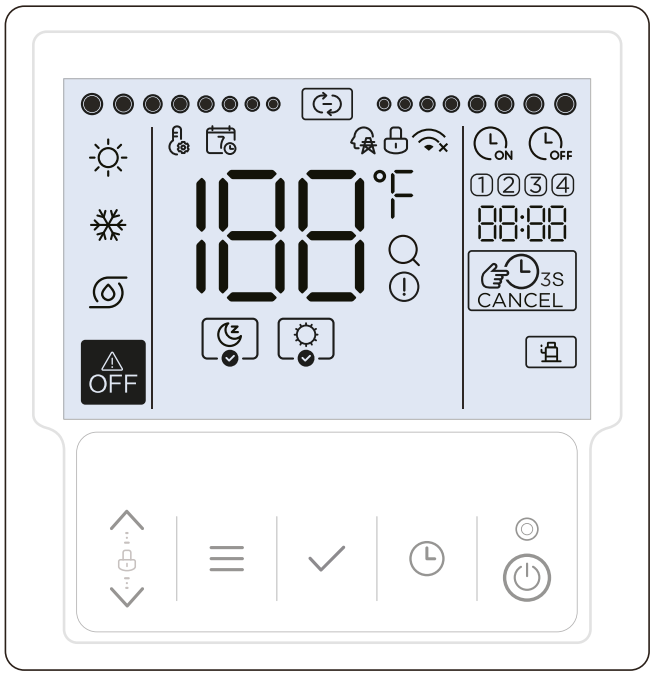
The installer is obliged to verify correct operation of unit after installation.

When the installation and parameter setting are completed, cover all the sheet metal of the unit well.

The unit should be maintained by professionals.

5. USE

5.2 Wired remote control



Icon	Description
88:88	It will display clock at the main interface normally, and display error code when fault occurs, and display other parameters when querying or setting.
3S CANCEL	It will be lightened when the timer or buzzer can be cancel.
	It will be lightened when the compressor is operating.
	For adjusting parameters, moving cursor and so on.
	For entering or quit menus and so on.
	For confirming settings, entering manual functions, and so on.
	For setting clock or timer.
	For turn on or turn off the unit. If user turn on the unit, the led will be lightened, and the led will be distinguished if user turn off the unit.

Icon	Description
	It will be lightened when the setting operating mode is heating mode, otherwise it will be extinguished.
	It will be lightened when the setting operating mode is cooling mode, otherwise it will be extinguished.
	It will be lightened when the setting operating mode is pump mode (only water pump operation), otherwise it will be extinguished.
OFF	It will be lightened when user turns off the controller or selects OFF mode in some timers.
	It will be lightened when the silence function is activated, and extinguished when the silence function is not activated. When it is selected (not activated), the icon will slowly flash.If manual silence function is activated, icon will flash in main interface.
	It will be lightened when the boost function is activated, and extinguished when the boost function is not activated. When it is selected (not activated), the icon will slowly flash.If manual boost function is activated, icon will flash in main interface.
	It will only be dynamically lightened when the unit is operating.
	It will only be lightened when setting or adjusting.
	It will be lightened when weekly-schedule is activated in the app, and extinguished when the weekly-schedule is not activated.
	It will be lightened when the smart-grid function is activated, and flashed when the operating time exceeds SMART GRID RUNNING TIME. It will be extingguished when the smart-grid function is not activated.
	It will only be lightened when keyboard has been locked.
	The icon without the cross is lit if Wi-Fi is active. The icon with the cross is lit if Wi-Fi is deactivated. When searching for a Wi-Fi signal, the icon flashes slowly.
188	On the main interface, it displays the current water temperature. When setting parameters, it displays the setting parameter.
°F	It displays °C or °F when the temperature icon is displayed.
	It will only be lightened during querying.
	It will quickly flash when a fault occurs.
ON	It will be lightened when setting timer on clock.
OFF	It will be lightened when setting timer off clock.
①②③④	It will be lightened when corresponding timer is activated.

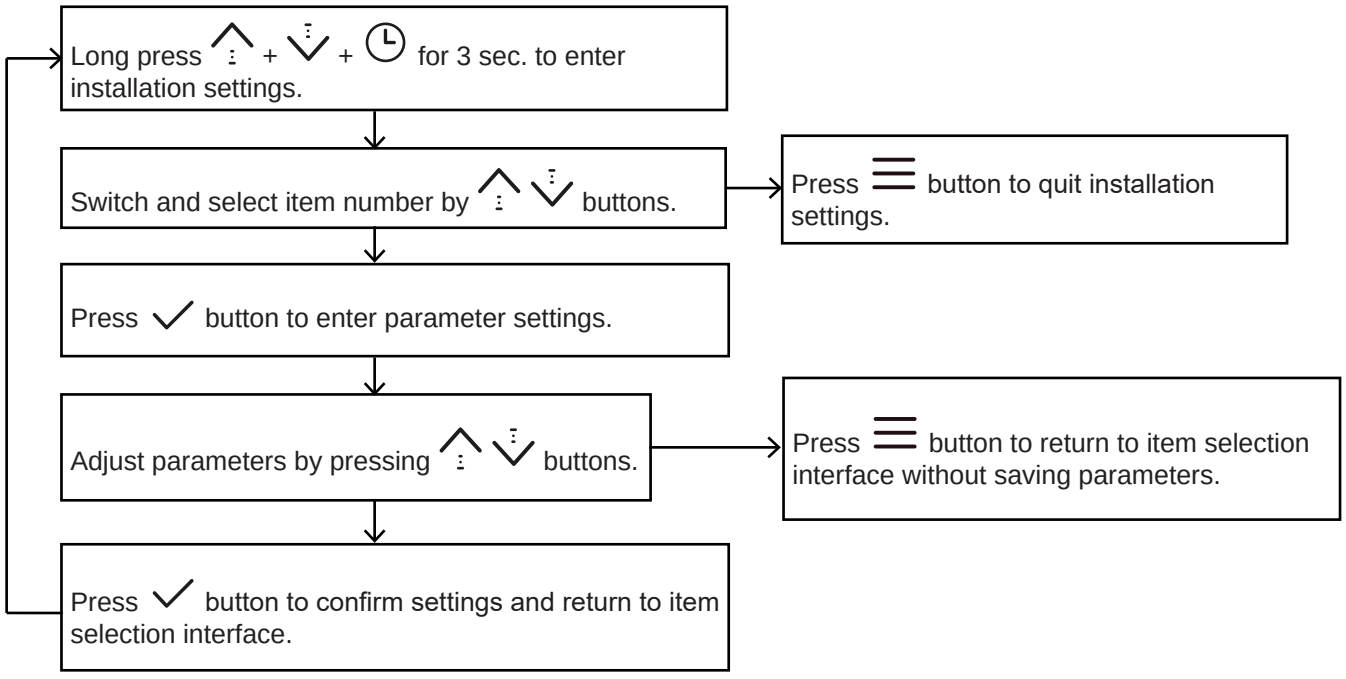
5. USE

5.3 Configuration

No.	Designation	Available settings	Default value
1	Network	1. Local and remote control: code LC:NC, 2. Local control only: code LC 3. Remote control only: code NC	LC:NC
2	Timer type		
3	Temperature unit	°C / °F	
4	Silence Mode	ON / OF	
10	Boost Mode	ON / OF	
11	SMART GRID	ON / OF + adjustment of operating hours	ON + 2h
15	Manually defrosting t1	ON / OF	
20	Operating time statistics dF	ON / OF + adjustment of operating hours	
21	Pump forced operation	t1 : Standby hours before operation t2 : Operation seconds t3 : Delay seconds after operation	
25	Water flow permanent malfuction (E0)		
26	Time correction		0

Long press ▲ + ▼ + 🕒 for 3 sec. to enter installation settings, then switch and select item number by ▲ ▼ buttons, then press ✓ button to enter the corresponding item setting or press ☰ button to quit installation settings (the parameters which does not be confirmed will not be saved).

The setting method is as follows:



5. USE

Network settings #1

This setting allows you to select the control mode. You have three options:

1. Remote and local control: code LC:NC, default mode
2. Only local control: code LC
3. Only remote control: code NC

Local control is like using the control box directly.

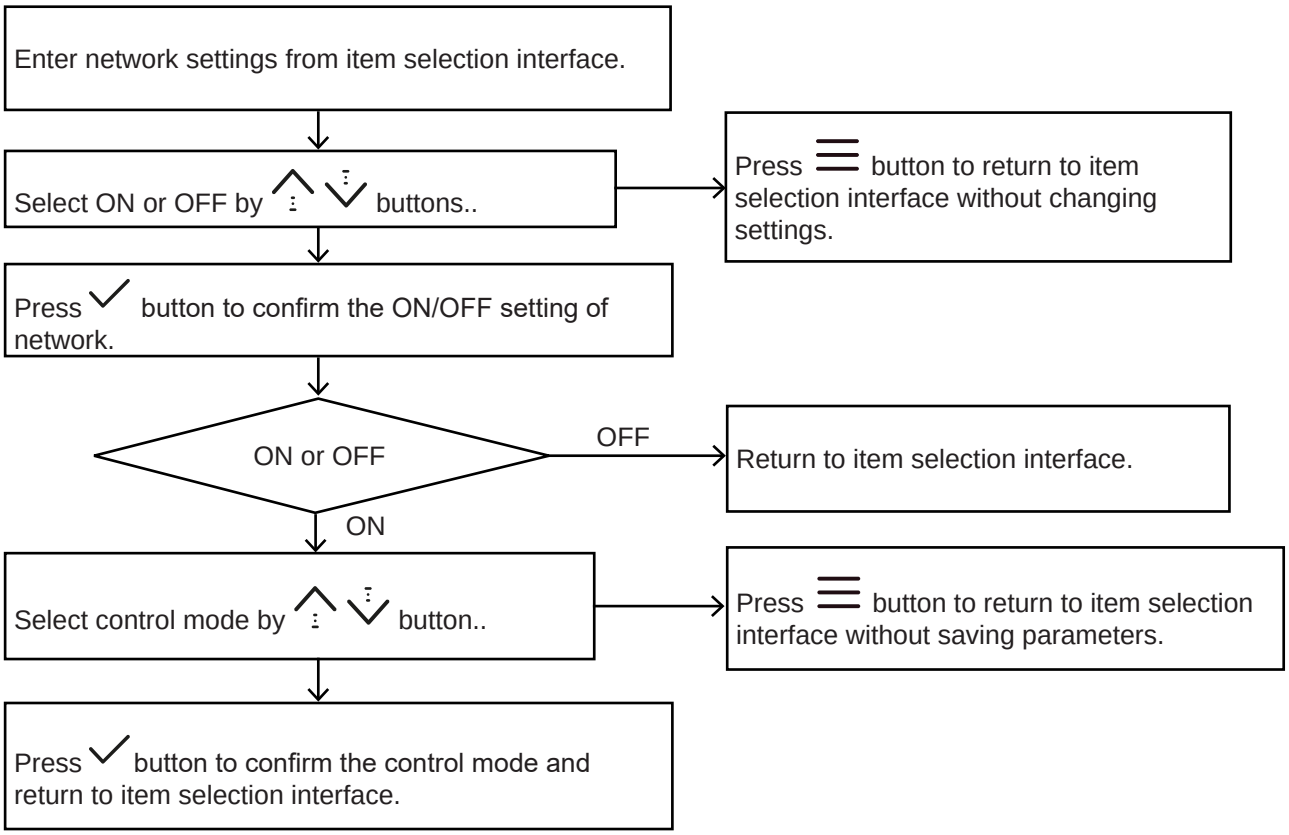
Remote control is like controlling the control box via its wifi function and a connected application.

During setting, the clock area displays the code and the temperature area displays either ON (when the command is activated) either OF (when the control is disabled).

Examples:

Control disabled	Local and remote control enabled	Local control activated	Remote control enabled

The adjustment method is as follows:



About connecting to network:

Normally, after network is set as ON, the controller will automatically connect to network through WiFi, then the unit will be found in iLetComfort app.

If automatic networking fails, long press + buttons for 3 sec. to activate the WiFi module's AP mode (connect to the network) and long press + buttons for 3 sec. to clear the WiFi module's wiring information.

Temperature unit setting #3

During setting, press ∧ ∨ buttons to switch and select °C or °F, then press ✓ button to confirm the unit setting.

Silence mode #4

This function can be set as active or inactive. During setting, the symbol ON displayed on 188 means *Active* and OF means *Inactive*. Press ∧ ∨ buttons to switch and select ON or OF, then press ✓ button to confirm.

Boost mode #10

This function can be set as active or inactive. During setting, the symbol ON displayed on 188 means *Active* and OF means *Inactive*. Press ∧ ∨ buttons to switch and select ON or OF, then press ✓ button to confirm.

Smart Grid #11

This function can be set as active or inactive. During setting, the symbol ON displayed on 188 means *Active* and OF means *Inactive*. Press ∧ ∨ buttons to switch and select ON or OF, then press ✓ button to confirm.

When the *Smart Grid* function is ON, you must then set or confirm the hours of operation of the Smart Grid function. During the setting, the SG symbol is displayed on 188 and the operating hours are displayed on 88:88. Press ∧ ∨ buttons to adjust the hours, then press ✓ button to confirm.

Manual defrosting dF #15

This function can be set as active or inactive. During setting, the symbol ON displayed at 188 means *Active* and OF means *Inactive*. Press ∧ ∨ buttons to switch and select ON or OF, then press ✓ button to confirm.
When the *Manual defrosting* function is ON, it is deactivated automatically after defrosting.

Forced control of circulation pump #20 and #21

#20

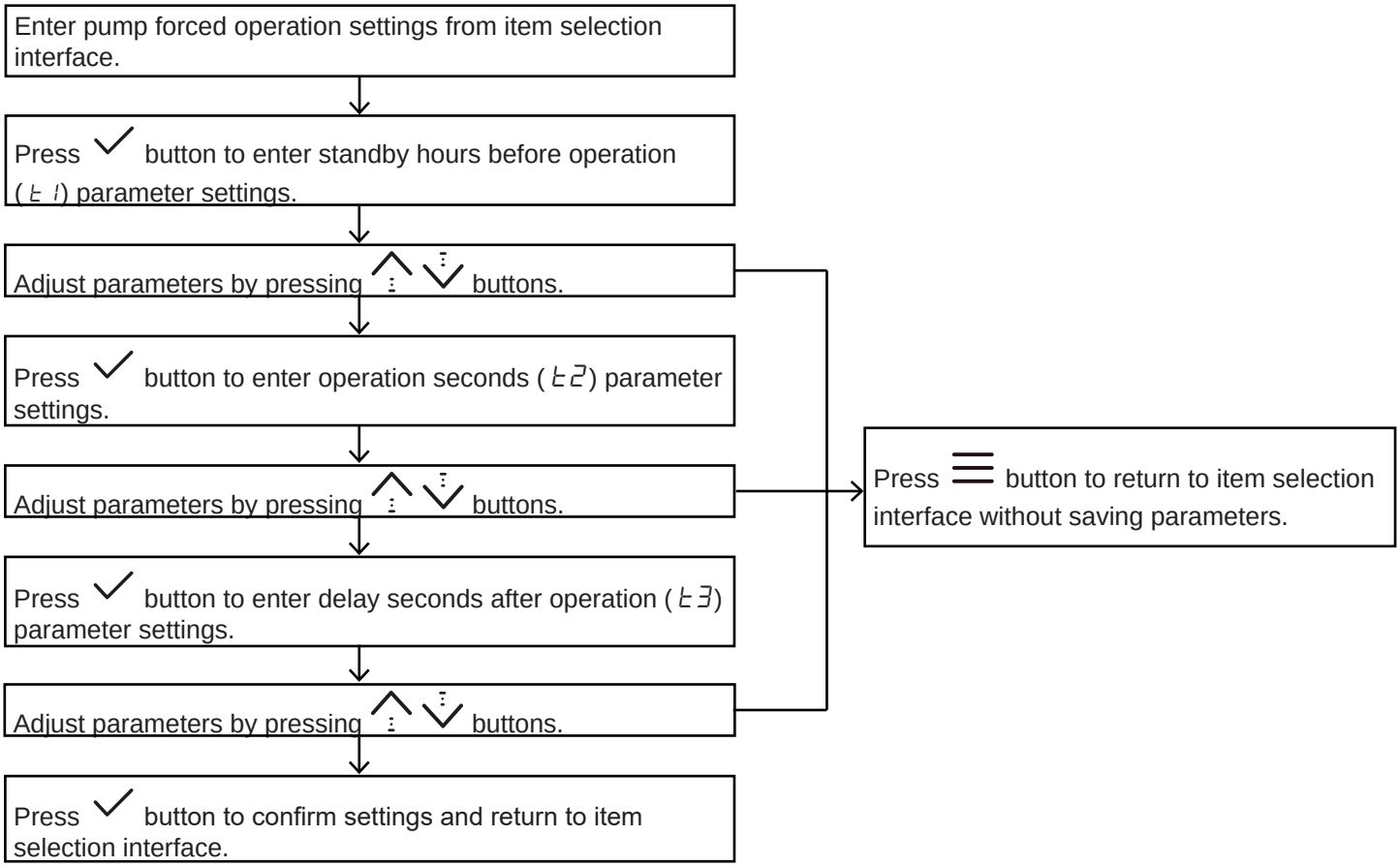
If the outside pump is controled by the singal from the terminal in the heat pump.Then the unit will let the pump forced operation in standby mode accroding to the follow parameters:

- Ł 1 : Standby hours before operation
- Ł2 : Operation seconds
- Ł3 : Delay seconds after operation

Example : The pump operates 1 minute every 8 hours and 1 minute.

#21

To set parameters Ł 1, Ł2 and T3, #20 must be active. Then follow the procedure below:



Water flow permanent malfuction E0 #25

When the water flow permanent malfuction (E0) function is activated, the water flow permanent malfuction (E0) is detected, and it needs to be powered off and restarted. If it is not activated, only water flow malfuction (E8) will be detected.

Time correction settings #26

This function allows you to add or subtract hours to adjust to daylight saving time.

During setting, press buttons to add or subtract the correction hours of daylight saving time (the default value is 0).

5.4 Unlock / Lock keyboard

When the controller is locked and the icon is lightened, any button is invalid at this time.

Press the + key for 1 sec. to unlock the keyboard.

The keyboard will be locked automatically When no button operation for 120 sec.

5.5 Turn on / turn off the unit

Press the button to turn on or turn off the unit, when the keyboard is unlocked.

If unit is turned on and not operating, the main interface will display setting mode, current temperature, clock and so on. If unit is turned on and operating, the operating icon will flash. If unit is turned off, the OFF icon will be lightened and operating icon and mode icon will be distinguished.

Examples :

Running Stand-by At the stop

5.6 Target temperature setting

In the main interface, press buttons to adjust target temperature.

During adjusting, press or button to confirm settings then return to main interface, or no press any button for 60 sec then confirm settings automatically and return to main interface.

5. USE

5.7 Réglage du mode de fonctionnement

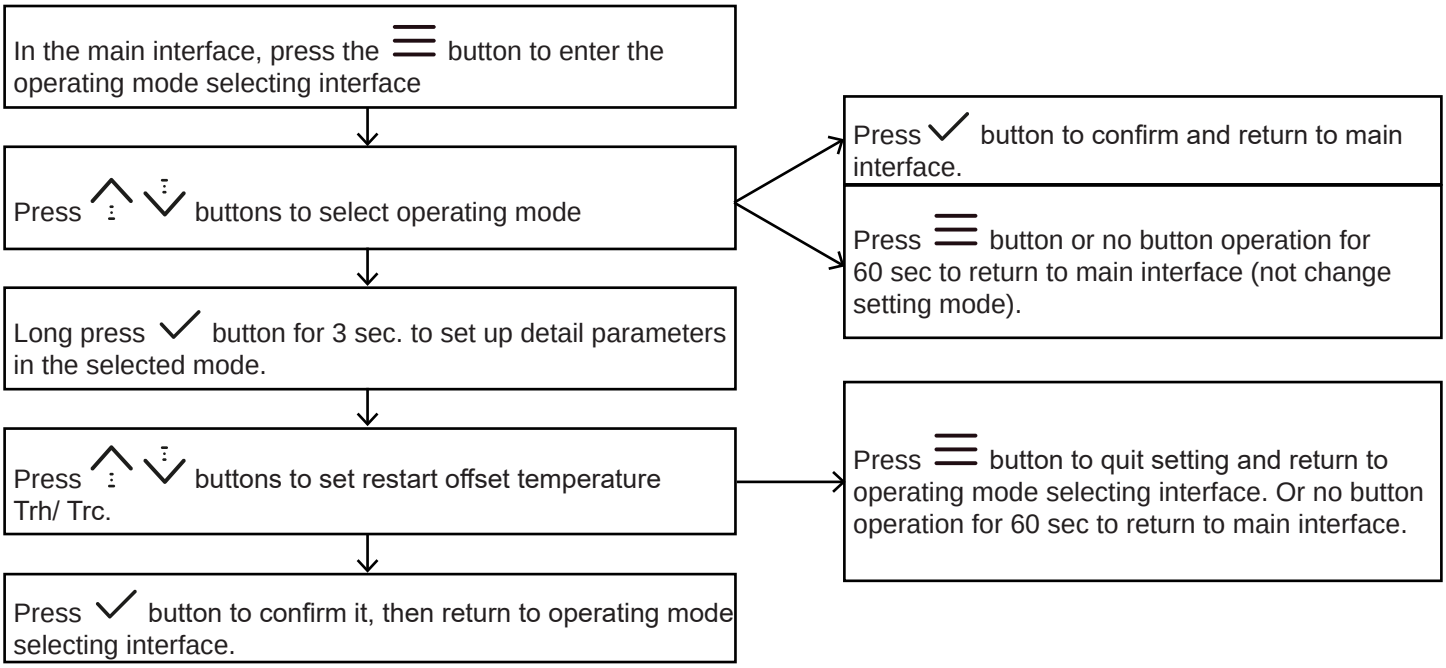
The code trh displayed at 88:88 represents the restart offset temperature for heating mode (Trh).

The code trc represents the restart offset temperature for cooling mode (Trc).

The value displays at 188.

Example :

The setting method is as follows:



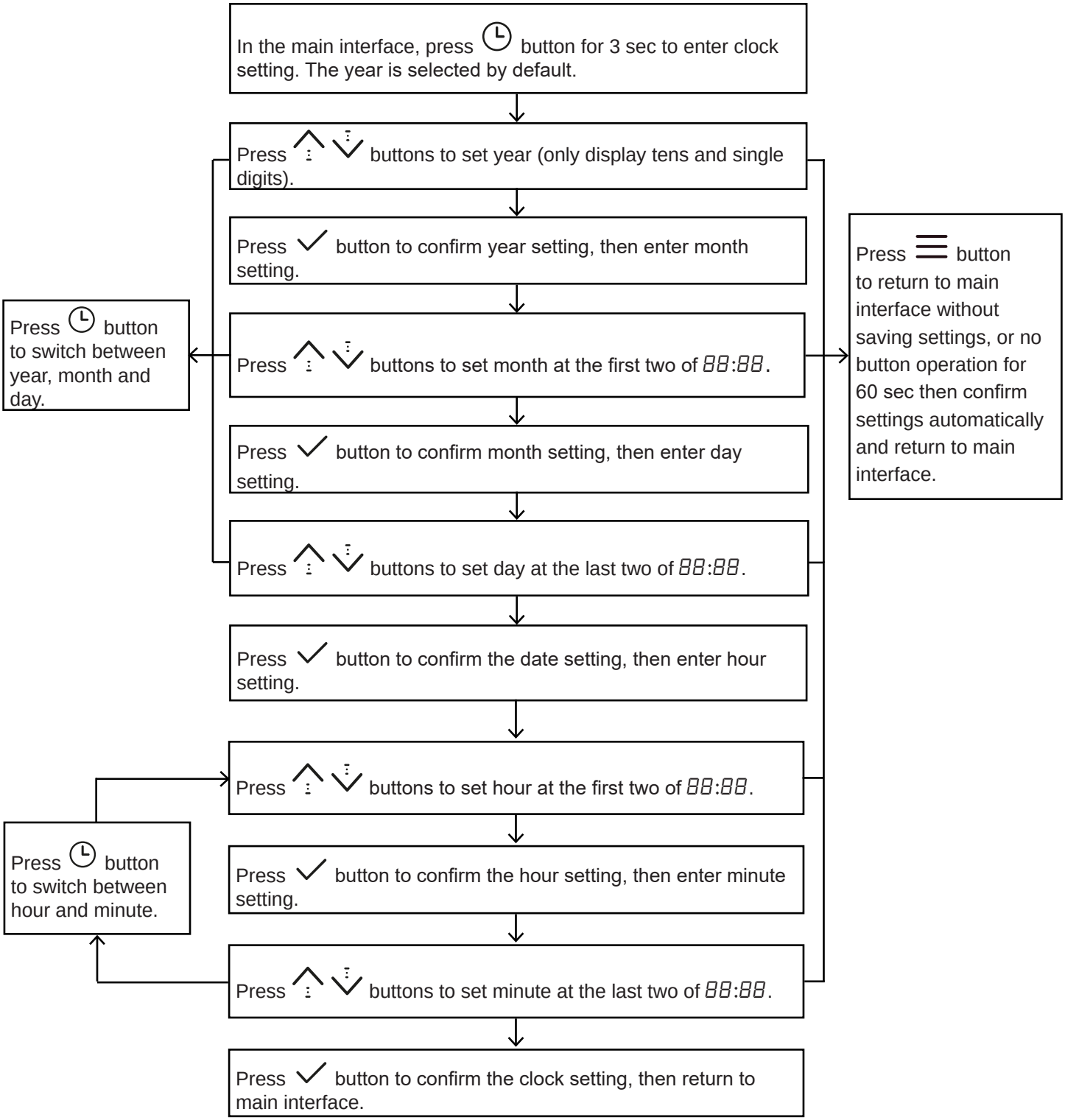
5.8 Clock setting

If the controller has successfully connected to network, it will update the clock automatically from network, else user can set clock in the controller. Only icon and current setting parameters are lightened during clock setting.

Display example: The year is displayed on 188. The month, day and time are displayed on 88:88.
For March 26, 2022 at 18:08, the screen displays:

5. USE

The setting method is as follows:



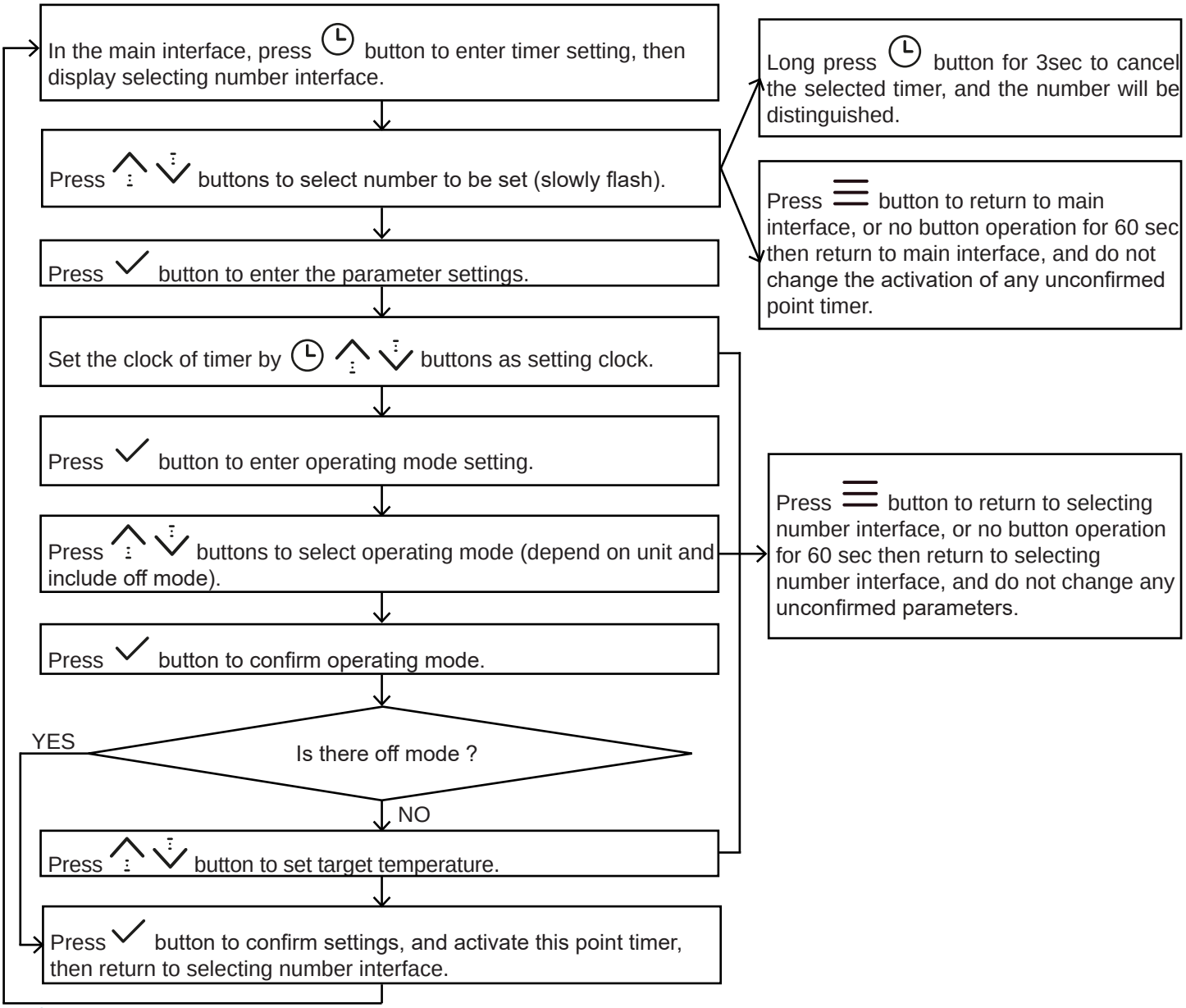
5.9 Programming and adjustment of heating

The controller provides point timer, which can be set up to 4 different points in time to execute different command every day, the timer step is 10 min.
After the timer settings are completed, the activated timer numbers are displayed at the main interface. When the clock reaches the timer point, according to the switching action at that time point, ON or OFF will be displayed respectively and unit will execute the commands.

Display examples:

Timer #1 is activated to heat to 28°C from 6pm.
Timer #2 is off. Otherwise, it would schedule a shutdown at 8pm.
Timer #3 is not activated.

The setting method is as follows:



5.10 Programming and setting of silence and boost functions

In the main interface, long press ☰ button for 3 sec. to enter the function selection and activation interface. During setting, the selected function icon will slowly flash.

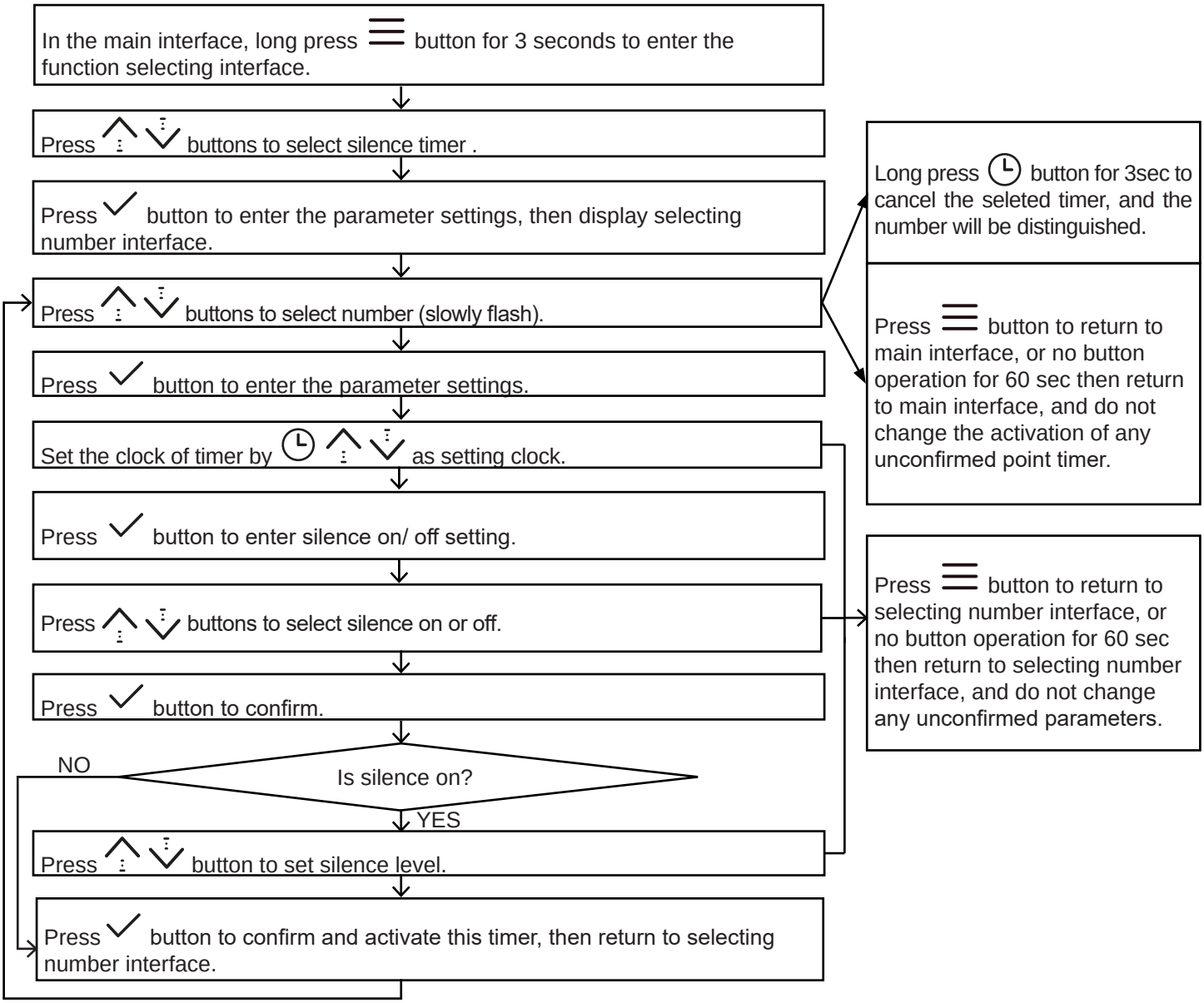
Timer silence setting

You can set your heat pump to run quieter at your preferred times. There are 4 point timers available in this setting. Each timer includes a time and on/off choice.

Display examples:

Time selection Activation mode Disable mode

The setting method is as follows:



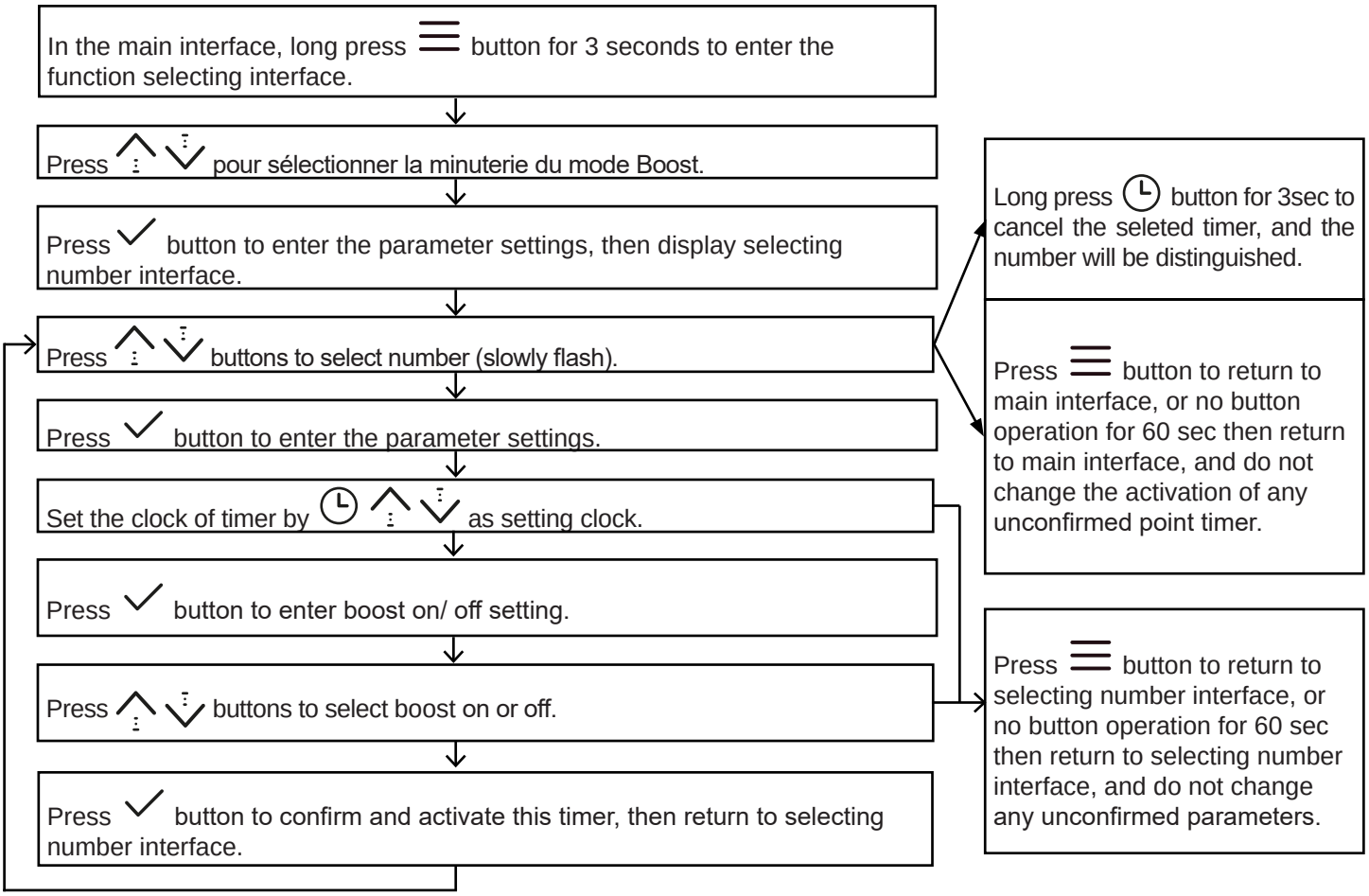
Timer boost setting

You can set your heat pump to run more efficiently at your preferred times. There are 4 point timers available in this setting. Each timer includes a time and on/off choice.

Display examples:

Time selection Activation mode Disable mode

The setting method is as follows:



5. USE

5.11 Manual activation of silence and boost functions

In main interface, long press ✓ button for 3 sec. to enter manual function selection interface. Setting icon and manual function icons (,) will be lightened.

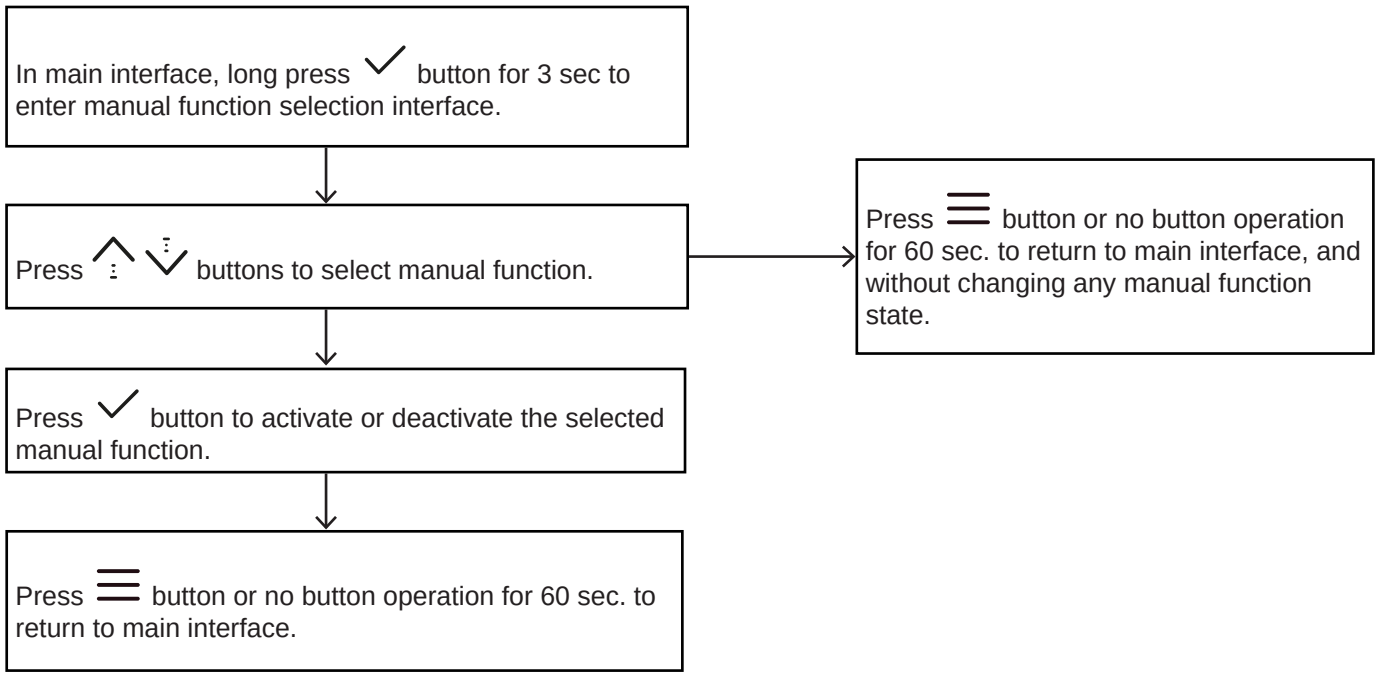
Then press ∧ ∨ buttons to select function.
If the function is selected, the function icon will slowly flash.

Press ✓ button to activate or deactivate the selected manual function.

If the function is activated, the function icon (such as) and the ● icon will be lightened together ( ).

Display examples:

The setting method is as follows:



Note :

- If the unit is be turned off or automatic standby when reached the set temperature, the boost function will be turned off automatic.
- The unit and boost function will not be turned on when the unit is in off mode.
- The boost function will not be turned on when the silence function is enabled.

5. USE

5.12 WiFi pairing and use of the app

When networking the product, the mobile phone should be as close as possible to the product.

As per the app's advice, if the product only supports 2.4GHz Wi-Fi communication, please note that the 2.4GHz network is selected for connection.

It is recommended that the SSID name of the Wi-Fi router contain only alphanumeric values. If special characters, punctuation marks, or spaces are used, this may prevent the SSID name from being among the available networks that can join the application. Try it and if the SSID appears, it can be used, otherwise connect to the router and change the name of the SSID.

The presence of a large number of devices on the Wi-Fi router can affect network stability. The equipment manufacturer can in no case advise a specific limitation of the number of devices, because it depends on the quality of the router and many other factors.

If the router or Wi-Fi name and Wi-Fi password are changed, please repeat the above procedure to reconnect to the network.

As the product technology is updated, the content of the application may change, and the actual display in the application will prevail.

Normally, once the network is activated, the controller automatically connects to the network via Wi-Fi, and then the unit is found in the app.

If automatic networking fails, press the ⋀ + ✓ buttons for 3 seconds to activate the PA mode of the WiFi module (network connection) and press the ⋀ + ☰ buttons for 3 seconds to clear the Wi-Fi module wiring information.

Download & Installation of the «Poolex» application

About the Poolex app:

You'll need to create a «Poolex» account to control your heat pump remotely.

The «Poolex» app lets you control your home appliances from anywhere. You can add and control multiple devices at once.

- You can share your devices with other Poolex accounts.
- Receive real-time operational alerts.
- Create scenarios with several devices, depending on the app's weather data (geolocation required).

For more information, go to the «Help» section of the «Poolex» app

iOS :

Search for «Poolex» in the App Store to download the app:

Download on App Store

Poolex

Check the compatibility of your phone and the version of your OS before installing the application

Android :

Search for «Poolex» on Google Play to download the app :

Download on Google Play

Poolex

Check the compatibility of your phone and the version of your OS before installing the application

5. USE

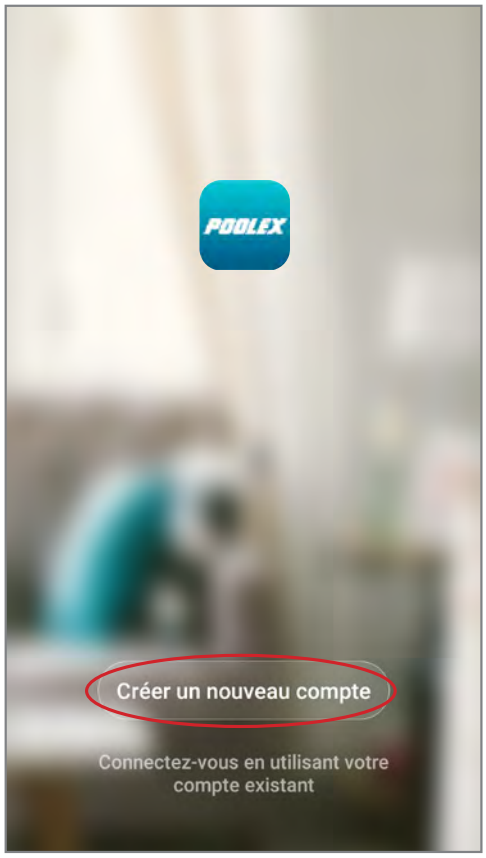
Setting up the app

⚠ **Before you begin, make sure you have downloaded the «Poolex» app, connected to your local WiFi network, and that your heat pump is electrically powered and running.**

You'll need to create a «Poolex» account to control your heat pump remotely. If you already have a Poolex account, please log in and go directly to step 3.

Step 1 : Click on «**Create new account**» and choose to register by «**Email**» or «**Phone**» where a verification code will be sent to you.

Enter your email address or phone number and click «**Send verification code**».



Step 2 : Enter the verification code received by email or phone to validate your account.

Congratulations! You are now part of the «Poolex» community.

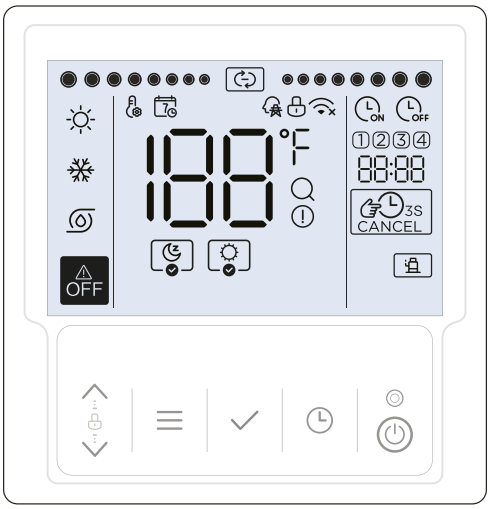
5. USE

Pairing the heat pump

Step 1 : Now start the pairing.
Choose your home WiFi network, enter the WiFi password and press «Confirm».

> ⚠ ***CAUTION: The «Poolex» application only supports 2.4GHz WiFi networks.***
>
> *If your WiFi network uses the 5GHz frequency, go to the interface of your home WiFi network to create a second 2.4GHz WiFi network (available for most Internet boxes, routers and WiFi access points).*
>
> *Be careful, if the network is unstable or if your internet box is too far from your heat pump, you may encounter connection difficulties. If you can not connect or you lose the WIFI signal, you will need to bring a WIFI repeater (PLC or other, not provided).*

Step 2 : Activate the pairing mode on your heat pump according to the following procedure:



Press + simultaneously for 3s. flashes quickly, the control box is ready to be paired.

Step 3 : Go to the Poolex application.

Step 4 : Now add a device:

Click «Add» or «+»

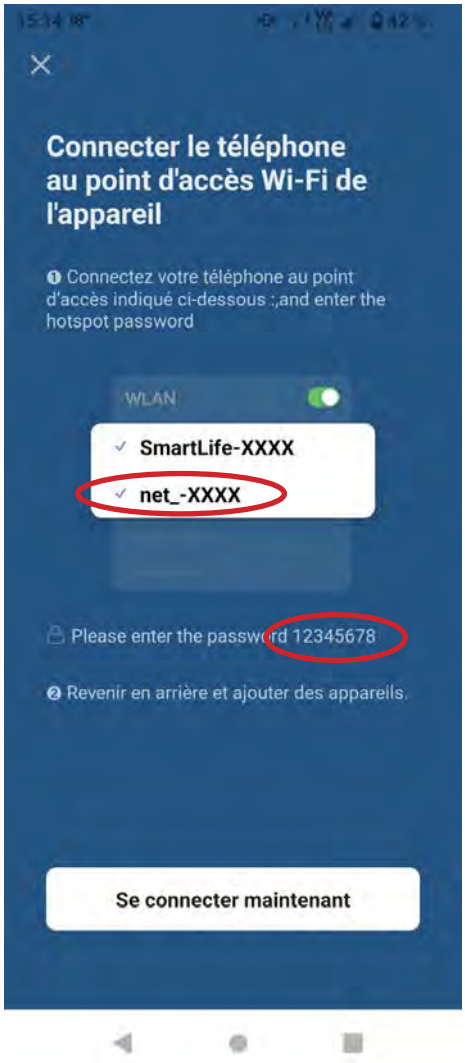
The application searches for devices in pairing mode nearby;

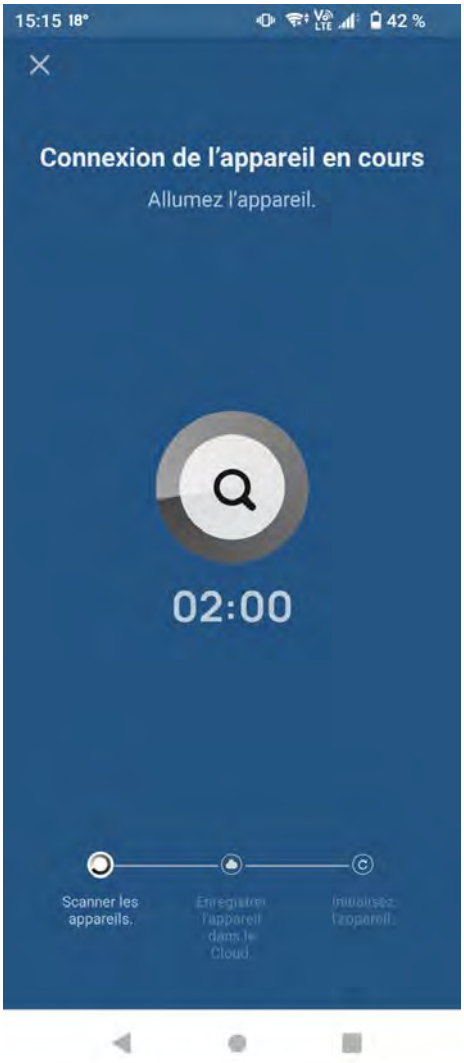
Select the JETPRO.

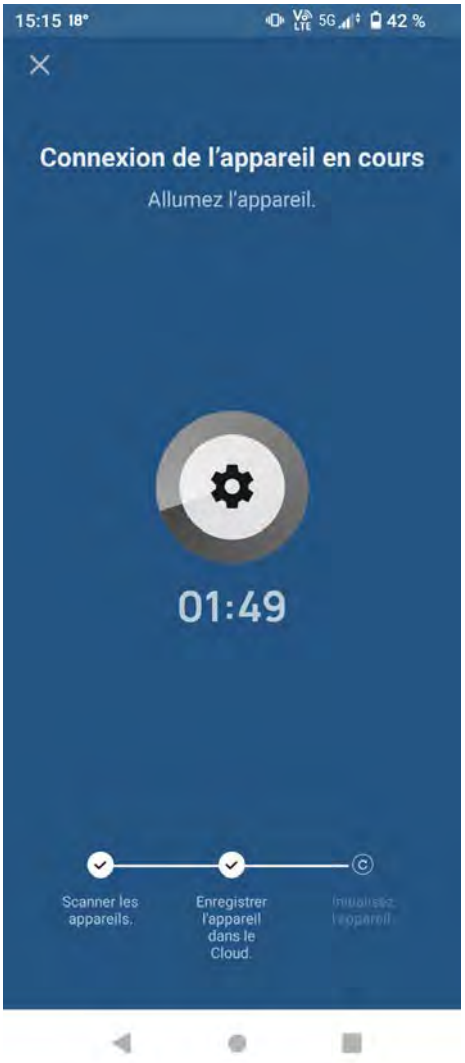
Step 5 : Follow the instructions in the application and click «Next» (Suivant):

5. USE

Step 6 : Connect your phone to your heat pump :
Select the WiFi access point named «**net_-XXXX**» and connect to it using the password: **12345678**
A 2-minute timer will help you wait for the pairing process to complete. This stage can be quicker.



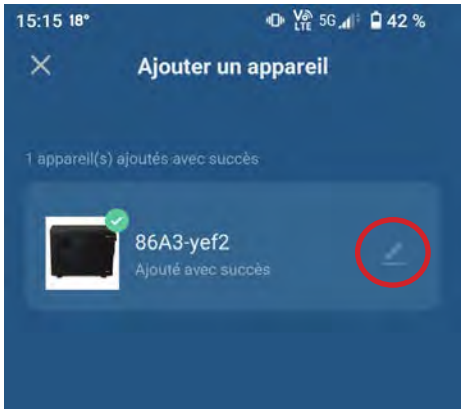


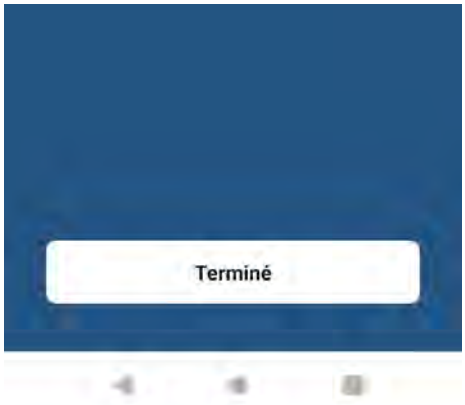


Once pairing has been successfully completed, you can rename your Poolex heat pump and then press «Done».

Congratulations, your heat pump can now be controlled from your smartphone.

Note: The flashing stops when the box is connected to WiFi.

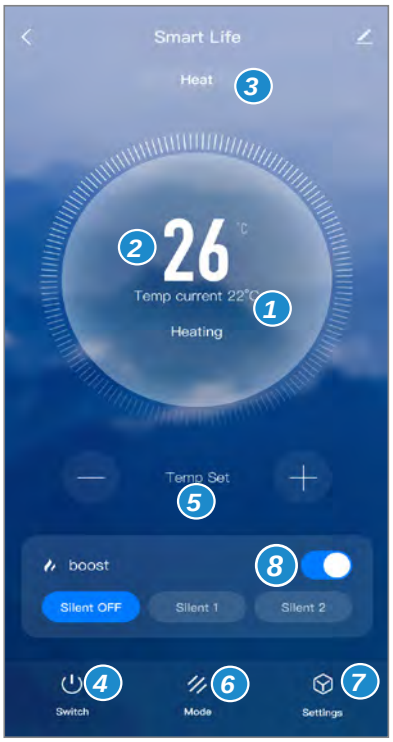




5. USE

Controlling

User interface

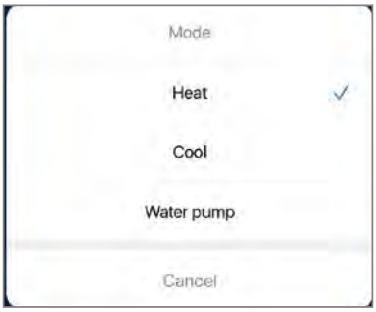


1. Current pool temperature
2. Temperature setpoint
3. Current operating mode
4. Switch the heat pump on/off
5. Change the temperature
6. Change the operating mode
7. Set the operating range
8. Activate/deactivate the Boost and Silence modes

Choice of operating modes 6

In the case of an Inverter heat pump :

You can choose between Inverter Heating (Heating), Cooling (Cooling), or circulating pump only modes.



Available modes

Inverter* heating

Inverter* cooling

Circulation pump

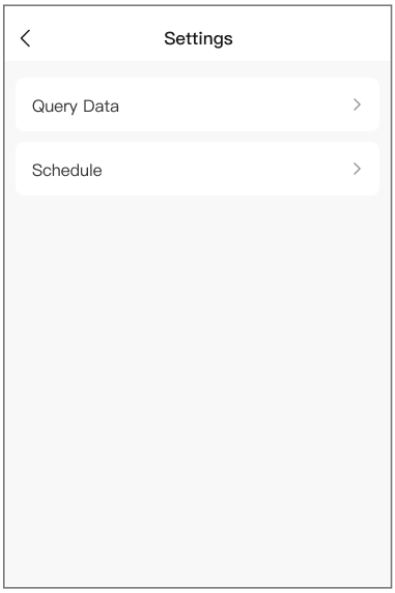
Done

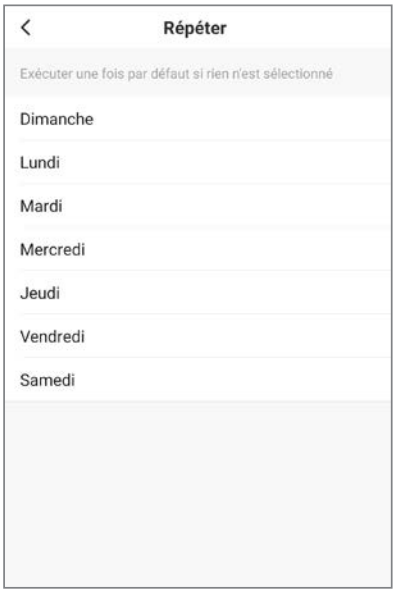
*Some modes may change depending on the machine.

Configure the operating ranges for the heat pump 7

Create a schedule : Choose the time, day(s) of the week(s), and the action (turn on or off) and save.

Delete a time slot : Press on it and hold.





5. USE

5.13 View status values

Press ∧ + 🕒 buttons for 1 sec. to query unit operating parameter.

The 🔍 icon will be lightened during querying.

During querying, press ∧ ∨ buttons to switch different parameters.

If some parameters are invalid for some unit, the parameter will be displayed as “--” or “----”.

To consult the status values on the application, click on ‘Setting’ then on ‘Query Data’ and enter the password 1688.

No.	Display at 188	Display at 88:88
1	FA	Fan speed change value (0 means the fan is off)
2	PU	Water pump status (0= Off, 1= On)
3	E 1	EXV1 pulse value
4	Fr	Compressor frequency in Hz
5	Co	Unit current value (A)
6	uo	Unit voltage value (V)
7	dC	DC bus voltage value (V)
8	PC	Discharge pressure value (KPa)
9	PE	Suction pressure value (KPa)
10	tP	Discharge temperature value
11	th	Suction temperature value
12	t3	Finned heat exchanger temperature value (T3)
13	t4	Ambient temperature value (T4)
14	t2	Liquid coil temperature value (T2)
15	1t2	Steam coil temperature value (T2B)
16	tn	Water inlet temperature value (Twi)
17	to	Water outlet temperature value (Two)
18	tF	Drive board temperature value (TF)
19	Value	trc (cooling restart compensation temperature)
20	Value	trh (heating restart compensation temperature)
21	t 1	Cumulative duration of unit operation in hours
22	L1	Compressor frequency limit code
23	code	Error in memory 1 Er 1
24	code	Error in memory 2 Er2
25	code	Error in memory 3 Er3
26	Version No.	CtrL control software version
27	Version No.	Motherboard software version 0dU

5.14 Restore factory settings

The controller will initialize in a initial few seconds after power on, and no control commands or button operations are valid.

When the unit is turned off, in main interface, long press ∧ ∨ ✓ buttons for 10 sec. to restore factory settings.

6. MAINTENANCE AND CARE

In order to ensure optimal availability of the unit, a number of checks and verifications on the unit and on-site wiring must be carried out at regular intervals. This service must be performed by your local technician.

6.1 Safety during maintenance

Before performing any maintenance or repair operation, you must turn off the power on the power panel.

Do not touch any live parts for 10 minutes after power off.
The compressor housing heater can operate even in standby mode.
Please note that some parts of the electrical components box are hot.
It is forbidden to touch the conductive parts.
It is forbidden to rinse the unit. This can cause electric shock or fire.
Never leave the unit unattended when the service panel is removed.
Do not change the system settings until you have consulted the technician.
Make sure water lines are clean and avoid dirt and obstructions.
Please use parts supplied or recommended by the company, do not use unqualified parts.
Gas tightness test at 4.3 Mpa

6.2 Daily maintenance

The following checks must be performed at least once a year by qualified person.

- ✓ Thoroughly inspect and clean up the unit.
- ✓ Clean the waterway system.
- ✓ Clean the water filter.
- ✓ Check water pump, regulating valve and other waterway equipment.
- ✓ Carry out a thorough visual inspection of the switch box and look for obvious defects such as loose connections or defective wiring.
- ✓ If the unit is not operation in winter, remove the inlet and outlet water connections and let off the water of the unit.
- ✓ Do NOT rinse the wired controller. This may cause electric shock or fire.
- ✓ Do NOT sit, climb or stand on the unit. Do NOT place any object or equipment on top of the unit.

Checks to the refrigeration equipment

Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times the manufacturer s maintenance and service guidelines shall be followed. If in doubt consult the manufacturer technical department for assistance. The following checks shall be applied to installations using flammable refrigerants.

Checks to electrical devices

Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, and adequate temporary solution shall be used. This shall be reported to the owner of the equipment so all parties are advised.

6. MAINTENANCE AND CARE

Initial safety checks shall include:

- ✓ The charge size is in accordance with the room size within which the refrigerant containing parts are installed.
- ✓ The ventilation machinery and outlets are operating adequately and are not obstructed.
- ✓ Marking and signs that are illegible shall be corrected.
- ✓ Refrigeration pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.
- ✓ That capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking.
- ✓ That there no live electrical components and wiring are exposed while charging, recovering or purging the system.
- ✓ That there is continuity of earth bonding.

Cabling

Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

6.3 Inverter drive board replace

1. Open the junction box.

junction box

2. Unscrew all screws on the top panel to remove it.

M4 screw*2

Unscrew these 2 screws before remove the top panel.

3. Unscrew all front panel screws to remove.

4. Unscrew and remove the panels opposite.

5. Unscrew the board.
6. Remove the connection cables from the board.
7. Take out the board and replace it.

board

7. TROUBLESHOOTING

Code	Malfunction or protection
bA	Ambient temp. sensor (T4) out of operation range Solutions: 1. Check whether the ambient temperature is lower than the operating range of the unit. 2. Check whether the finned heat exchanger and air outlet of the unit are blocked by debris. 3. Check whether the ambient temperature probe is detached or attached to the fin. 4. If all the above checks are ok, the fault still exists, please contact the installer or retailer.
C7	High temperature protection of inverter module
E0	Water flow malfunction (after 3 times E8)
E2	Communication malfunction between controller and main control board Solutions: 1. Restart the unit. 2. Power off the unit,unplug and plug the cable of display, and then power on. 3. If all the above checks are ok, the fault still exists, please contact the installer or retailer.
E3	Total outlet water temp.sensor (T1) malfunction
E5	Air side heat exchanger temperature sensor (T3) malfunction
E6	The ambient temperature sensor (T4) malfunction
E8	Water flow malfunction Solutions: 1. Check whether the water pump works properly. 2. Check whether there is no water flow or water flow is too low. 3. If all the above checks are ok, the fault still exists, please contact the installer or retailer.
E9	Suction temperature sensor (Th) malfunction
EA	Discharge temperature sensor (Tp) malfunction
Ed	Inlet water temp.sensor (Tw_in) malfunction
EE	EEprom malfunction
F1	DC bus low voltage protection
F6	EXV1 fault
H1	Communication malfunction between main control board and inventer board
H2	Liquid refrigerant temp.sensor (T2) malfunction
H3	Gas refrigerant temp.sensor (T2B) malfunction
H4	Three times L0 protecs
H6	The DC fan malfunction
H7	Voltage protection
H8	HP pressure sensor malfunction
HA	Outlet water temp.sensor (Tw_out) malfunction
Hb	Three times PP protection and Tw_out below 7°C
Hd	Main control board failure. Solution: Replace the main control board.
HF	Inverter module board EE prom malfunction
HH	10 times H6 in 2 hours
HP	Low pressure protection in cooling mode
P0	Low pressure switch protection Solutions: 1. Check whether the fan is running properly. 2. Check whether the finned heat exchanger and air outlet of the unit are blocked by debris. 3. If all the above checks are ok, the fault still exists, please contact the installer or retailer.

7. TROUBLESHOOTING

Code	Malfunction or protection
P1	High pressure switch protection Solutions: 1. Check whether the water pump works properly. 2. Check whether there is no water flow or water flow is too low. 3. If all the above checks are ok, the fault still exists, please contact the installer or retailer.
P3	Compressor overcurrent protection
P4	Comp discharge temp. too high protection
P5	|Tw_out-Tw_in| value too big protection Solutions: 1. Check whether the water pump works properly. 2. Check whether there is no water flow or water flow is too low. 3. If all the above checks are ok, the fault still exists, please contact the installer or retailer.
Pb	Anti-freeze mode
PP	|Tw_out-Tw_in| abnormal protection
Pd	High temperature protection of air side heat exchanger temperature (T3)
L0	Inverter or compressor protection
L1	DC bus low voltage protection
L2	DC bus high voltage protection
L3	Current sampling error of PFC circuit
L4	Rotating stall protection
L5	Zero speed protection
L7	Phase loss protection of compressor
dF	Deicing operational status
d0	Compressor oil return operational status
d8	Remote switch status (on/off)

When the unit occurred any fault:

- the error code will be displayed at 88:88,
- alarm icon ⓘ will quickly flash,
- cancel icon 3S CANCEL will slowly flash,
- and buzzer will sound 3 times every 180 sec.

Long press ⏲ for 3 sec. to cancel buzzer, but alarm icon and error code will quickly flash until the fault is removed.

8. WARRANTY

General warranty conditions

The Poolstar Company guarantees the original owner against defective materials and faults in the manufacture of the Poolex heat pump for a period of **five (5) years**.

- The compressor is guaranteed for a period of **seven (7) years**.
- The titanium tube heat exchanger is guaranteed for a period of **fifteen (15) years** against chemical corrosion, except for frost damage.
- The condenser's other components are guaranteed for **five (5) years**.

The warranty becomes effective on the date of the first invoice.

The warranty does not apply in the following cases:

- Malfunction or damage arising from an installation, usage or repair that is not in compliance with the safety instructions.
- Malfunction or damage arising from a chemical agent that is unsuitable for the pool.
- Malfunction or damage arising from conditions that are unsuitable for the equipment's purposes of use.
- Damage arising from negligence, accident or force majeure.
- Malfunction or damage arising from the use of unauthorised accessories.

Repairs undertaken during the warranty period must be approved prior to being carried out by an authorised technician. The warranty shall be null and void if the repair to the equipment is carried out by a person who is not authorised by the Poolstar company.

The guaranteed parts shall be replaced or repaired at Poolstar's discretion. Defective parts must be returned to our workshops to be covered during the warranty period. The warranty does not cover labour costs or unauthorised replacements. The return of the defective part is not covered by the warranty.

Recycling

Electrical and electronic products should not be mixed with unsorted household waste. Do not try to disassemble the system yourself: disassembly of the system, treatment of refrigerant, oil and other parts must be carried out by a qualified installer in accordance with local and national legislation. Units must be treated in a specialized treatment facility for reuse, recycling and recovery. Ensuring that this product is disposed of properly will help prevent potential negative consequences to the environment and human health. For more information, contact your installer or local authorities.

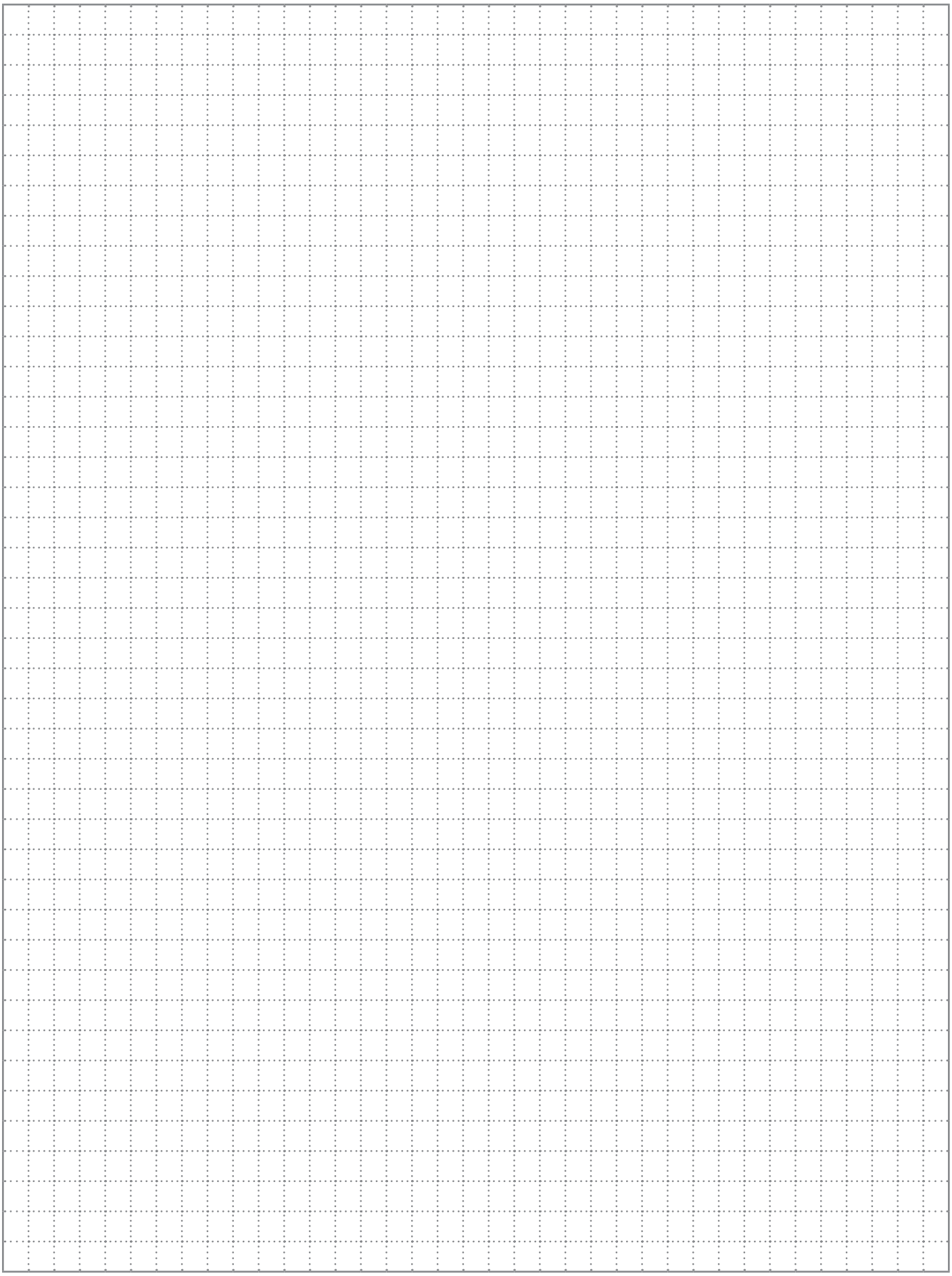
Dear customer,

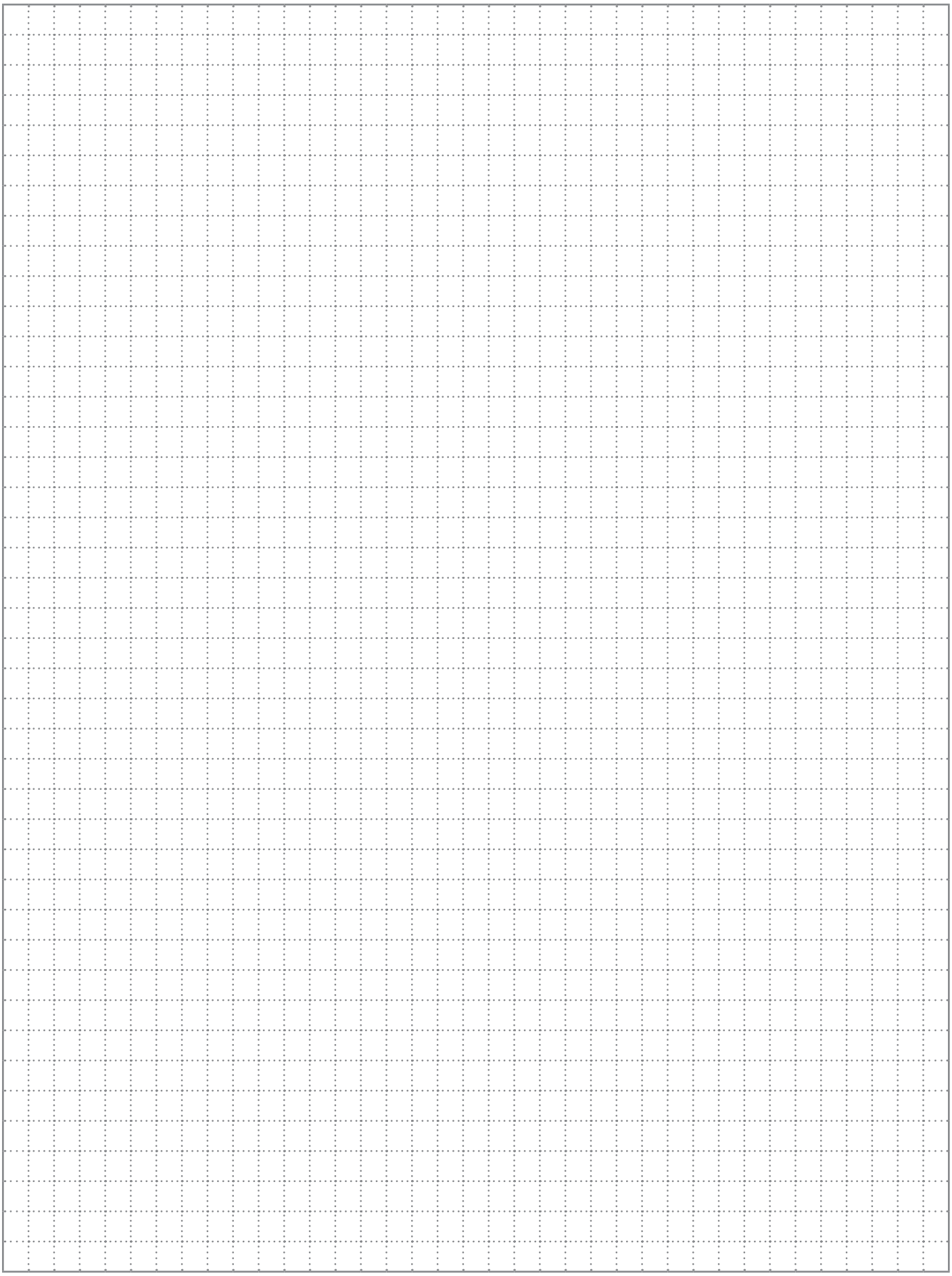
A question? A problem? Or simply register your warranty, find us on our website:

https://assistance.poolstar.fr/

Thank you for you trust and support. Happy bathing!

Your personal information is processed in accordance with the French Data Protection Act of 06 January 1978 and will not be shared with 3rd parties.





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Source d'innovation

POOLEX Jet PRO

ASSISTANCE TECHNIQUE
TECHNICAL SUPPORT
ASISTENCIA TÉCNICA
ASSISTENZA TECNICA
TECHNISCHE UNTERSTÜTZUNG
TECHNISCHE BIJSTAND

www.poolex.fr

06/2025