HeatStream by Primsal®

Installation & Operation Manual

MODEL: Primsal HS 200/270 ltr

Distributed by ecobulb® Saving enough electricity to power New Zealand

ALL IN ONE HEAT PUMP

Features

- R290 low GWP (GWP=3).
- CMEV: Central mechanical extract ventilation.
- WIFI smart control.
- Microchannel heat exchanger.

Primsal

R290 | MICROCHANNEL HEAT COIL | LOW 43dB(A) NOISE | WiFi

Stable Silent Operation

Technical Data

MODEL	PRIMSAL HS 200 LTR	PRIMSAL HS 270 LTR
Power supply	220V~240V/50HZ	220V~240V/50HZ
Rated Input Power (Heat pump)	1.2KW	1.2KW
Rated Input Current (Heat pump)	5.3A	5.3A
Rated Heating Capacity (Heat pump)	2.78KW	2.78KW
Rated Input Power (Resistance)	1.8KW	1.8KW
Rated Input Current (Resistance)	7.5A	7.5A
Max Current (HP&Resistance)	14A	14A
Water Tank Volume	200L	270L
Recovery Rates (litres per hour)	60	60
COP (A 20/15, W 15-55)	4.15	4.15
Refrigerant	R290 (400g)	R290 (400g)
Compressor	GMCC / Rotary	GMCC / Rotary
Expansion Valve	EEV	EEV
Fan	Axial	Axial
Ventilation	Horizontal discharge	Horizontal discharge
Heat Exchanger	Microchannel / Wrap around tank	Microchannel / Wrap around tank
Inner Tank Material	Enamel	Enamel
Inner Tank Thickness	Dome 3.0mm / Wall 2.5mm	Dome 3.0mm / Wall 2.5mm
Inner Tank Type	Concave	Concave
Insulation / Thickness	Polyurethane / 40mm	Polyurethane / 40mm
Outer Casing	Galvanized painted sheet	Galvanized painted sheet
TPR Valve	850KPA	850KPA
Rated Outlet Water Temperature	60°C	60°C
Max Outlet Water Temperature	70°C	70°C
Working Range with Element	-15°C-43°C	-15°C-43°C
Working Range without Element	-7°C-43°C	-7°C-43°C
Anti Legionella	Water heated up to 70°C	Water heated up to 70°C
IP Class	IPX4	IPX4
Electric Shock Proof	I	I
Unpacked Dimension (outdoor unit)	ϕ620mm*1520mm	ϕ620mm*1840mm
Packed Dimension (outdoor unit)	700*700*1565mm	700*700*1885mm
Net Weight	104	118
Gross Weight	120	136
Noise	43dBA	43dBA

CONTENTS

Carefully read these operating and installation instructions and keep them safe. Should this system change hands, pass these instructions to the subsequent owner. Additionally, provide this document to any trained contractor for servicing.

SYMBOLS USED IN THESE INSTRUCTIONS:

Important INFORMATION and TIPS.

Important INFORMATION regarding FLAMMABLE MATERIALS.

Warnings about possible DANGERS

1.0 SAFETY PRECAUTIONS

NOTE

Please make sure that you have read at least one chapter of the safety precautions shown in this manual. This part provides important safety points for you and operation of the unit must be based on the safety precautions.

WARNING

1. Household electrical systems must have a reliable ground connection.

2. Household electrical systems must install a leakage protection device.
3. Please refrain from removing any permanent instructions, labels, or parameter plates affixed to the outer cover or any internal plates of the heat pump.
4. Please entrust dealer or professional personnel to install the device. Installer must have professional knowledge, as any incorrect handling by yourself may lead to risks such as fire, electric shock, injury, or leaks.
5. When making a purchase from the local supplier, it is necessary to choose a product that is specified by our company.
6. Please obey the local regulations issued by your electricity company to connect power supply.
7. If there is a need to remove or reinstall the heat pump, it is advisable to delegate this task to a dealer or qualified professionals.
8. Engaging in self-modification or attempting to carry out repairs is strictly forbidden due to the potential hazards, including fire, electric shock, injuries, or leaks, that improper repairs could pose. It is crucial to refer to authorised dealers or certified professionals for any required repair work.
9. The earthing pole for the outlet should establish a secure connection, with a rated current value of no less than 10A. It is imperative to keep both the outlet and power plug dry to prevent any leakage, and ensure that the outlet and power plug are properly matched.
10. In areas or on walls where water splashing might occur, the installation height of the power plug should be a minimum of 1.8 metres. Additionally, maintain a safe separation between the water source and the power plug to prevent access by children.
11. One way valve specified by our company must be installed in close proximity to the cold water outlet.
12. To ensure the ongoing safety of this appliance, it must be installed, operated, and maintained in accordance with the manufacturer's provided instructions.
13. This appliance may deliver hot water at high temperatures. For installations in Australia or New Zealand, refer to the applicable Plumbing Code of the country, local regulations, and installation instructions to determine if additional temperature control measures are necessary.

14. Australia or New Zealand installations must conform with the applicable Plumbing Code of the country.

15. If the fixed appliance lacks a power cord and plug or any other means to disconnect the power cord (these devices must have contact separation at all poles and allow complete disconnection under over-voltage Class III conditions. It should be an all-pole disconnect switch), then the disconnection device must be integrated into the fixed wiring in accordance with the wiring rules.

16. Do not employ methods to expedite the defrosting process or cleaning that are not recommended by the manufacturer.

17. The appliance should be stored in a room with no continuously active ignition sources, such as open flames, operating gas appliances, or running electric heaters.

18. Do not puncture or incinerate.

19. Keep in mind that refrigerants may be odourless.

20. Ensure there are no obstructions near the required ventilation.

21. Maintenance should strictly follow the supplier's recommended procedures.

22. Ducts connected to electrical appliances must not contain potential ignition sources.

23. Store appliances in well-ventilated areas, with room sizes corresponding to the designated operating room areas.

24. If electrical appliances connected to one or more rooms via an air duct system are installed in a room smaller than the minimum area specified in Article 23 above, the room should be free from continuously active ignition sources (e.g., gas appliances in operation) or other potential ignition sources (e.g., operating electric heaters, hot surfaces).

25. For equipment connected to one or more rooms through an air duct system, auxiliary equipment that may serve as a potential ignition source should not be installed in the air duct system.

26. For appliances connected to one or more rooms through an air duct system, only auxiliary devices approved by the appliance manufacturer or declared suitable for the refrigerant should be installed in the connected piping system.

27. Store the appliance in a way to prevent any mechanical damage. This appliance is not intended for use by individuals (including children) with reduced physical, sensory, or mental capabilities, or those lacking experience and knowledge, unless they have been supervised or instructed on its safe use by a person responsible for their safety.

28. Children should be supervised to ensure they do not play with the appliance.

29. If the power cord is damaged, it must be replaced by the manufacturer, its authorized service agent, or a similarly qualified individual to prevent hazards.

30. If the hot water system has not been used for two weeks or more, a potentially flammable hydrogen gas buildup may occur in the water heater. To safely dissipate this gas, it is recommended to open a hot tap for several minutes or until the gas discharge ceases. Use a sink, basin, or bath outlet for this purpose, but do not use a dishwasher, clothes washer, or any other appliance. During this process, there should be no smoking, open flames, or nearby operating electrical appliances. If hydrogen is discharged through the tap, it may produce an unusual sound, similar to air escaping.

2.0 GENERAL INFORMATION

2.1 Measurement

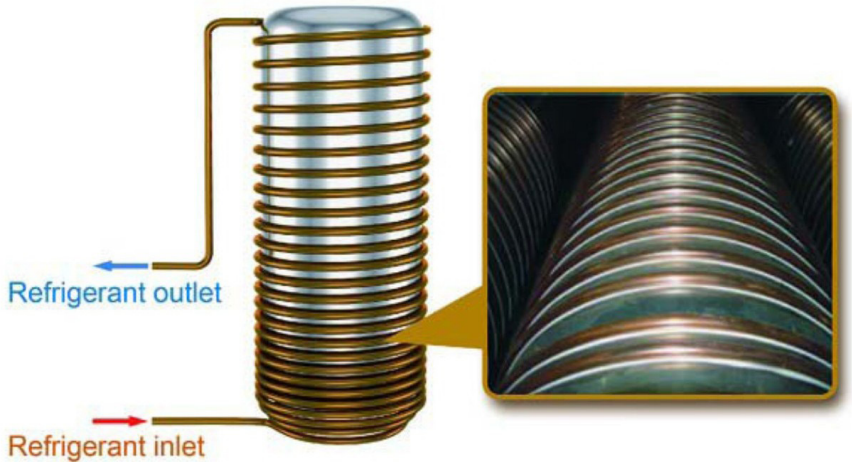
MODEL	WEIGHT (KG)	DIMENSION (MM,D×H)	POWER SUPPLY	WATER CONNECTION SIZE
Primsal HS 200 ltr	120	ϕ620mm*1520mm	220V~240V/50HZ	3/4"
Primsal HS 270 ltr	140	ϕ620mm*1840mm	220V~240V/50HZ	3/4"

2.2 External Appearance

2.3 Features

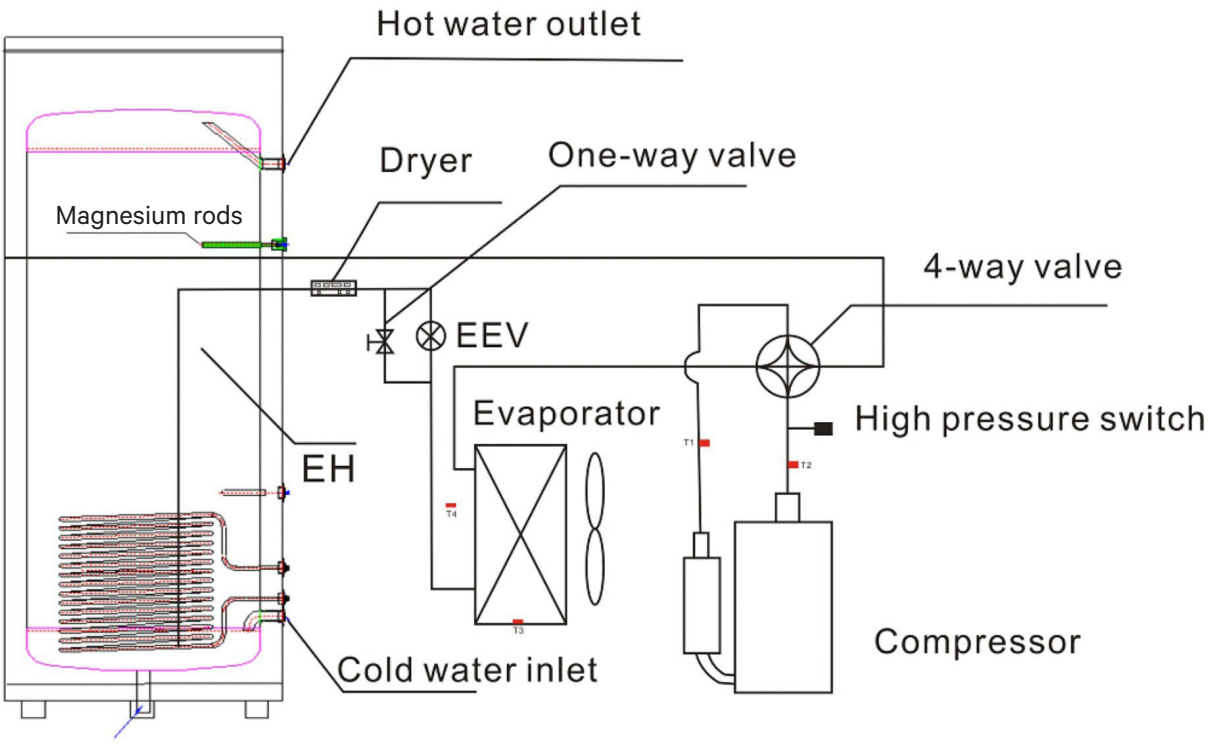
All-in-One Heat Pump for Sanitary Hot Water:

1. It features complete separation between water and electricity, ensuring there are no electric shock issues, thus enhancing safety.
2. There are no fuel tubes or storage, eliminating any potential hazards associated with oil leakage, fires, explosions, and similar risks.



3. The condenser coil, securely enveloping the stainless steel tank, eliminates the possibility of cross-contamination. This external coil does not directly contact the water, ensuring enhanced safety.
4. The maximum outlet water temperature is 75ºC. The system utilizes innovative heating methods that combine electric heating and heat pump heating effectively, ensuring a stable and rapid water heating process.
5. Automatic start-up and shutdown and automatic defrosting are incorporated by optimising the refrigerant cycle to conserve energy during additional operations.
6. In accordance with the thermodynamics of the heat pump operation, the unit extracts heat from outdoor air and efficiently generates hot water with a thermal efficiency of approximately 4.17 (under the conditions A20/15ºC and W15/55ºC).
7. In the temperature range spanning from -7 ºC to 43ºC, the unit remains unaffected by various weather conditions, including nighttime, cloudy skies, rain, and even snow.

2.4 Refrigerant Circuit



COMPRESSOR:	R290, supplied by GMCC.
EVAPORATOR:	Copper tube and aluminium fin type heat ex-changer.
E.E.V:	Electronic expansion valve, the opening is regulated according to the discharge air temperature of compressor.
FAN:	Centrifugal fan with three speeds.
HIGH PRESSURE SWITCH:	When the discharge pressure of compressor is 2.76Mpa or higher, the protection switch will be triggered, and if the discharge pressure is down to 2.07MPa, the protection switch will be switched off.

2.5 Specifications

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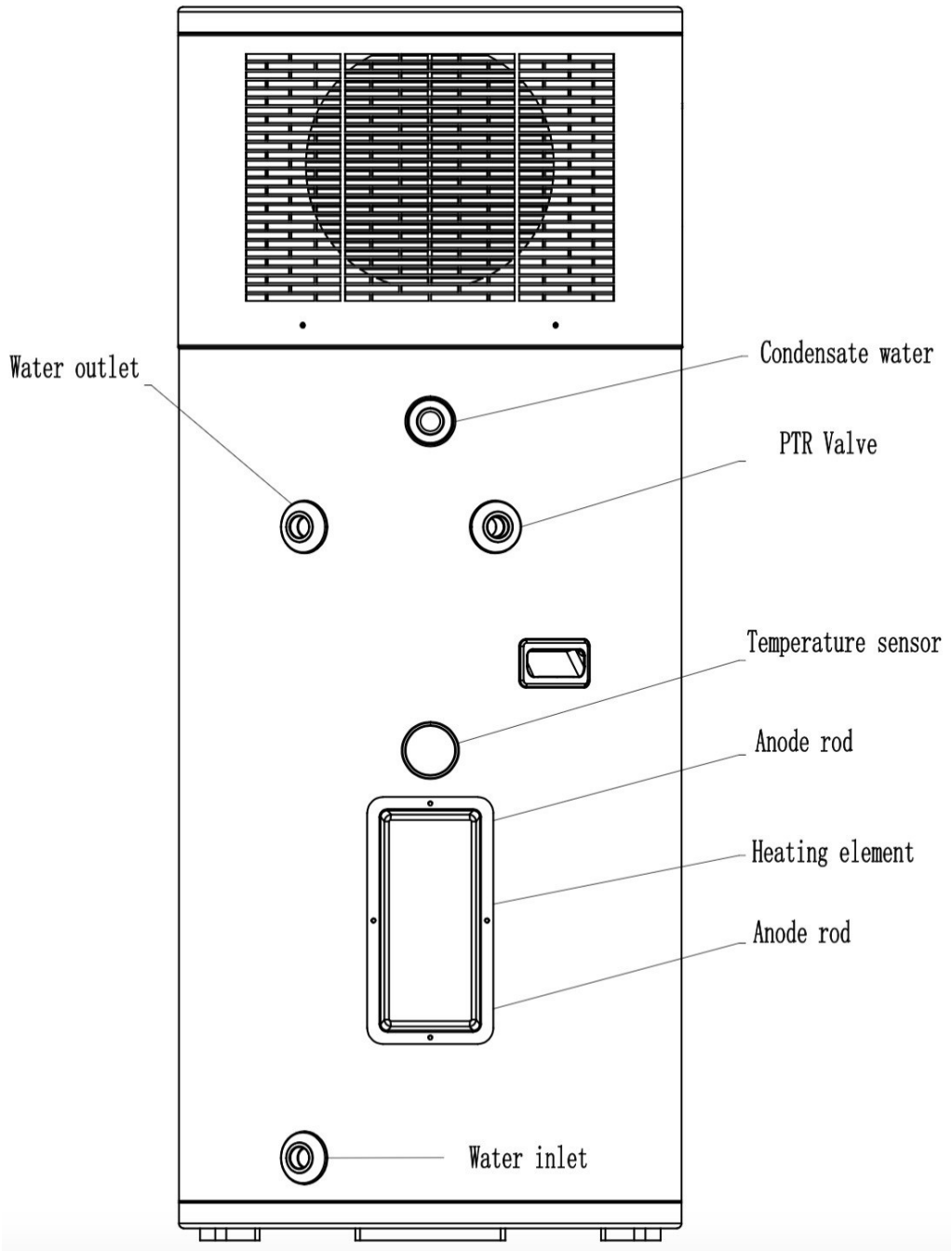
Net Weight	104	118
Gross Weight	120	136
Noise	43dBA	43dBA

The data above is only a reference. For specific data please refer to the nameplate on the units.

Note: We reserve the right to discontinue or change, at any time, specifications or designs without notice and without incurring obligations.

3.0 PART NAMES

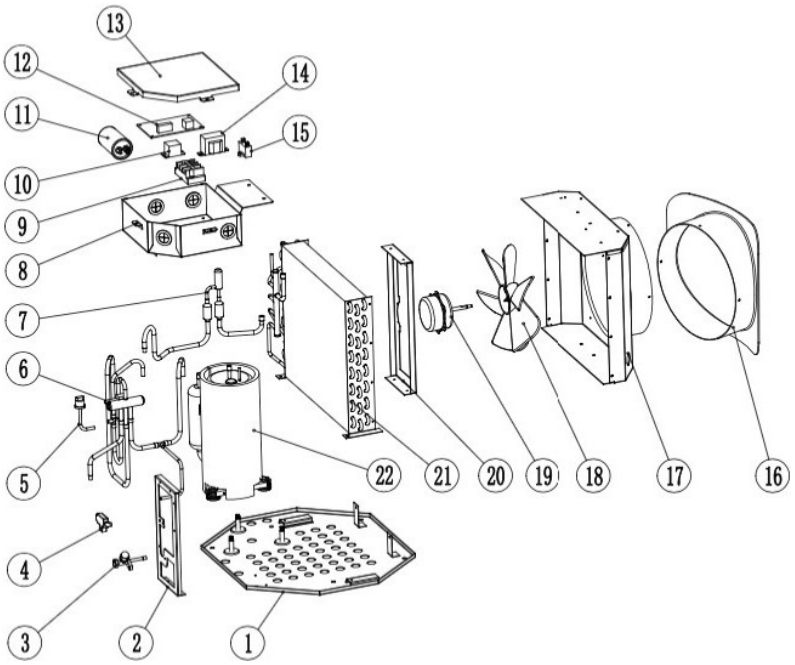


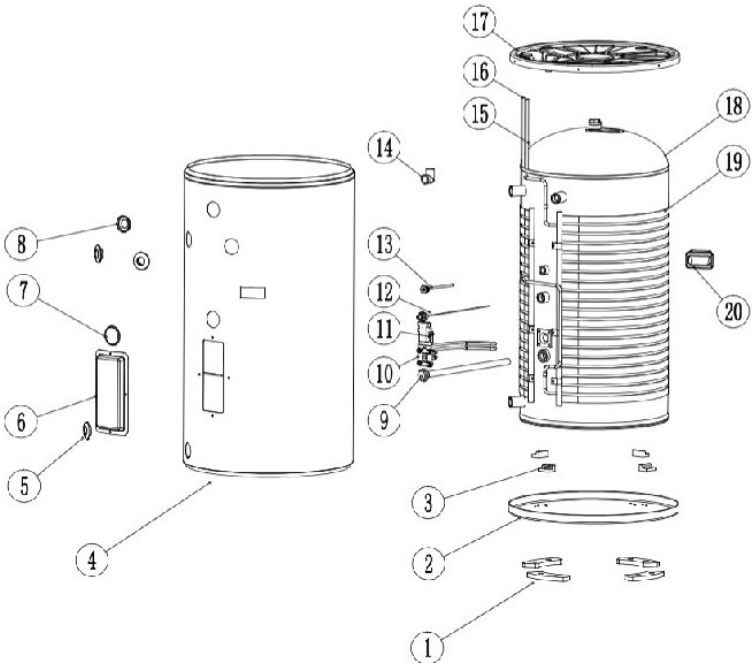
NOTE

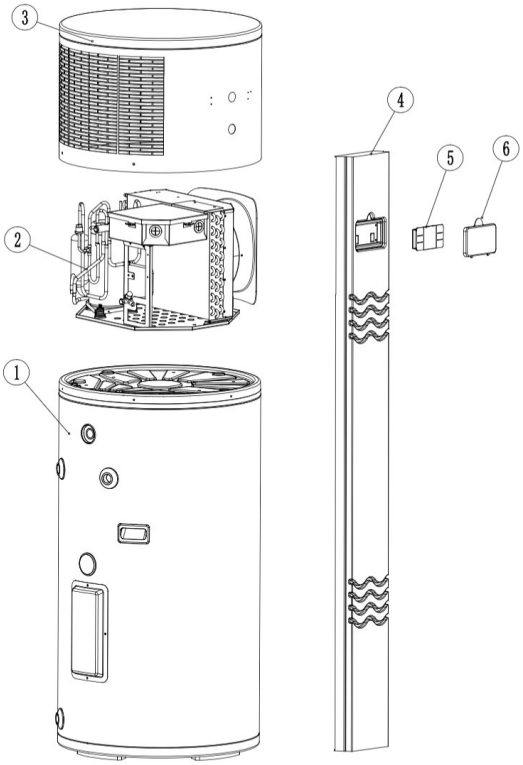
All images within this manual serve purely illustrative purposes. Depending on the model, there may be slight variations between the images and the heat pump water heater you've acquired. We recommend referring to the actual product sample rather than relying solely on the manual's pictures.

Heat pump component

1	Chassis components
2	Electric box bracket
3	Check valve
4	Clip
5	High pressure switch
6	Four way valve
7	Electronic expansion valve
8	Electric box
9	Terminal block
10	Relay
11	Compressor capacitor
12	PCB board
13	Electrical box cover
14	Transformer
15	Fan capacitor
16	Air outlet ceiling cover
17	Belows
18	Fan blade
19	Fan motor
20	Motor support
21	Evaporator
22	Compressor







Water tank

1	Feet
2	Lower cover
3	Fixed block
4	Housing
5	Decorative cover
6	Electrical heater cover
7	Decorative cover
8	Decorative cover
9	Anode rod
10	Heating element

11	Electric heater temperature controller
12	Anode rod
13	Temperature measuring sleeve
14	Condensate drainage pipe
15	Microchannel intake pipe
16	Microchannel outlet pipe
17	Water tray
18	Inner tank
19	Microchannel heat exchanger
20	Handle

1	Water tank
2	Heat pump component
3	Top cover
4	Trim panel
5	Controller

4.0 INSTALLATION OF HEAT PUMP

4.1 Choose a Suitable Location

1. Do not install this equipment indoors. If installed indoors, it may cause overflow, noise, or for indoor temperature to drop which can impact your comfort. Please take preventive measures in advance.
2. Ensure that there is sufficient space for installation and maintenance of the heat pump.
3. Ensure that there are no obstructions to the inlet or outlet airflow paths, and shield them from strong winds.
4. A dry and well-ventilated location is the most appropriate choice.
5. The support surface must be flat (horizontal angle must not be more than 2°), be able to bear the heat pump's weight for easy vertical installation, and should not cause any increased noise or shock.
6. Make certain that the location is such that noise and exhaust air do not directly impact neighbouring properties.
7. Easy to install connection pipe and electrical parts.
8. If the heat pump is installed on those metal parts of the building, electrical insulation must be done well and must comply with the technical standards on electrical equipment.

NOTE

- **In regions where the temperature is below 0°C, the heat pump must be installed indoors or in any location where it will not be frozen for the purposes of protecting the connection pipe.**
- **If used in regions where the temperature is below 0°C, appropriate precautions should be implemented to safeguard the pipes if the heat pump is installed outdoors.**
- **Areas of high temperature or long-term sun exposure are prohibited as it may decrease the lifespan of product.**

NOTE

Installation in the following places may cause machine errors. If unavoidable, please consult your local authorized service points.

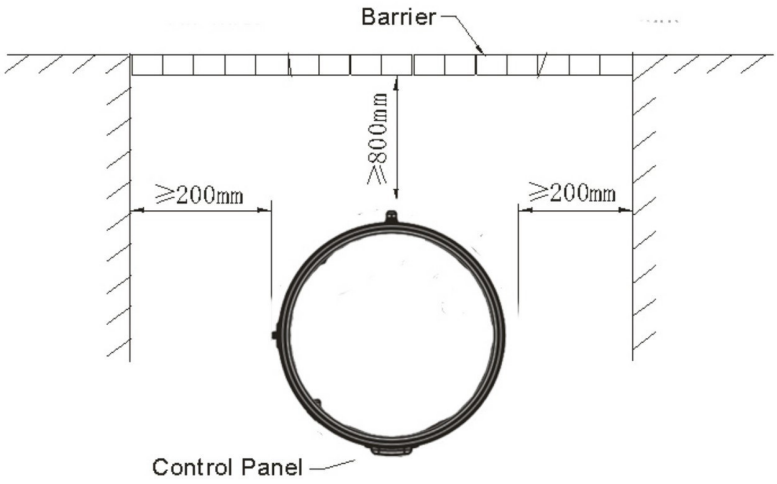
- **Places containing mineral oil such as cutting oil.**
- **Places containing salt such as the seaside.**
- **Places with corrosive smell such as a spa, where there is sulfur gas.**
- **Places where there is frequent voltage and current waves.**
- **Places with strong shakes, such as a car or cabin.**
- **Places with strong electromagnetic waves.**
- **Places that are full of oil gas and oil bloom, such as the kitchen.**
- **Places where there is evaporation of acid or alkaline gas.**

4.2 The Movement of Heat Pump

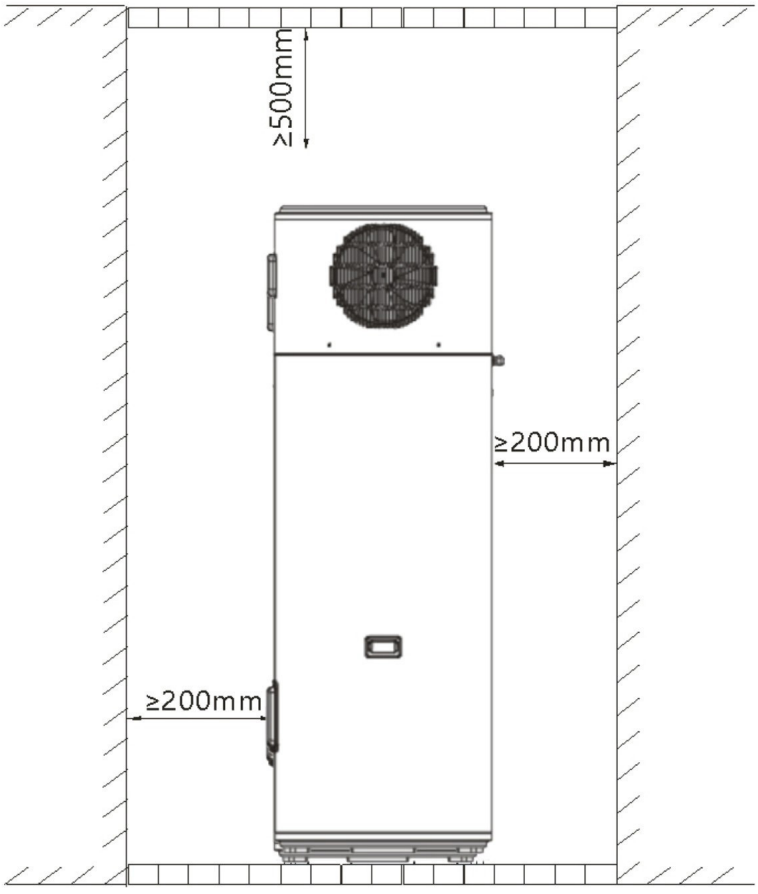
1. This heat pump is heavy and will need at least two people to move and install it.
2. Please relocate the equipment in its factory-condition state, and refrain from making any alterations or self-modifications.
3. Please install the protection plate to avoid the heat pump from touching hard objects to protect it from scratches and deformation.
4. Do not touch the fan with your hands or with other objects.
5. Do not move the heat pump at the angle of 75°.

4.3 The Installation of Heat Pump

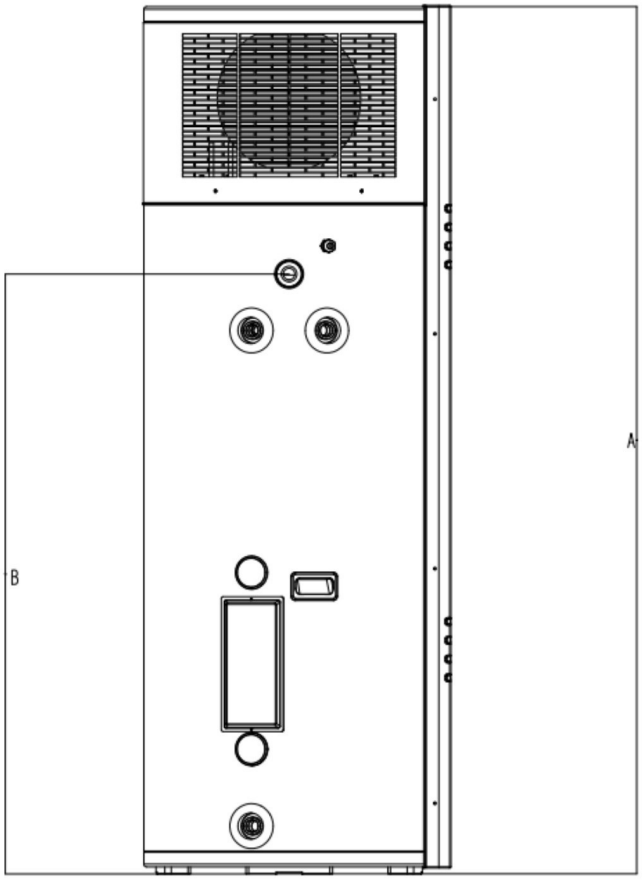
1. Please leave enough space for installation and maintenance.



2. If the heat pump installed is in the basement, indoors, or in any other airtight space, please ensure the required exhausting or intake circulation between the surrounding air and the outdoor air. The air duct's total length should be equal or less than 6 metres, and the duct diameter should be equal or more than 150 millimetres.



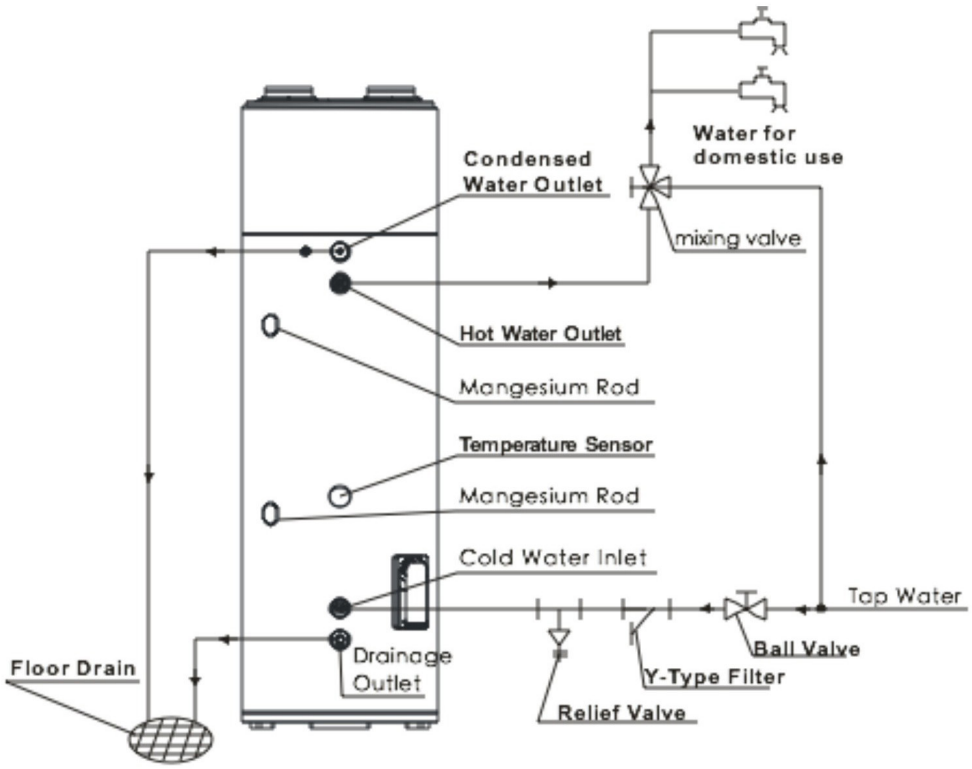
4.4 Product External Dimensions



MODEL	SIZE	
	A	B
Primsal HS 200 ltr	1518	1010
Primsal HS 270 ltr	1838	1330

5.0 PIPE LINE CONNECTION

5.1 Pipe Connection Diagram



5.2 Water Quality Requirements

PH VALUE	TOTAL HARDNESS	CONDUCTIVITY	SULPHATE ION	CHLORINE ION	AMMONIA ION
7~8.5	< 50ppm	<200μV/cm(25°C)	None	< 50ppm	None
Sulfate ion	Silicon	Iron content	Sodium	Ca	
< 50ppm	< 50ppm	< 0.3ppm	No requirement	< 50ppm	

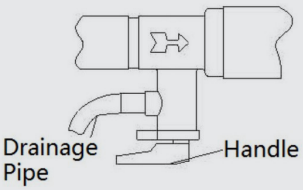
5.3 Water Pipe Installation Instructions

1. Please do not use an iron pipe to connect to the heat pump. Instead, please use CPVC pipe, PPR pipe, or PB pipe.
2. Water pipes, connectors, and similar components should be installed in accordance with the provided drawings. In cases where the ambient temperature falls below 0°C, it is imperative to apply adequate insulation to the water pipes..
3. Water inlet/outlet size is G3/4", external thread.
4. The water pipe's lifespan should not be less than the heat pump's working lifetime.

5. Relief valve is G1/2", 0.8 MPa. After installation, must sure that the drainage pipe, which connects to the relief valve, is not blocked.

NOTE

- **For maintenance purposes, it is necessary to manually activate the relief valve once every six months to remove any calcium carbonate deposits and to ensure that there are no obstructions. Please exercise caution as the outlet temperature of the drainage port may be elevated.**
- **Precautions should be implemented to avoid the freezing of the drainage pipe.**



DANGER

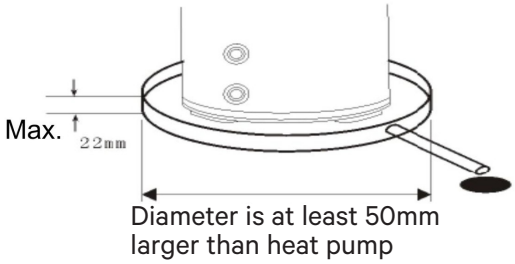
- **Do not hold down the handle of the safety valve.**
- **Do not knock down the safety valve.**
- **Do not plug the drainage port.**
- **Excretion pipe must be connected to a open drainage port.**

Explosion Danger

6. After completing the installation of all pipelines, please open the valve for cold water inlet and the valve for hot water outlet to fill the tank with water. You can stop the process when water starts overflowing from the water outlet. Following this, inspect all pipelines to ensure there are no water leaks. If any leaks are detected, you must rectify them and then refill the tank with water.

7. If the intake pressure falls below 0.15MPa, it is necessary to install a booster pump connected to the inlet water pipe to increase the water capacity, ensuring that the intake pressure remains below 0.15MPa. Conversely, if the intake pressure exceeds 0.65MPa, a relief valve should be installed on the inlet water pipe to maintain the long-term operational stability of your water tank.

8. While the heat pump is operating, there is a possibility of condensation forming water droplets, potentially causing unexpected blockages in the drainage water port, which can lead to water dripping from the equipment's surface. To ensure both your daily comfort and the well-being of your equipment, we recommend the use of a water tray. Please consult the chart provided below for guidance.



NOTE

If you plan to install the heat pump outdoors in an environment where temperatures can drop below 0°C, it's essential to take appropriate measures to safeguard the water pipes. This will help prevent freezing or damage to the water pipes and ensure proper functioning.

6.0 ELECTRICAL CONNECTION

Electrical Wire Assembly

NOTE

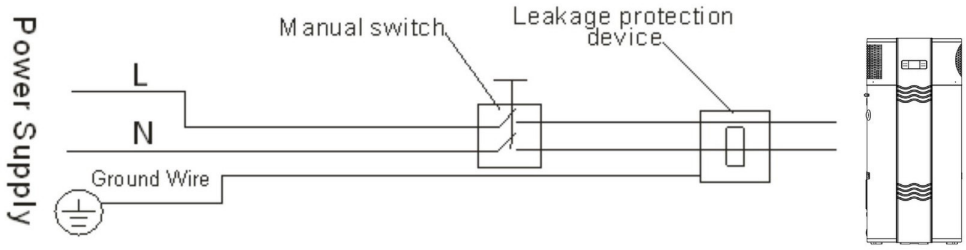
- The equipment requires a dedicated power supply with a supply voltage that aligns with its rated voltage.
- The power supply circuit must be fitted with a ground wire, and the ground wire of the power supply must be reliably connected to the external ground wire.
- The operation should only be carried out by trained professionals following the circuit diagram.
- Set up the leakage protection device according to the National Technical Standard for electrical equipment.

6.1 Power Specification

ITEM MODEL	POWER SUPPLY	MINIMUM WIRE DIAMETER (MM2)		MANUAL SWITCH (A)		LEAKAGE PROTECTION DEVICE	CIRCUIT BREAKER
Primsal HS 200 ltr	220V/50Hz	Size (continuous length ≤ 30m)	Ground wire	Capacity	Fuse	Below 30mA 0.1sec	Rated Current
Primsal HS 270 ltr		≥2.5	≥ϕ1.0mm	≥20	20		≥20A

Note: When using the heat pump, please connect the power supply wire directly to the user's plug.

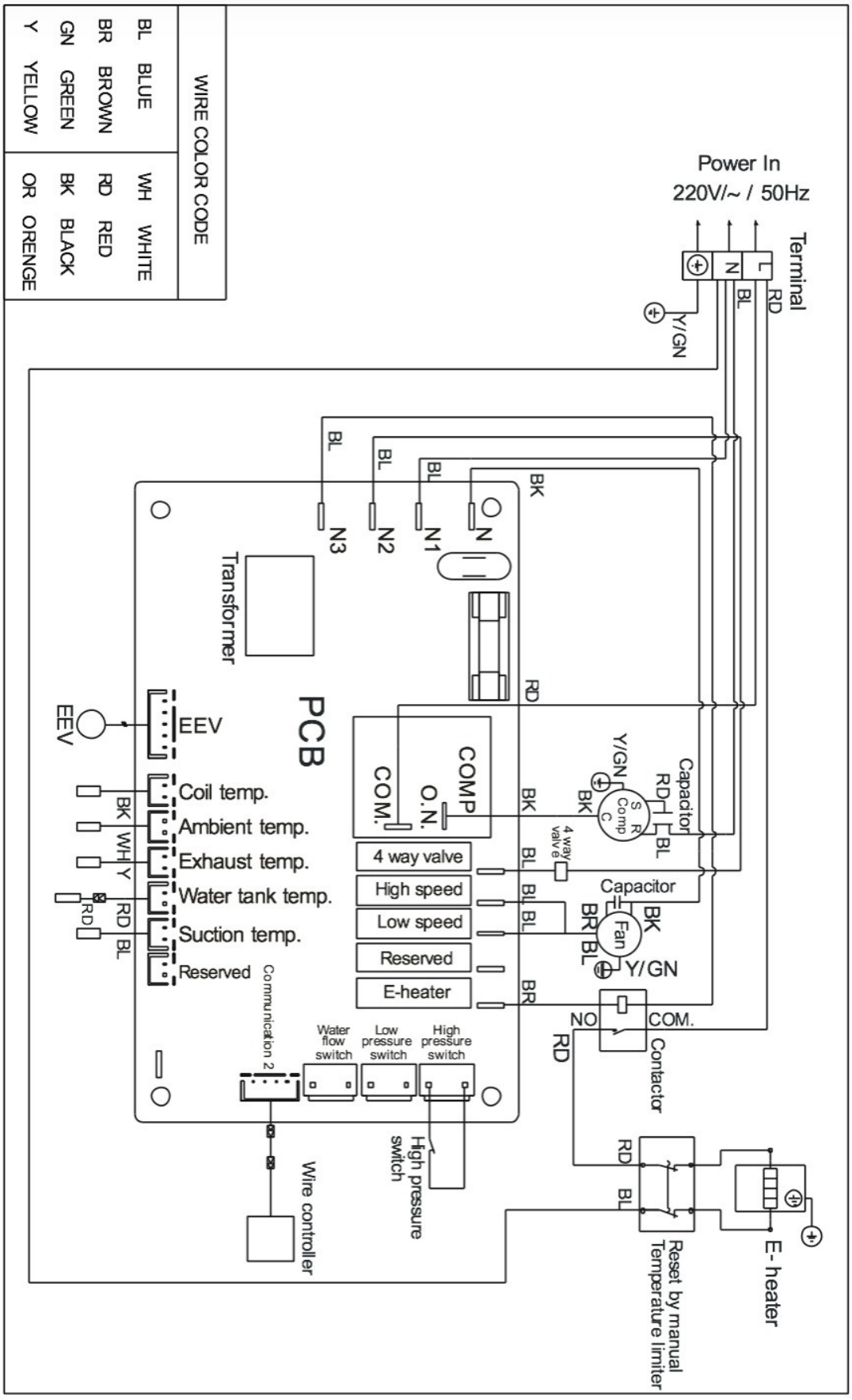
6.2 Leakage Protection



WARNING

- Install a leakage protection device on the external power supply box, as shown in the diagram above, to ensure your safety.
- The equipment can only be used once you have verified the presence of a reliable ground wire.

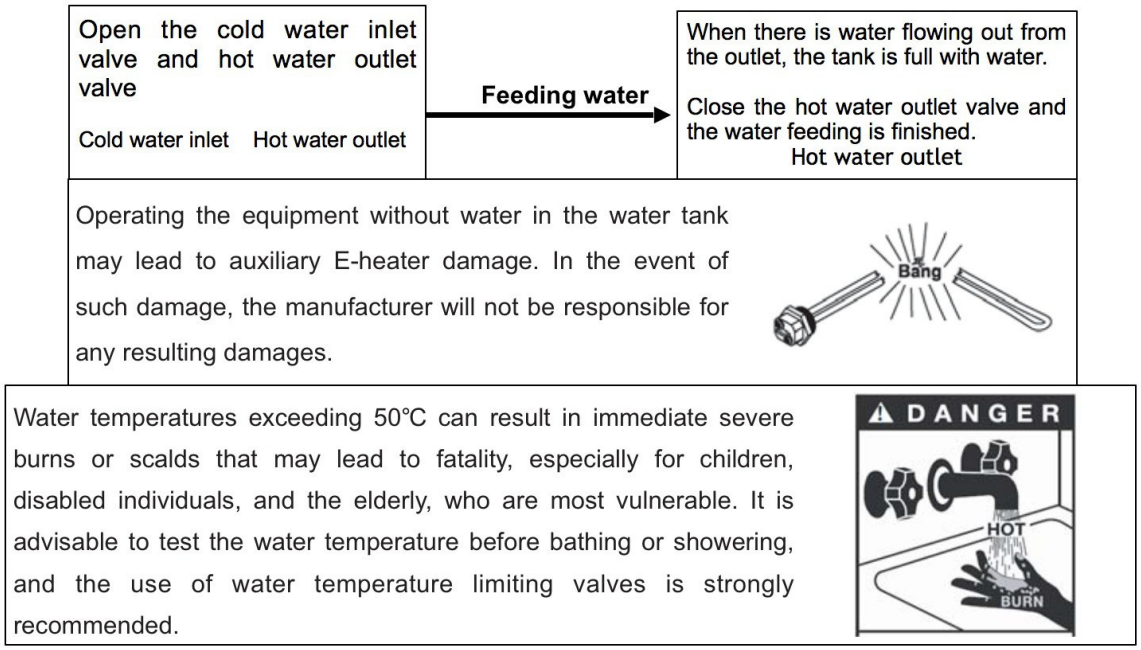
6.3 Electric Wiring Diagram



7.0 METHOD OF APPLICATION

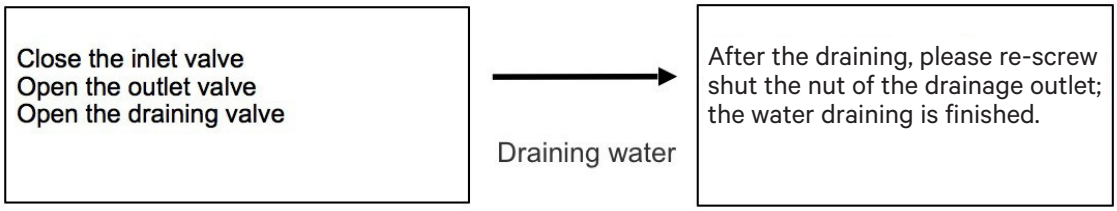
When using the unit, please operate in the following order:

1. **Feeding water:** When using the unit for the first time, or when reusing it after the tank has been emptied, please ensure that the tank is filled with water before connecting it to the power supply. Please refer to the water feeding method in the picture below.



2. **Connect the unit to the power source by plugging it in.** Once connected, the screen will illuminate, indicating that the unit is on. Users can access various modes by simply pressing the corresponding buttons on the screen (refer to the next chapter for details).

3. **Water draining:** before cleaning or moving the unit, please drain out the water in the water heater. Please refer to the picture below for the drainage procedure:



8.0 OPERATING INSTRUCTIONS

8.1 Control System Specifications

(1) Operating Condition

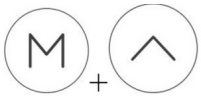
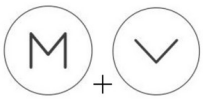
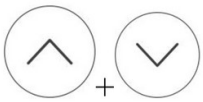
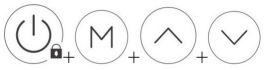
- Voltage: 220V～±10%, 50Hz±1Hz
- Ambient temperature: -7～+43°C
- Storage temperature: -20～+75°C
- Relative humidity: 0～95%RH
- Temperature accuracy: ±1°C

(2) Main Functions

- The display shows both the water temperature and the set temperature, and it also allows you to check the coil temperature, ambient temperature, exhaust temperature, and other relevant data.
- Power cut memory function.
- The clock continues to operate even in the event of a power outage.
- Timing on/off.
- Automatic defrosting.
- Forced defrosting.
- Large LCD display.
- Key-Lock Function.
- Anti-freezing function.
- In the absence of a wired controller or in the event of a malfunctioning wired controller, the system can detect it and control the heat pump to run automatically.

8.2 Controller and Operation

(1) Controller Instructions

SYMBOL	NAME	MEANING
	**On/OFF Key**	1. Power key (press and hold for 1 second) 2. Return key 3. Escape key 4. Unlock key (press and hold for 3 seconds)
	**Clock Key**	1. To adjust the clock, press the key to access the clock settings interface. Then, press it once to toggle between the hour and minute settings. 2. To configure the timer, press and hold the key for 3 seconds. 3. While in timer setup mode, press and hold the key for 3 seconds to cancel the current timer configuration. 4. While in clock setup mode, press and hold the key for 3 seconds to activate or deactivate the weekly function.
	**Mode Key**	1. Press and hold the key for 5 seconds to access the parameter setting interface. 2. Press the key to switch between operation modes. 3. In the parameter query interface, press the key to either enter the value configuration or save the current settings.
	**Up Key**	1. Use the key to adjust temperature settings, parameter values, or alter the hour and minute values. 2. Press and hold the key for 3 seconds to request information on the system status or parameters. 3. Page up
	**Down Key**	1. Use the key to adjust temperature settings, parameter values, or alter the hour and minute values. 2. Press and hold the key for 3 seconds to request information on the system status or parameters. 3. Page down
	**Combination Key**	While the heat pump is operating in heating mode, press and hold both keys for 3 seconds to activate or deactivate the Boost mode, which controls the heating element.
		While the heat pump is in operation, initiate or exit the defrosting mode by pressing and holding both keys for 5 seconds.
		Upon powering on the heat pump, activate the Ventilation mode with high- speed operation by pressing and holding both keys for 5 seconds. To switch to low-speed operation, press and hold the two keys for 3 seconds. Press the keys for 3 seconds once more to exit the Ventilation mode.
		To activate or deactivate the sterilization mode, press and hold the three keys for 5 seconds.
		If the power is turned on within 5 minutes and the heat pump is not activated, you can restore the factory settings by pressing and holding all four keys for 5 seconds.

(2) Symbol Meanings

STATUS	SYMBOL	MEANING
Not lit up		Heat pump OFF or not in heating mode
Lit up		In heating mode
Lit up		Heating element ON
Flash for 1 second		Run in Boost Mode
Flash for 2 seconds		Run in Sterilization Mode
Lit up		Water Temperature
Lit up		Setting Temperature
Lit up		Degree Centigrade
Lit up		Degree Fahrenheit (reserved)
Lit up		Percent (reserved)
Lit up		Low/Middle/High water level(reserved)
Flash		Heat Pump OFF and in Refrigerant Recovery Mode
Lit up		In Defrosting Mode
Lit up		Maintenance Mode
Lit up		Error Present
Lit up		Lock Screen
Lit up		Compressor Running
Lit up		High Fan Speed
Lit up		Low Fan Speed
Flash for 1 second		Ventilation Mode: High Fan Speed
Flash for 2 seconds		Ventilation Mode: Low Fan Speed
Display		Error Code Display
Lit up		Timer ON
Display		In timing ON period
Flash		Setting timing ON
Display		In timing OFF period
Flash		Setting timing OFF
Lit up/ Not bright		Timer number 1/2/3
Display		Week

8.3 Operation Parameter Query

Upon powering on, press and hold the "V" or "Λ" button for 3 seconds to access the status query interface. Use the "V" or "Λ" button to inquire about each status, and press the "⏻" button to exit the status query interface.

NAME	CODE	REMARK
Fluorine cycle/water cycle heat pump	**00**	**0**=water cycle; **1**=fluorine cycle
High pressure switch	**01**	**0**=disconnect; **1**=close
Low pressure switch	**02**	**0**=disconnect; **1**=close
Water flow switch	**03**	**0**=disconnect; **1**=close
EEV value	**04**	Measured value
Evaporator coil sensor	**05**	Measured value
Ambient temperature sensor	**06**	Measured value
Suction temp.	**07**	Measured value
Exhaust temperature sensor	**08**	Measured value
Water inlet temperature (Water tank)	**09**	Display value = measured value + compensation value
Water outlet temperature	**10**	Display value = measured value + compensation value
Compressor	**11**	**0**=stop; **1**=running
4-way valve	**12**	**0**=stop; **1**=running
High-speed fan	**13**	**0**=stop; **1**=running
Low-speed fan	**14**	**0**=stop; **1**=running
Circulation water pump	**15**	**0**=stop; **1**=running
Heating element	**16**	**0**=stop; **1**=running
Compressor working time before defrosting	**17**	Measured value
Link switch	**18**	**0**=Open; **1**=Close
Program code	**19**	Show the code
Dial switch	**20**	**0**=Open; **1**=Close
Dial switch	**21**	**0**=Open; **1**=Close
Phase detecting value	**22**	**0**=OK; **3**=Lack phase; **4**=Phase fault; **5**=No connection

8.4 Operation Instructions

1. Locking and Unlocking:

When the controller is in its regular display mode, and no button is pressed for more than 60 seconds, it will automatically enter a locked state. To unlock it, press and hold the "⏻" button for 3 seconds; you will hear a beep.

2. Powering the Heat Pump On/Off:

While the controller is in its normal display mode, press the "⏻" button for more than 1 second to switch the controller between the ON and OFF modes.

3. Selecting the Operation Mode:

In the normal display mode of the controller, press the "M" button to reveal the current operation mode, which will remain displayed for 8 seconds. Before it disappears, press "M" again to toggle between various operating modes.

The mode name will appear in the clock area for 8 seconds each time you press the "M" key. When unlocked, the area will display the clock, and pressing "M" once will reveal the current operation mode. The default mode for the system is "STAN" mode. When the unit is initially powered on, it will operate in "STAN" mode. Subsequently, the unit will always start in the previously selected mode. To change the mode, please refer to the instructions below:

Operation Modes Chart With Symbols

S.NO.	MODE	SYMBOL	SETTING RANGE
01.	Standard Mode	STAN	15°C ~ 60°C
02.	Economic Mode	ECO	15°C ~ 60°C
03	Hybrid Mode	HYB	15°C ~ 65°C
04	Hybrid Mode 1	HYB1	15°C ~ 70°C
05	Electric Mode	ELE	15°C ~ 70°C

STAN Mode (Standard Mode):

In STAN mode, the controller will display " STAN ". In this mode, only the heat pump operates, and the default water temperature setting is 55°C, with a setting range from 15°C to 60°C. The restart temperature difference is 5°C.

ECO Mode (Economic Mode):

In ECO mode, the controller will display " ECO ". In this mode, only the heat pump operates, and the default water temperature setting is 55°C, with a setting range from 15°C to 60°C. The restart temperature difference is 12°C.

HYB Mode (Hybrid Mode):

In HYB mode, the controller will display " HYb ". In this mode, the heat pump runs until the water temperature reaches 60°C. When the water temperature reaches 60°C, the heat pump stops running, and the heating element continues to heat the water until it reaches the set temperature (if the set value is above 60°C). In this mode, the water temperature setting range is 15°C to 65°C, and the restart temperature difference is 5°C.

HYB1 Mode (Hybrid Mode 1):

Under HYB1 mode, the controller will display " HYb1 ". In this mode, the heat pump runs until the water temperature reaches 60°C. When the water temperature reaches 60°C, the heat pump stops running, and the heating element continues to heat the water until it reaches the set temperature (if the set value is above 60°C). In this mode, the water temperature setting range is 15°C to 70°C, with a default restart temperature difference of 5°C.

ELE mode (Heating Element Mode)

Under ELE mode, the controller will display " ELE ". In this mode, only the heating element functions to heat the water. The water temperature setting range is 15°C to 70°C, and the restart temperature difference is 10°C.

4. Adjusting Water Temperature Setting

Unlock the controller and, in the main interface, use the "V" or "Λ" button to raise or lower the water temperature setting value.

5. Clock Settings:

In the main interface, press the " " button to access the clock setting interface. During clock setting, when the hour part is flashing, press and hold the " " button for 3 seconds to enable or disable the week function. If the week function is enabled, it will display the weekdays (Monday: 1, Tuesday: 2...Sunday: 7). With the week function enabled, in the real-time clock setting interface, press the " " button, and the weekday part of the number will flash first. Use the "V" or " Λ" button to set the weekday of the clock. If the week function is disabled, press the " " button to set the hours first, and the hour part of the number will flash. Use "V" or "Λ" to set the hour of the clock. Once the hour is set press the " " button again, and the minutes will start flashing. Use "V" or "Λ" to set the minutes of the clock. After setting the minutes, press the " " button again to confirm the real-time clock setting and return to the main interface. In the real-time clock setting interface, if there is no button operation for 60 seconds, the current clock setting value will be confirmed, and you will return to the main interface. In the clock setting interface, press the " " button to confirm the clock setting value and return to the main interface.

6. Work Time Settings:

In the main interface, press and hold the " " button for 3 seconds to enable or disable the timer working mode. Then use "V" or "Λ" to select timer No. 1, No. 2, or No. 3 periods. When selecting timer No. 1 period, the symbol will flash. Press and release " " to switch the start time (ON) hour. The hour part of the number will flash. Use "V" or "Λ" to set the hour. After setting the hour, press the " " button again, and the minutes will flash. Use "V" or "Λ" to set the minutes. After setting the minutes, press the " " button again to set the end time (OFF) hour. The hour part of the number will flash. Use "V" or "Λ" to set the hour. After setting the hour, press the " " button again, and the minutes will flash. Use "V" or "Λ" to set the minutes. After setting the minutes, press the " " button again to confirm the setting and move to the next period (No. 2 or No. 3) for timer working settings. The method of setting is the same as above. If the start time of a certain working period is later than the end time, the end time is considered to be on the following day. When all time periods are canceled, it is assumed that the appliance operates throughout the day. When the start time and end time of a certain working period are identical, the time period is not considered. With the week function enabled, the timing work cycle is weekly. If the week function is disabled, the cycle time is 24 hours.

7. Forced Defrosting:

In the normal display mode, with the heat pump ON, simultaneously press the “M” and “V“ buttons for more than 5 seconds to activate or deactivate the “Forced Defrost” function. The symbol “  ” will illuminate when “Forced Defrost” is activated.

8. Boost Mode:

When the controller is in the standard display mode, and the heat pump is in heating mode, press both the “M” and “Λ” buttons simultaneously for more than three seconds to activate or deactivate the boost mode. When the boost mode is enabled, the heating element turns on, and the symbol “  ” flashes for one second before remaining lit. When the heat pump water heater reaches the set temperature, the heating element turns off, and the symbol “  ” flashes, indicating that it is operating in boost mode. Exiting the boost mode occurs when the heat pump is turned off.

9. Sterilization:

Manual Sterilization Mode:

In the normal display mode, with the heat pump ON, press and hold the “  ” “  ” and “V”, buttons together for more than 5 seconds to initiate water tank sterilization. The symbol “  ” will flash for 2 seconds before staying lit, and the heat pump will heat the water to 60°C.

Automatic Sterilization:

In automatic sterilization, the symbol “  ” will flash for 2 seconds before staying lit, and the heat pump will heat the water to 60°C. Automatic sterilization occurs every 7 days.

9.0 TROUBLESHOOTING

ERROR CODE	ERROR DESCRIPTION	POSSIBLE CAUSE	SOLUTION
E05	High pressure protection	High pressure switch is broken / Connection is loose	Customer service to identify the reasons
E09	Communication failure	Signal wire connection loose / There is Strong magnetic field / PCB is broken / Signal wire is broken	Replace the controller communication line (mainboard COM2 port)
E12	Exhaust temp. too high	Lack of refrigerant / Fluorine system leak	Check then add refrigerant
E14	Tank temp. sensor failure	Sensor failure / Connection is loose	Replace the T4temp. sensor
E16	Coil temp. sensor failure	Sensor failure/Connection is loose	Replace the T1temp. sensor
E18	Exhaust temp. sensor failure	Sensor failure/Connection is loose	Replace the T3temp. sensor
E21	Ambient temp. sensor failure	Sensor failure/Connection is loose	Replace the T2temp. sensor
E29	Suction temp. sensor failure	Sensor failure/Connection is loose	Replace the T5temp. sensor (***Note:*** refer to the diagram, T1+T2+T3+T5 are in group parts)

10.0 PILOT RUN OF HEAT PUMP

Before initiating the heat pump's pilot run, please ensure the following:

1. The heat pump has been properly installed and is in good condition.
2. All pipes and wires have been correctly assembled.
3. The drainage system is functioning smoothly.
4. The insulation materials are in place and intact.
5. The ground wire has been securely installed.
6. The power voltage matches the rated voltage of the heat pump.
7. The inlet and outlet air ports are free from obstructions.
8. Any air trapped in the water pipes has been purged, and all valves are open.
9. The leakage protection device is operational.
10. The input water pressure is below 0.15 MPa.

11.0 MAINTENANCE AND SOLUTIONS

I. Maintenance

1. Frequently check power plug and sockets and make sure both of them have been connected well and reliably, and have no over-heating effect.
2. When not used for a long time, especially where temperature is below 0°C, water filled in the water tank must be drained out to prevent from damaging inner tank. Draining instructions in manual.
3. To maintain the heat pump in a long-term, highly efficient operational condition, we recommend cleaning the inner tank every six months to eliminate accumulated sediment. Please adhere to the following guidelines for inner tank cleaning:

   (1) Turn off power supply of heat pump.

   (2) Turn off cold water inlet valve, and open up hot water tap.

   (3) Connect drainage water with drain outlet through a soft pipe, (temperature resistance of pipe must be 93°C, otherwise please use cold water inlet valve to keep the water cool in pipe).

   (4) Turn on drainage water port of heat pump, clean water tank attached to inner tank. You may need to wash inner tank many times to clear sediment.

   (5) Turn off drainage water port, re-fill water into inner tank and switch on power supply.
4. Each device is equipped with an anode rod, which gradually depletes over time while safeguarding the inner tank and extending its lifespan. In certain water conditions, a reaction can occur between the anode rod and water, potentially leading to accelerated corrosion and leaks in the hot water system once the anode rod is fully depleted. We recommend inspecting the insulation materials annually, and in the event of an exhausted anode rod, you can contact your local service centre or a specialized technical department for a replacement.
5. When using the unit for an extended supply of hot water, we recommend that users lower the preset temperature setting. This action can reduce heat loss, prevent scalding, and, in turn, help conserve more electrical energy and extend the unit's operational lifespan.
6. Cleaning the filter every month is essential to ensure optimal heating performance.
7. When using this system in areas with temperatures below 0°C, it is advisable to implement appropriate measures to safeguard the pipes, especially if the heat pump is installed outdoors. This precaution helps protect the connection pipes and ensures the system can function efficiently.

II. Specific Guidelines for Service Personnel

1. Area Inspection:

Before commencing work on systems containing **flammable refrigerants**, it is imperative to perform safety checks to minimize the risk of ignition. Steps 2 to 6 must be completed before any work can be conducted on the **refrigerating system**.

2. Work Procedure:

Work must be carried out following a controlled procedure to minimize the possibility of a flammable gas or vapour being present during the work.

3. General Work Environment:

All maintenance personnel and individuals working in the vicinity must be informed about the nature of the work being performed. Working in confined spaces should be avoided.

4. Detection of Refrigerant Presence:

An appropriate refrigerant detector must be used to check the area before and during work to ensure that technicians are aware of potentially toxic or flammable substances. The leak detection equipment used should be suitable for all applicable refrigerants, meaning it should be non-sparking, adequately sealed, and fit-for-purpose.

5. Availability of Fire Extinguisher:

If any high temperature work is to be carried out on the refrigeration equipment or any related parts, suitable fire extinguishing equipment should be readily available. A dry powder or CO2 fire extinguisher should be placed near the working area.

6. Avoidance of Ignition Sources:

No person working on a refrigeration system, particularly one involving exposed pipes, should use any sources of ignition that could pose a fire or explosion risk. All potential ignition sources, including smoking, should be kept at a safe distance from the installation, repair, removal, and disposal sites where refrigerant may be released into the surroundings. “No Smoking” signs should be prominently displayed.

7. Adequate Ventilation:

Ensure that the area is well-ventilated or open before accessing the system or performing any high temperature work. Adequate ventilation should be maintained throughout the work to safely disperse any released refrigerant, preferably expelling it externally into the atmosphere.

8. Inspection of Refrigeration Equipment:

When changing electrical components, ensure they are suitable for their intended purpose and meet the correct specifications. Always adhere to the manufacturer’s maintenance and service guidelines. If uncertain, consult the manufacturer’s technical department for assistance.

The following checks should be conducted for installations using **flammable refrigerants**:

- Confirm that the **refrigerant charge** matches the room size where the refrigerant-containing components are installed.
- Verify that ventilation equipment and outlets are functioning correctly and free from obstructions.
- If an indirect refrigerating circuit is used, check for the presence of refrigerant in the secondary circuit. Ensure that equipment markings and signage are visible and legible. Correct any illegible markings or signs. Install refrigeration pipes or components in positions where they are unlikely to be exposed to substances that may corrode refrigerant-containing parts, unless the components are inherently resistant to corrosion or adequately protected against it.

9. Inspection of Electrical Components

Repair and maintenance of electrical components should include initial safety checks and inspection procedures for the components. If a fault is identified that could compromise safety, electrical supply should not be connected to the circuit until the issue is resolved satisfactorily. If immediate correction of the fault is not possible but continued operation is necessary, an appropriate temporary solution must be implemented. This should be reported to the equipment owner to keep all parties informed.

Initial safety checks should cover:

- Ensuring capacitors are discharged safely to prevent sparking.
- Confirming that no live electrical components or wiring are exposed during charging, recovery, or system purging.
- Verifying continuity of earth bonding.

III. Repairs to Sealed Components

1. During repairs to sealed components, all electrical supplies must be disconnected from the equipment before any sealed covers or similar components are removed. If it's absolutely essential to maintain an electrical supply during servicing, a continuously operating leak detection system must be placed at the most critical point to warn of potential hazards.
2. Particular attention should be paid to ensure that working on electrical components does not alter the casing in a way that affects the level of protection. This includes avoiding damage to cables, connections, deviations from original specifications, seal damage, improper gland fitting, and so on. The equipment should remain securely mounted, and seals or sealing materials should not have degraded to the point where they no longer prevent the entry of flammable substances or gas. Replacement parts should adhere to the manufacturer's specifications.

IV. Repair to Intrinsically Safe Components

Avoid applying permanent inductive or capacitance loads to the circuit without confirming that it will not exceed the permissible voltage and current limits for the equipment in use. Ensure the device is operated under safe and rated conditions. Only replace parts with safety-approved components specified by the manufacturer to prevent potential refrigerant leaks from igniting.

V. Cabling

Inspect cabling to ensure it will not be exposed to wear, corrosion, excessive pressure, vibration, sharp edges, or other adverse environmental factors. The inspection should also consider the effects of aging or continuous vibration from sources such as compressors or fans.

VI. Detection of Flammable Refrigerants

Under no circumstances should potential ignition sources be used to search for or detect refrigerant leaks. The use of a halide torch (or any other detector employing an open flame) is strictly prohibited.

Acceptable leak detection methods for all refrigerant systems include electronic leak detectors, though their sensitivity may require recalibration when dealing with **flammable refrigerants**. These detectors should not pose a potential ignition risk and must be suitable for the refrigerant in use. Leak detection equipment should be set to a percentage of the Lower Flammable Limit (**LFL**) of the refrigerant and calibrated for the specific refrigerant in question. The appropriate gas percentage (maximum 25%) should also be confirmed.

Leak detection fluids can also be used with most refrigerants, but detergents containing chlorine should be avoided as they may react with the refrigerant and corrode copper pipework. Examples of leak detection fluids include the bubble method and fluorescent agents.

If a leak is suspected, all open flames should be extinguished or removed. If a refrigerant leak requiring brazing is discovered, all refrigerant must be recovered from the system or isolated (using shut-off valves) in a part of the system away from the leak.

VII. Disassembly and Evacuation

When accessing the refrigerant circuit for repairs or any other purpose, standard procedures must be followed. However, for **flammable refrigerants**, it's crucial to adhere to best practices due to their flammability.

The following steps should be observed:

1. Remove the refrigerant.
2. If required, purge the circuit with inert gas (not required for A2L refrigerants).
3. If required, evacuate the system (not required for A2L refrigerants).

4. If required, purge with inert gas again (not required for A2L refrigerants).
5. Cut or braze to open the circuit.

The **refrigerant charge** should be recovered into appropriate recovery cylinders. For appliances using **flammable refrigerants** other than **A2L refrigerants**, the system should be purged with oxygen-free nitrogen to ensure its safety for handling **flammable refrigerants**. This process may need to be repeated multiple times. Do not use compressed air or oxygen for purging refrigerant systems.

For appliances using **flammable refrigerants** other than **A2L refrigerants**, purging should involve breaking the vacuum in the system with oxygen-free nitrogen until the desired working pressure is reached. Then, vent it to the atmosphere and pull it down to a vacuum. This process should be repeated until no refrigerant remains in the system. When the final charge of oxygen-free nitrogen is used, vent the system to atmospheric pressure before any brazing work can occur. It's crucial to ensure that the vacuum pump outlet is not located near **potential ignition sources**, and ventilation should be available.

VIII. Charging Procedures

In addition to standard charging procedures, the following requirements must be followed:

- Ensure that charging equipment is not contaminated with different refrigerants. Keep hoses or lines as short as possible to minimize refrigerant content.
- Store cylinders in accordance with the provided instructions. Ground the refrigerating system before charging with refrigerant. Label the system once charging is completed, if not already labeled. Exercise extreme caution to avoid overfilling the refrigerating system.
- Before recharging, pressure-test the system with the appropriate purging gas. The system should also undergo a leak test after charging but before commissioning. A follow-up leak test should be performed before leaving the site.

IX. Decommissioning

Before proceeding with this procedure, technicians must have a comprehensive understanding of the equipment and its details. Safe recovery of all refrigerants is recommended best practice. Before starting the task, take an oil and refrigerant sample in case analysis is required before reusing recovered refrigerant. Ensure electrical power is available before commencing the task.

a. Familiarize yourself with the equipment and its operation.

b. Isolate the system electrically.

c. Before starting the procedure, make sure:
    - Mechanical handling equipment, if needed, is available for handling refrigerant cylinders.
    - All personal protective equipment is available and worn correctly.
    - The recovery process is supervised by a competent person.
    - Recovery equipment and cylinders conform to the appropriate standards.

d. If possible, pump down the refrigerant system.

e. If a vacuum is not possible, create a manifold to remove refrigerant from various parts of the system.

f. Ensure the cylinder is placed on the scales before recovery.

g. Start the recovery machine and operate it as per the instructions.

h. Do not overfill cylinders (no more than 80% liquid charge volume).

i. Do not exceed the maximum working pressure of the cylinder, even temporarily.

j. Once the cylinders are correctly filled, promptly remove them and close all isolation valves on the equipment.

k. Recovered refrigerant should not be charged into another **refrigerating system** unless it has been cleaned and checked.

X. Labeling

Equipment must be clearly labelled to indicate that it has been decommissioned and emptied of refrigerant. The label should include the date and a signature. For appliances containing **flammable refrigerants**, ensure that there are labels on the equipment indicating the presence of **flammable refrigerant**.

XI. Refrigerant Recovery

When extracting refrigerant from a system, whether for servicing or decommissioning, it is considered best practice to ensure the safe removal of all refrigerants.

- During the transfer of refrigerant into cylinders, use only appropriate refrigerant recovery cylinders. Make sure you have the correct number of cylinders to hold the entire system charge. All cylinders used should be designated for the recovered refrigerant and appropriately labeled (e.g., specialized cylinders for refrigerant recovery). These cylinders should have functioning pressure-relief valves and shut-off valves. Before recovery, empty recovery cylinders should be evacuated, and if possible, cooled.
- The recovery equipment must be in good working order and come with a set of instructions for its use. It should be suitable for recovering all relevant refrigerants, including, when applicable, **flammable refrigerants**. Additionally, calibrated weighing scales should be available and in good working condition. Hoses should be equipped with leak-free disconnect couplings and be in excellent condition. Before using the recovery machine, ensure that it is in satisfactory working condition, has been properly maintained, and that any associated electrical components are sealed to prevent ignition in case of a refrigerant release. Consult the manufacturer if there are any doubts.
- The recovered refrigerant should be returned to the refrigerant supplier in the appropriate recovery cylinder, and the necessary waste transfer documentation should be arranged. Never mix refrigerants in recovery units, especially not in cylinders.
- If compressors or compressor oils need to be removed, ensure that they have been appropriately removed to guarantee that no **flammable refrigerant** remains in the lubricant. The removal process should be completed before returning the compressor to the suppliers. Only electric heating should be used to accelerate this process on the compressor body. When draining oil from a system, it must be done safely.

XII. Error & Approaches

ERROR	REASON	APPROACH
The outlet water is cold. The screen is dark.	The plug is not plugged in properly. The temperature controller is on the lowest temperature control state. The temperature controller is damaged. The circuit board of the indicator lamp is damaged.	Plug in properly. Set the temperature of the controller to higher temperature. Inform the service department.
No water out from the hot water outlet.	The tap water is cut off. The water pressure is too low. The tap water inlet valve is closed.	Waiting for tap water to come back on. Wait and use when the water pressure is raised. Open the tap water inlet valve.
Water leakage.	Loose connection points between pipes. Inlet water pressure is exceeding 850 KPA.	Tighten the connecting points. Connect water pressure regulator 500KPA.

12.0 AFTER-SALE SERVICE

If your hot water heater cannot operate normally, please turn off the unit and cut off the power supply at once, then contact our service center or technical department.

13.0 FAQ

What maintenance does the HeatStream need?

The heat pump water heater is designed to not require any system maintenance other than that detailed in this Owner's Manual. The PTR valve and ECV should be checked for adequate performance or replaced at intervals not exceeding 5 years or less if local regulations apply. These relief valves should be operated by pulling their lever at least once every 6 months. Personally inspecting or servicing any other part of the system is not recommended.

Every 5 years you should contact the local service agent or licensed plumber to replace all safety valves and Magnesium Anodes to ensure continued system life and operational safety.

In locations where the potable water has a TDS greater than 600 ppm, this service is recommended every 3 years.

What safety features does the HeatStream have?

If installed correctly, the HeatStream system has the following safety features:

- An over-temperature energy cut-out thermostat.
- A Pressure & Temperature Relief (PTR) valve and Expansion Control Valve (ECV).
- A 3 minute delay from powering the system to prevent any damage from electrical surges.

What should I do to the HeatStream if I go away on holiday?

Leave the system as per normal. The HeatStream has built in safety features which will prevent Legionnaires' disease from occurring while you are away. The amount of electricity used by the system while there is no hot water being used is minimal.

FLAMMABLE

If the hot water system is not used for two weeks or more, a quantity of highly flammable hydrogen gas may accumulate in the water heater. To dissipate this gas safely, it is recommended that a hot tap be turned on for several minutes or until discharge of gas ceases. Use a sink, basin, bath outlet, but not a dishwasher, clothes washer or other appliance. During this procedure, there must be no smoking, open flame or any electrical appliance operating nearby. If hydrogen is discharged through the tap, it will probably make an unusual sound as with air escaping.

14.0 WARRANTY – AUSTRALIA AND NEW ZEALAND

5 YEAR SYSTEM + 2 YEAR LABOUR WARRANTY

The warranty applies to Primsal HeatStream Heat Pumps installed exclusively in single-family residences and is specifically designed for individuals who acquire the heat pump as consumers, in accordance with the applicable Consumer Law. Commencing from the date of heat pump installation, the warranty terms become effective. To validate the product warranty period, you have the option to request a copy of the compliance certificate that accompanied the installation.

14.1 Warranty Duration

This warranty guarantees the defect-free performance of the following heat pump components for specified periods, commencing from the installation date:

Tank Cylinder: 5 years for product, 2 years for labour.
Compressor: 3 years for product, 1 year for labour.
All other components supplied, including valves, elements, thermostats, and sacrificial anodes: 1 year.

No warranty is extended to components not supplied, such as tempering valves and cold water valve assemblies used by installers. Subject to the conditions and exclusions meticulously outlined in this warranty, the owner is afforded the option to have a defective heat pump component repaired or replaced under this warranty, as promptly as possible upon reporting the defect.

14.2 Registration of Consumer Warranty

For a streamlined claims process under this warranty, consumers are strongly encouraged to complete all requisite information on the provided warranty form and submit it to the designated address. Alternatively, warranty registration can be conveniently completed online, via the web address indicated on the form.

14.3 Procedure for Warranty Claims

Upon identifying a suspected defect:

- Contact the installer or supplier if the suspected defect pertains to the heat pump's installation or any components not covered by this warranty.
- Reach out to your distributor during the relevant warranty period if the suspected defect concerns components covered by this warranty. Please take note that, for a successful warranty claim, the heat pump's serial number must be supplied. Failure to provide the serial number may lead to delays or the denial of the service request.

14.4 Specific Exclusions

Primsal assumes no responsibility under this warranty, within the bounds of the law, in the following situations:

- If any heat pump component has been installed, repaired, relocated or altered by an individual lacking the requisite qualifications approved by Primsal, in adherence to installation and maintenance instructions, and in compliance with local and statutory requirements.
- For loss or damage arising from installation errors or defects.
- If corrosion manifests due to the failure to replace the anode in accordance with installation and maintenance guidelines.
- If specific valves and components (e.g., cold water expansion valve, check valve, strainer) are not installed in locations where mains pressure may exceed 500kPa.

- For damage incurred through accidents, natural events, or other circumstances beyond the control of Primsal.
- In cases where the inner cylinder collapses due to incorrect filling or commissioning procedures.
- For components not provided by Primsal but incorporated into the heat pump's installation (e.g., tempering valves, cold water valve assemblies).
- For warranties, whether implied or extended, not formally offered by Primsal.
- For external labor or equipment expenses (e.g., cranes and lifting devices) required for repairs.
- For costs incurred to rectify issues not directly linked to the heat pump water heater.
- For travel costs exceeding 30 kilometers for service agents.
- For consequential losses or damages stemming from defects that can be lawfully excluded.
- For any other concerns not directly tied to defects in components supplied by Primsal, including but not limited to:
    a. Damage resulting from incorrect commissioning.
    b. Leakage from non-Primsal valves.
    c. Leakage from the pressure temperature relief valve when water pressure or temperature surpasses the limits detailed in the installation and maintenance instructions.
    d. Occurrence of water hammer.
    e. Presence of external rust on the storage tank.
    f. Inadequate hot water supply due to various factors, such as the consumer's refusal to use the auxiliary booster, malfunctioning tempering or mixing valves, erroneous installation, undersized water heater, restricted water flow due to water-saving fixtures or appliances, blown fuses, tripped electrical switches, or subpar household electrical wiring, as well as limited water flow caused by the accumulation of debris in the water strainer.

14.5 Important Note

This warranty offers advantages in addition to any other rights and remedies accessible to consumers under applicable laws governing the goods or services covered by this warranty.

WARRANTY REGISTRATION

CUSTOMER'S DETAILS

NAME:	
MODEL:	
INSTALLATION DATE:	/ /

INSTALLER'S DETAILS

NAME:	
ADDRESS:	
PHONE NUMBER:	
EMAIL ADDRESS:	
LICENSE NUMBER:	

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