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PHNXX



# End-to-End Smart Ecosystem



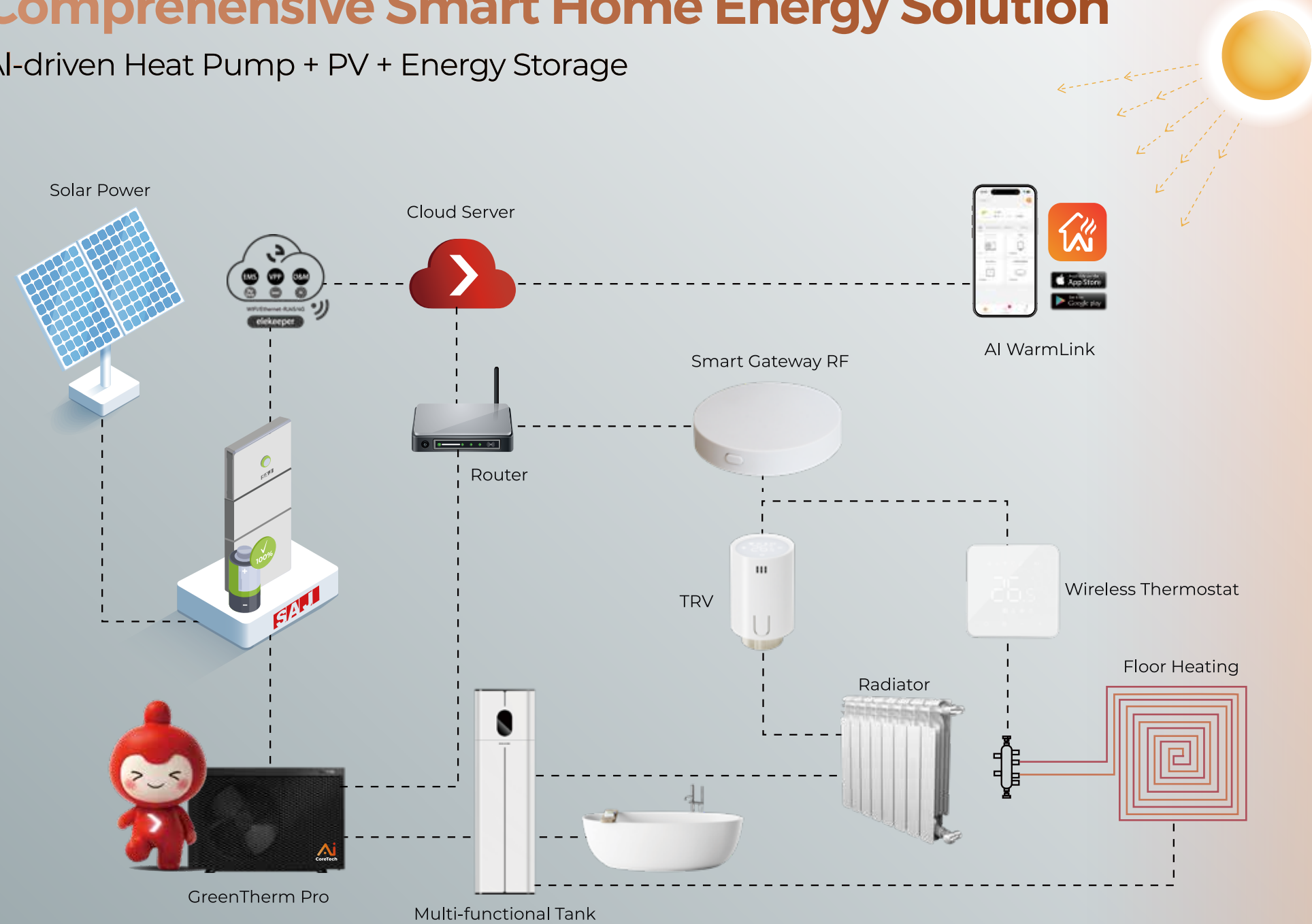
# AI Core Tech

- Real-Time Optimization
- Dynamic Grid Adaptation
- User-Centric Automation
- Data Asset Analysis
- Fault Auto Intervention



# Comprehensive Smart Home Energy Solution

AI-driven Heat Pump + PV + Energy Storage



# AI Energy Management

- **Big Data Intelligence:** Refined by real-time data from 25,000+ heat pumps, our AI model delivers a field-proven algorithm that maximizes COP in all climates.
- **Dynamic Grid Adaptation:** Seamlessly integrating European dynamic electricity tariffs, the system automatically adjusts compressor frequency to maximize COP and drastically reduce running costs.
- **User-Centric Automation:** Intelligent scheduling based on user's habit to reduce unnecessary cycling, extending the lifespan of the unit. Intelligent scheduling based on habit recognition reduces unnecessary cycling, enhancing comfort while extending the unit's lifespan.



# Industry First AI Smart Assistant

## PHNIX NIKIGPT Interaction



Device Control.

Operate and adjust the heat pump via the NIKI voice assistant ●

Conduct simple troubleshooting and provide straightforward solutions ●

I'm getting an E03 error.

Hi~ I am NIKI. What can I do for you?

I'll have a friend coming over later—please set it to a comfortable temperature.

Please set the heat pump in energy saving mode.



**Device Control**  
About Device Control



**Product Q&A**  
User manual, malfunction



AI WarmLink



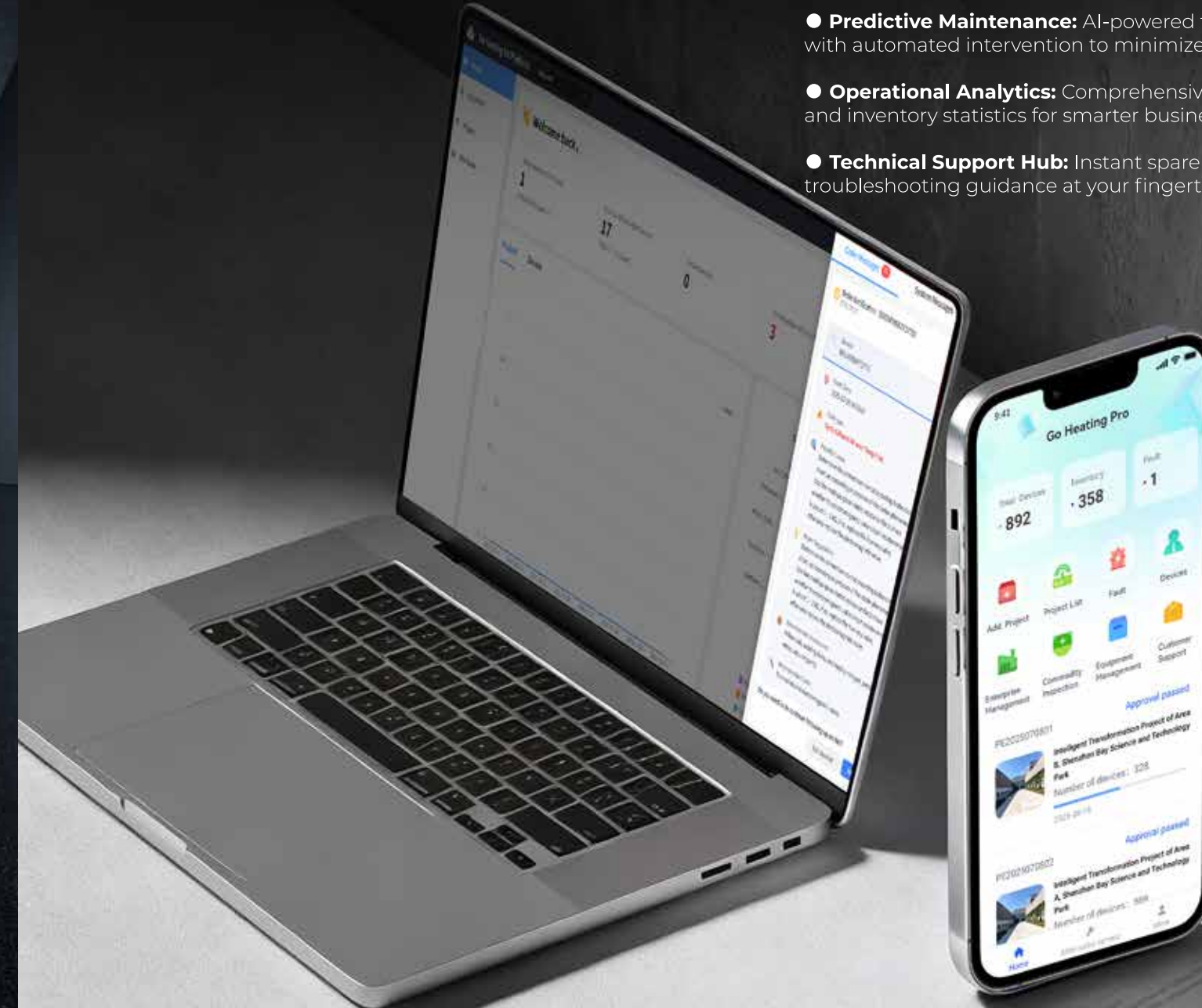
# AI-driven Service Ecosystem

## PHNIX IOT Platform

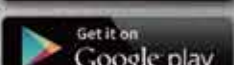
● **Predictive Maintenance:** AI-powered fault forecasting (1 hour in advance) with automated intervention to minimize downtime and onsite visits.

● **Operational Analytics:** Comprehensive data asset analysis, fault trends, and inventory statistics for smarter business decision-making.

● **Technical Support Hub:** Instant spare parts inquiry and step-by-step troubleshooting guidance at your fingertips.



Go Heating Pro



# EVI Technology

## 30% Increase in COP

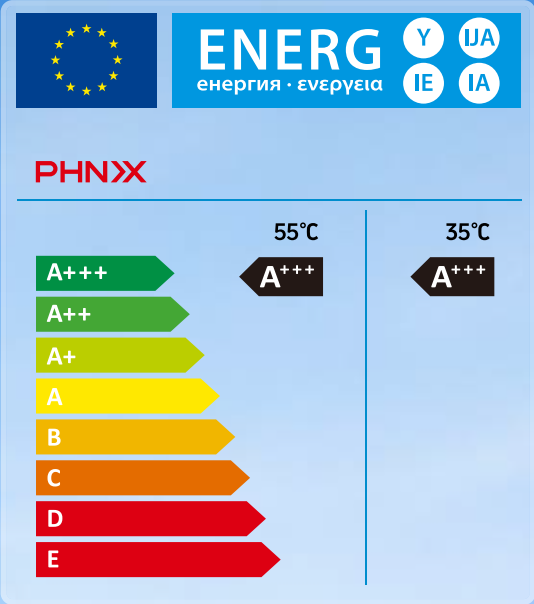
Equipped with the latest EVI compressor, GreenTherm Pro delivers high energy efficiency and stable performance even under extreme cold conditions.

- **High Outlet water temperature:** Up to 80°C
- **Ultra-Low Ambient Operation:** Stable performance down to -30°C
- **Superior Performance:** GreenTherm Pro achieves the A+++ energy label at both 35°C and 55°C water temperatures. This ensures maximum energy savings and full compliance with the strictest European efficiency standards.

Ambient Temp.  
-30°C

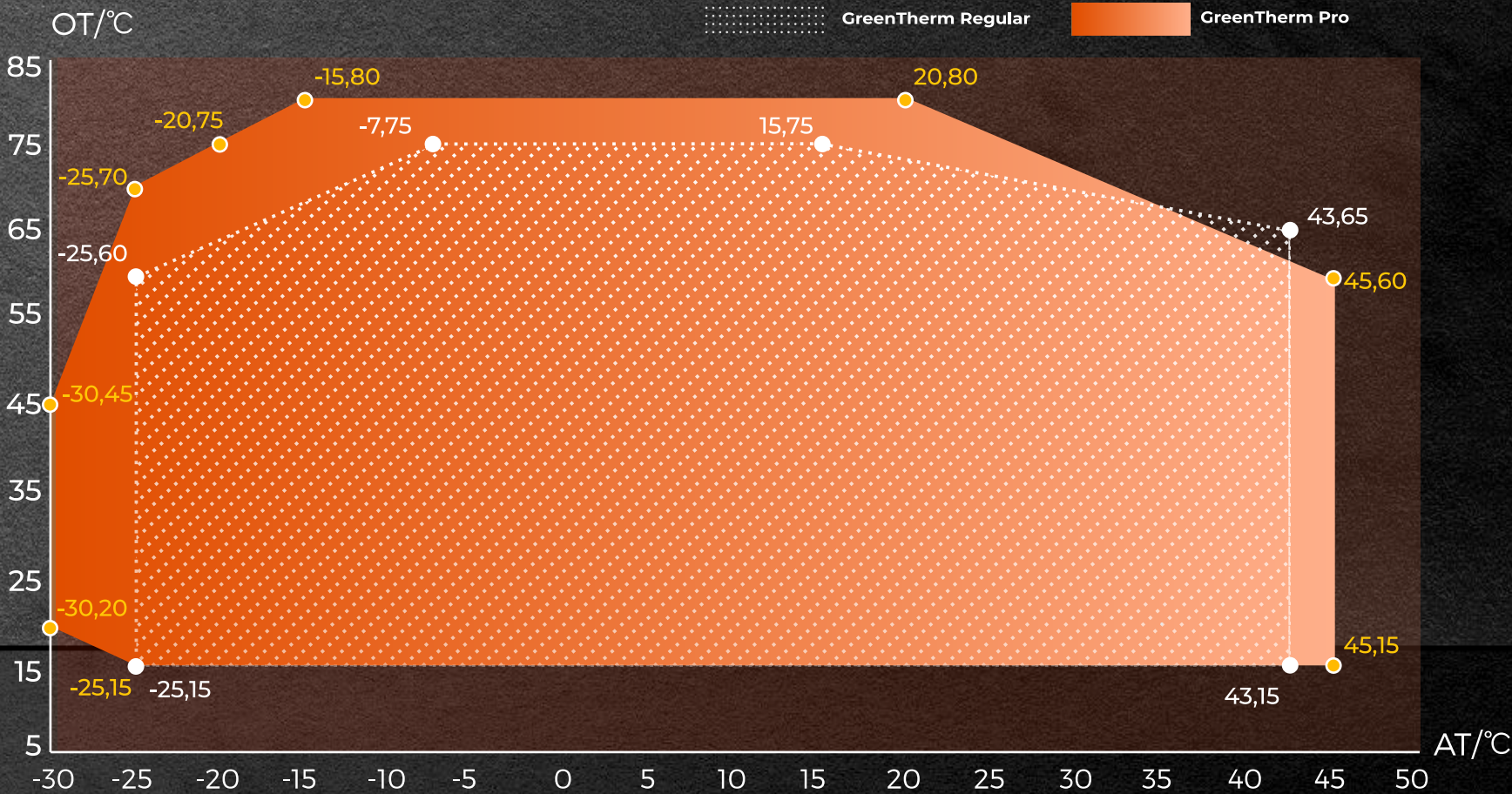


Water up to  
80°C



# Operating Envelope

- **Expanded Capacity Range:** PHNIX's first 4 kW & 7 kW EVI residential heat pumps, covering a wider range of household applications
- **Jointly Developed Drive System:** Co-developed with GMCC, the back-EMF motor is precisely matched to EVI operating conditions, balancing high performance with long-term reliability



# Optimized Water Circuit Design

**5kPa** Lower on Water Resistance

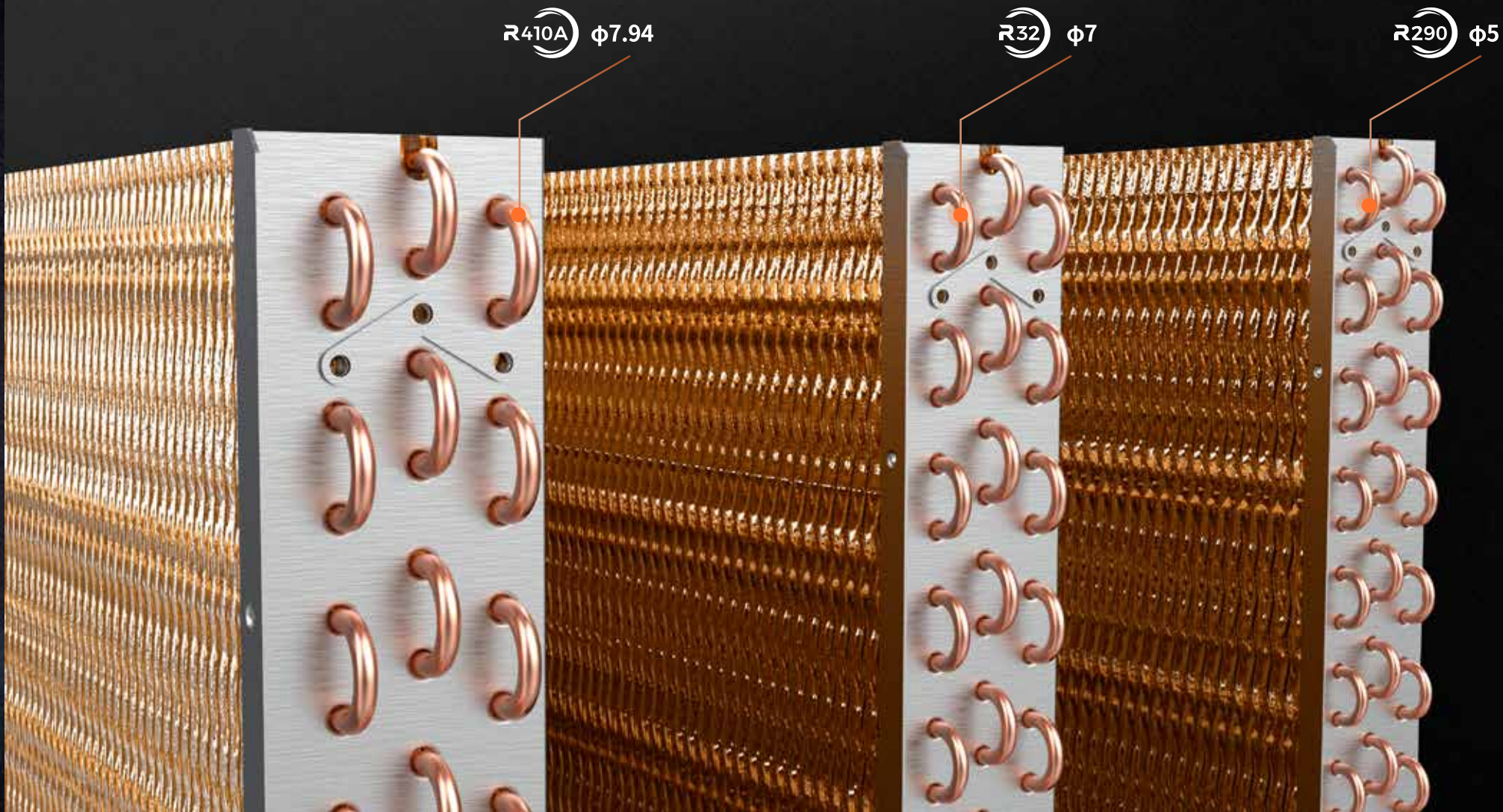
By retaining only one 90° elbow in the water circulation loop, GreenTherm Pro reduces water resistance by up to 5 kPa, enhancing water-side heat exchange efficiency and overall heating performance.



# Optimized Heat Exchanging System Design

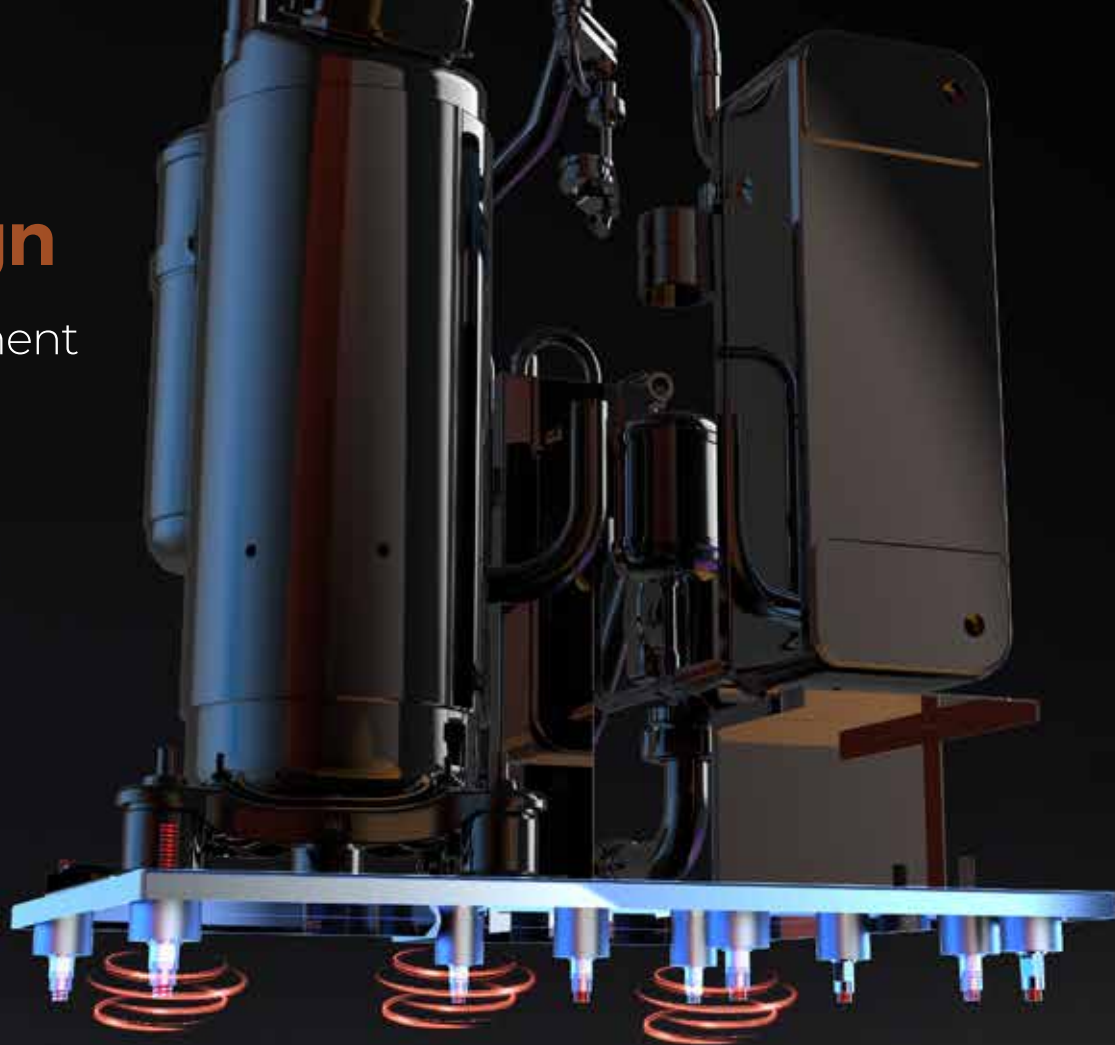
**φ5** Fin Tube Design | 20% Increase in COP

GreenTherm Pro is the first residential heat pump to apply φ 5 fin tubes, delivering a higher heat transfer coefficient, achieving up to a 20% increase in COP.



# 31dB(A) Ultra-Quiet Design

Compliant with the requirement  
of German TA Lärm.



## Full Suspension Technology for Compressor and Assembly Compartment

- Effectively isolates vibration transmission



## Composite Sound-Absorbing Insulation

- Suppresses both high-frequency tonal noise and low-frequency vibration

## Intelligent Quiet Modes

- One-Key Mute Mode and Night Mode available
- Users can freely set quiet operation periods based on daily habits



# R290 Leak Protection

## R290 Leak Detection

The system monitors refrigerant concentration in real time. If levels exceed safety thresholds, it triggers an instant alert and automatically stops operation. Notifications are simultaneously sent to both the controller and the APP.



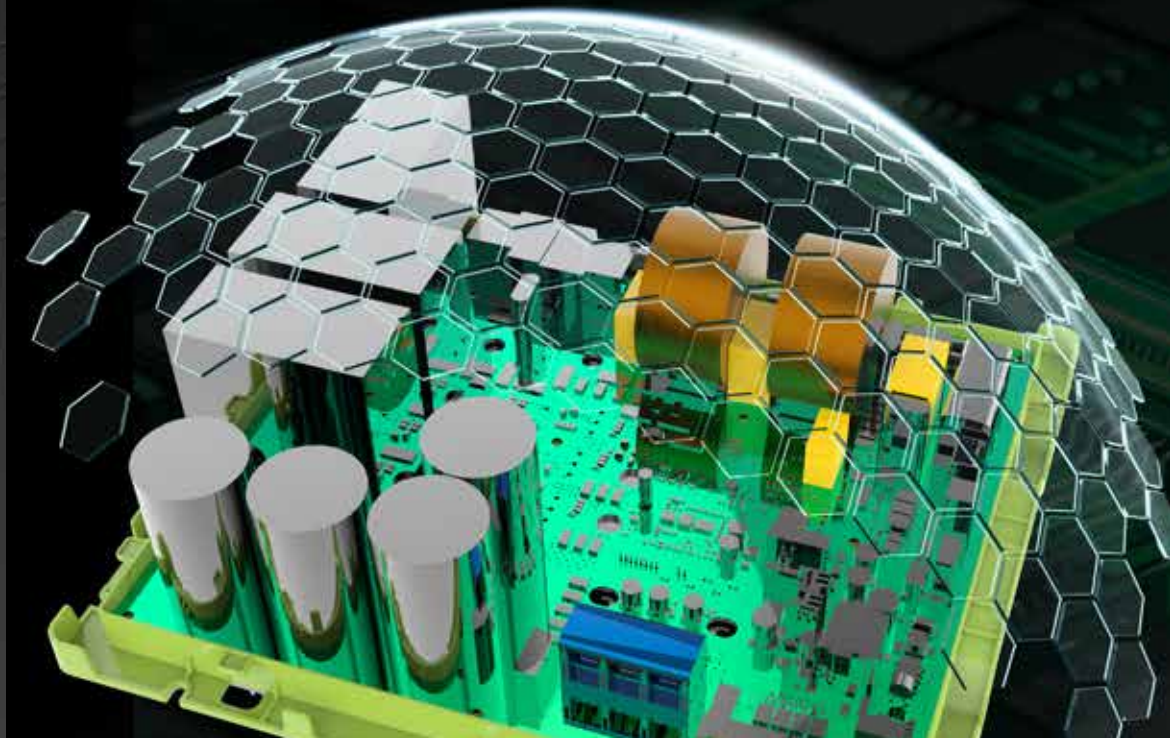
## Gas Separator

The built-in gas separator efficiently captures and vents micro-bubbles from the water circuit into the atmosphere. This safety barrier prevents R290 from entering indoor spaces, while ensuring smooth water flow for higher efficiency and quieter operation.



## Potting for Board Protection

After glue filling, it offers 3-fold protection, including resistance to moisture, insect, and corrosion, as well as protection against short circuits



# Multi-Level Anti-freezing Protection

Active frost protection is the foundation of reliable winter heating

● **Intelligent Real-time Monitoring:** Built-in sensors continuously track system water temperatures. In low-ambient conditions, the unit automatically activates protective measures to prevent internal components and pipelines from freezing.

● **Two-Stage Safety Logic:** If the water temperature drops to the preset threshold, the system triggers Level 1 Protection. Should the temperature continue to fall, Level 2 Protection is instantly activated to prevent frozen damage and ensure long-term hardware integrity.



Exhaust Protection



Over Current Protection



Over Voltage Protection



Low Pressure Protection



High Pressure Protection



High Water Temperature Protection



Low Voltage Protection



Low Water Flow Protection

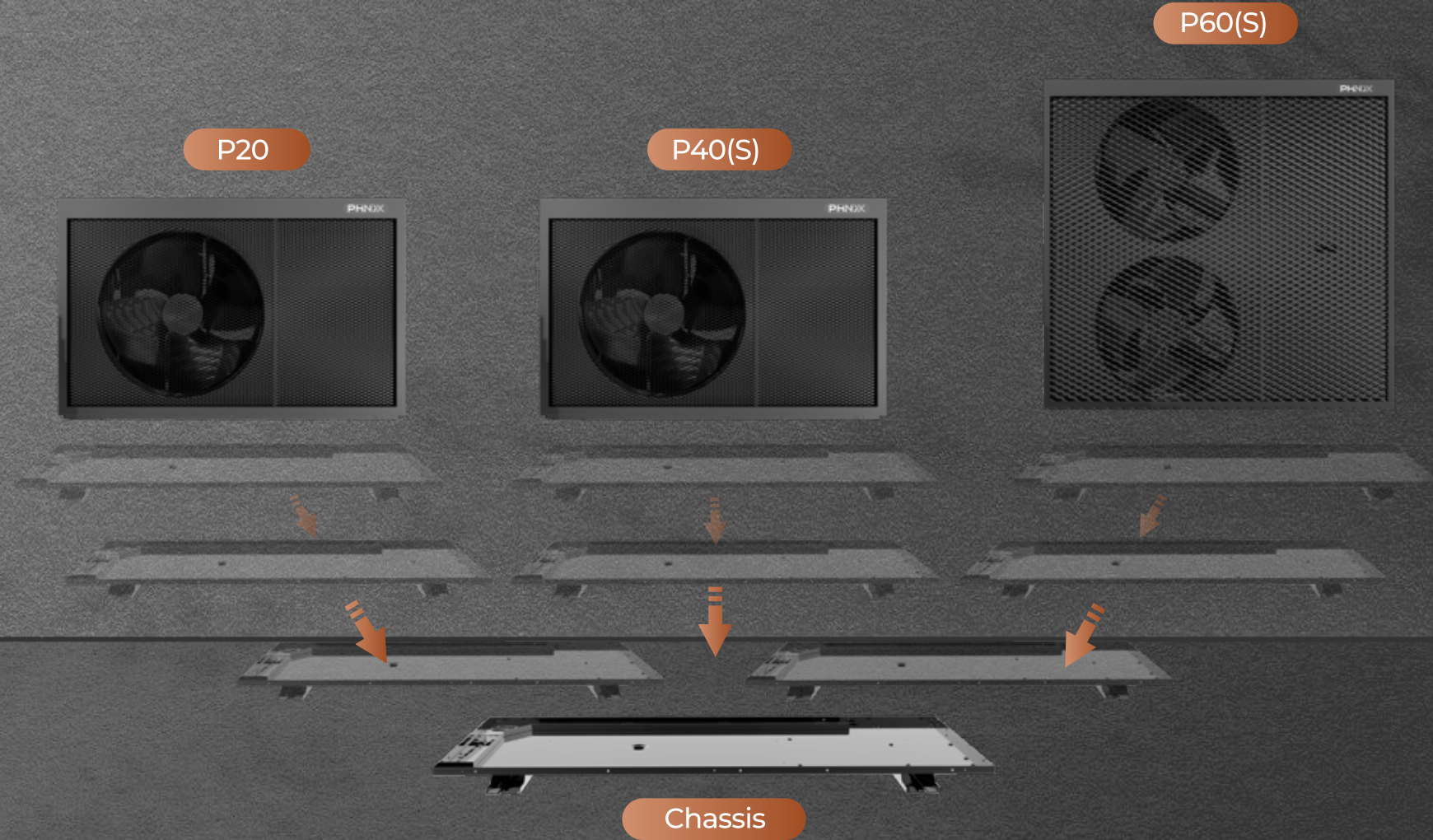


Low Ambient Temperature Protection

# Friendly Installation

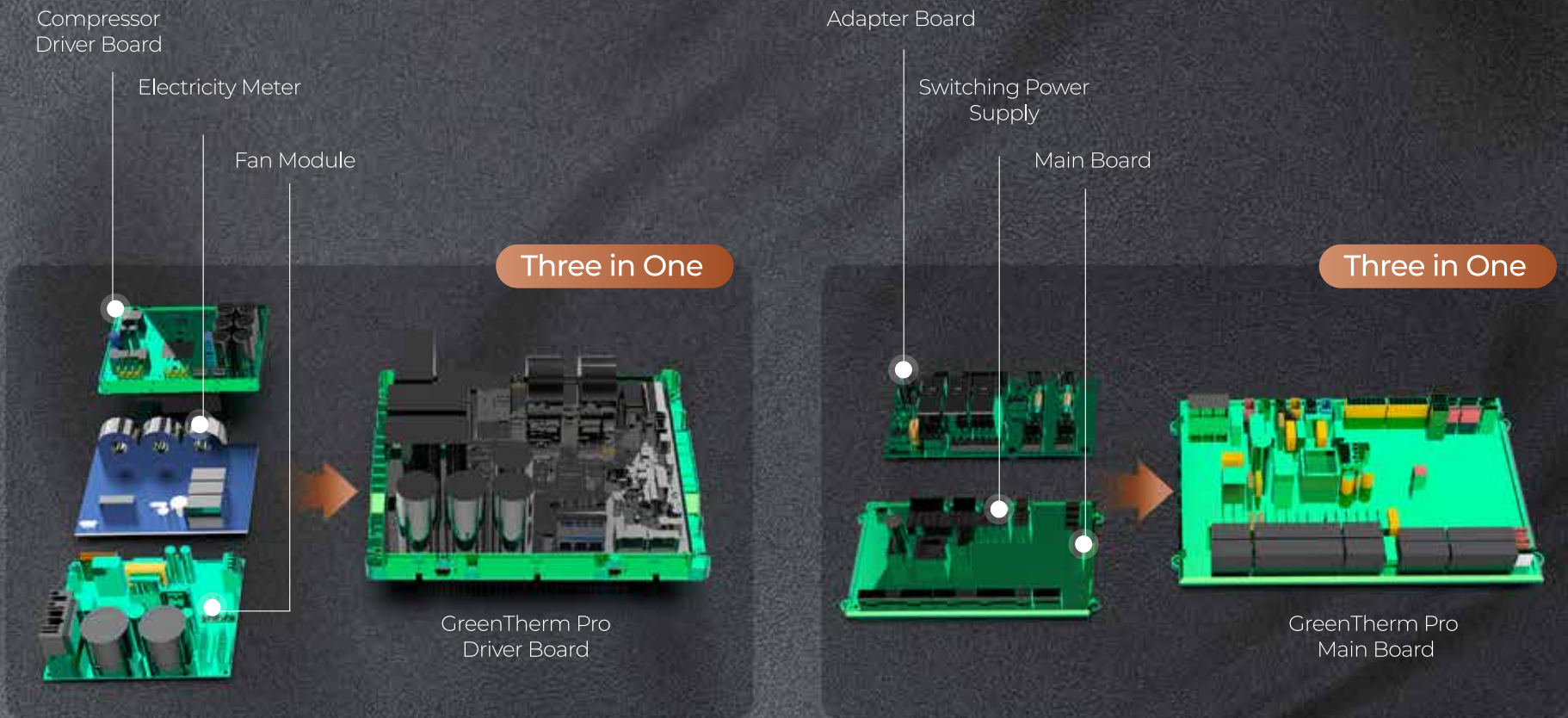
## 60% Key Components Commonality

With 60% components sharing across different models, GreenTherm Pro significantly reduces spare part varieties and inventory pressure. This design lowers procurement, warehousing, and after-sales management costs, improving overall service efficiency for B2B partners.



# Highly Integrated PCB Board

- **Enhanced Production Efficiency**  
The dual-board architecture eliminates complex wiring, minimizing assembly errors and ensuring faster delivery for your orders.
- **Simplified Service & Maintenance**  
A clean internal layout makes component access and troubleshooting effortless, drastically reducing service time and after-sales costs.
- **Superior Reliability**  
Reduced wiring means fewer connection failures and less signal interference, ensuring long-term stable operation.



# Service-Friendly Design

Terminal wiring and PCB replacement can be completed simply by opening the side panel, greatly improving maintenance efficiency.

- Extra-large side service space integrates the gas separator and pressure relief valve
- External water circuit requires no additional installation

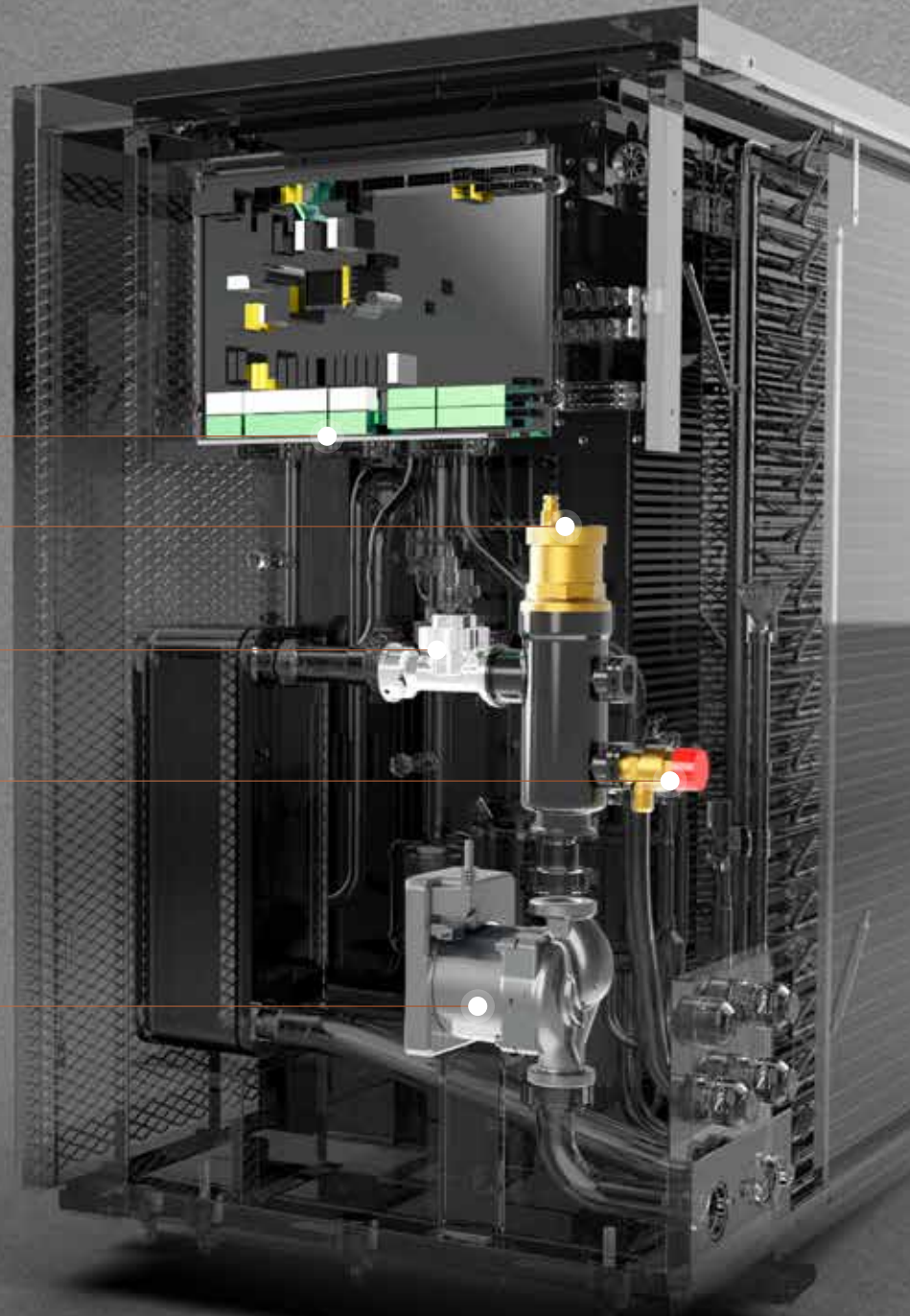
Main Board

Gas Separator

Flow Sensor

Safety Relief Valve

Water Pump



# Snap-Fit Assembly Design

Minimizes traditional threaded connections, enabling quick disassembly and reassembly.

- Reduce assembly time
- Improve service convenience
- Lower after-sales service costs

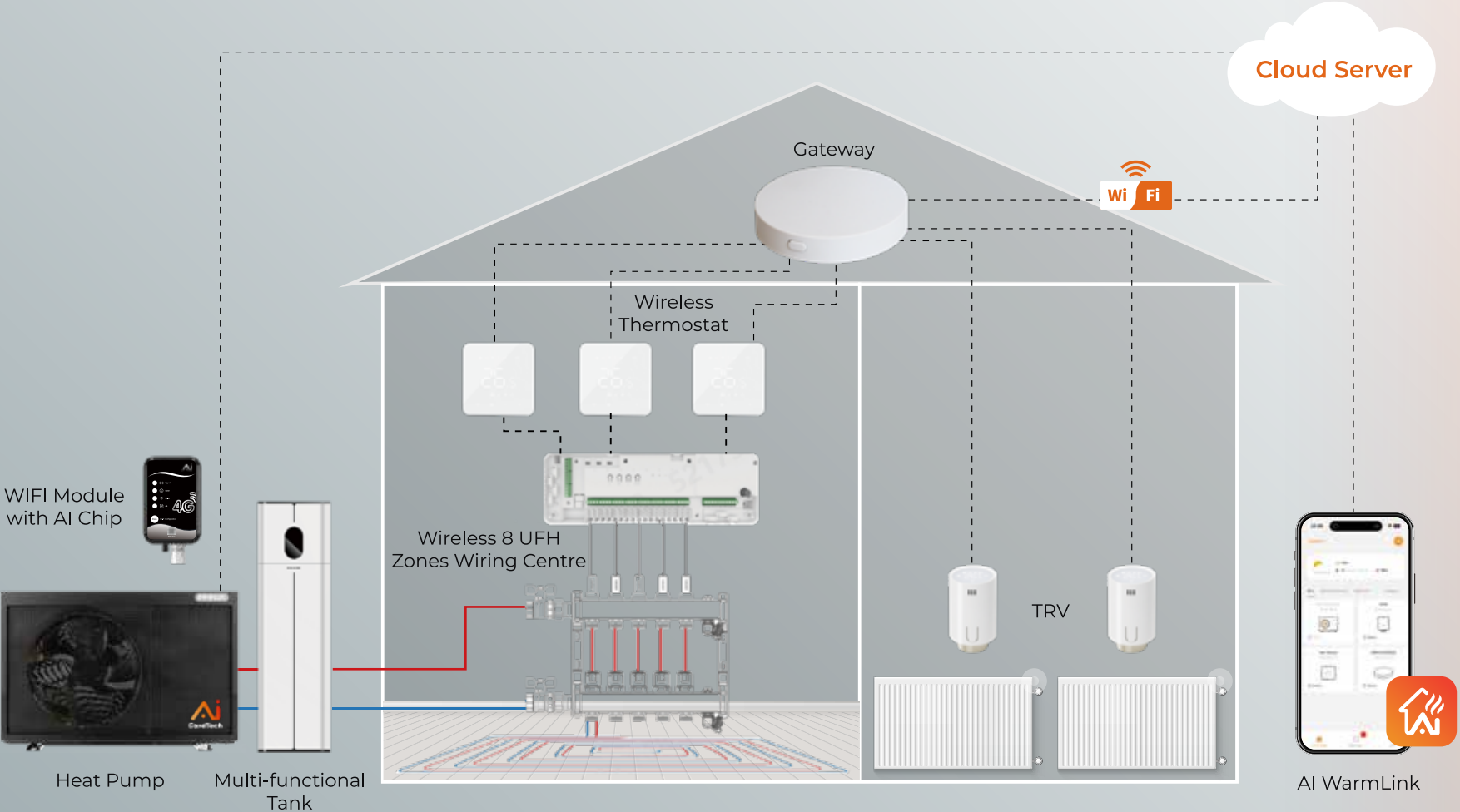


# Universal Design-Modbus

The modbus protocols and displays are compatible for all the three generations of heat pumps.



# Wireless Temperature Controller Solution



# Specification

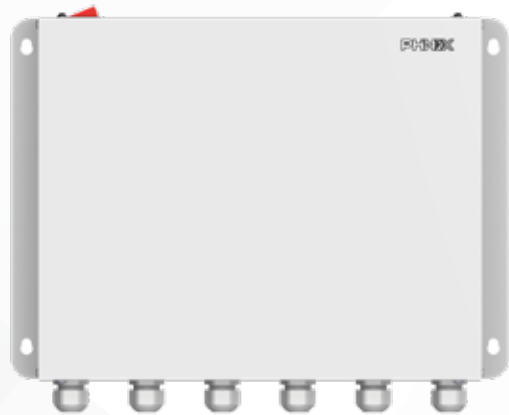
| Model | Product Type                                        | Photo                                                                               | Technical Data                                                                | Net/Gross Weight | Unit/Package Size (L x W x H)                        |
|-------|-----------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|------------------|------------------------------------------------------|
| TH01  | Wireless<br>Thermostat                              |    | Heating Mode & Cooling Mode                                                   | 140g/250g        | 100.6mm x 100.6mm x 22mm<br><br>130mm x 110mm x 65mm |
|       |                                                     |                                                                                     | Operating Voltage: 4*aaa Battery Power Supply Or 5V/1A Type C                 |                  |                                                      |
|       |                                                     |                                                                                     | Frequency: 868 Mhz                                                            |                  |                                                      |
|       |                                                     |                                                                                     | Temperature Settings: 5°C ~ 35°C                                              |                  |                                                      |
|       |                                                     |                                                                                     | Accuracy: ±0.5°C                                                              |                  |                                                      |
|       |                                                     |                                                                                     | Color: White                                                                  |                  |                                                      |
|       |                                                     |                                                                                     | With A Wall-fixing Frame, Base And A Very Compact Receiver (Surface-mounted). |                  |                                                      |
| RF01  | Smart<br>Gateway RF                                 |    | Operating Voltage: 5VDC                                                       | 30g/80g          | Φ 65mm x 15mm<br><br>110mm x 75mm x 50mm             |
|       |                                                     |                                                                                     | Operating Current: 1A                                                         |                  |                                                      |
|       |                                                     |                                                                                     | Operating Connector: Type C USB                                               |                  |                                                      |
|       |                                                     |                                                                                     | Frequency: 868mhz                                                             |                  |                                                      |
|       |                                                     |                                                                                     | Environment Temperature : 5°C ~50°C                                           |                  |                                                      |
| TR01  | Wireless<br>Thermostatic<br>Radiator<br>Valve (TRV) |   | Thermostat Operating Voltage: 2 X AA1.5V, Alkaline Batteries                  | 125g/210g        | Φ 50mm x 69mm<br><br>140mm x 80mm x 60mm             |
|       |                                                     |                                                                                     | Frequency: 868 Mhz                                                            |                  |                                                      |
|       |                                                     |                                                                                     | Temperature Settings: 5°C ~ 35°C                                              |                  |                                                      |
|       |                                                     |                                                                                     | Accuracy: ± 1°C                                                               |                  |                                                      |
|       |                                                     |                                                                                     | Control: PID                                                                  |                  |                                                      |
| WH01  | Wireless<br>8 UFH Zones<br>Wiring Centre            |  | Color: White                                                                  | 540g/635g        | 353.5mm x 85mm x 45mm<br><br>370mm x 95mm x 50mm     |
|       |                                                     |                                                                                     | Power Supply: 230VAC, 50/60 Hz                                                |                  |                                                      |
|       |                                                     |                                                                                     | Heat Pump Output: 230VAC Output                                               |                  |                                                      |
|       |                                                     |                                                                                     | Frequency: 868 Mhz                                                            |                  |                                                      |
|       |                                                     |                                                                                     | Max. Current: 5A For Each Output                                              |                  |                                                      |
|       |                                                     |                                                                                     | Up To 8 Room Thermostats                                                      |                  |                                                      |
|       |                                                     |                                                                                     | Up To 16 Thermal Actuators                                                    |                  |                                                      |

# Wiring Center Box

Integrate the main control board and other PCBs in an optimal layout, streamlining on-site installation while eliminating separate outdoor unit wiring, significantly reducing installation time, labor costs, and wiring errors.



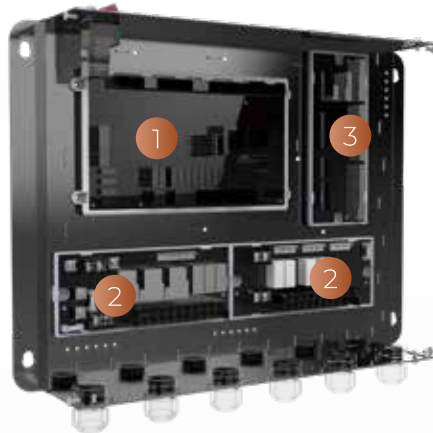
# Structure Display



External View



Internal View

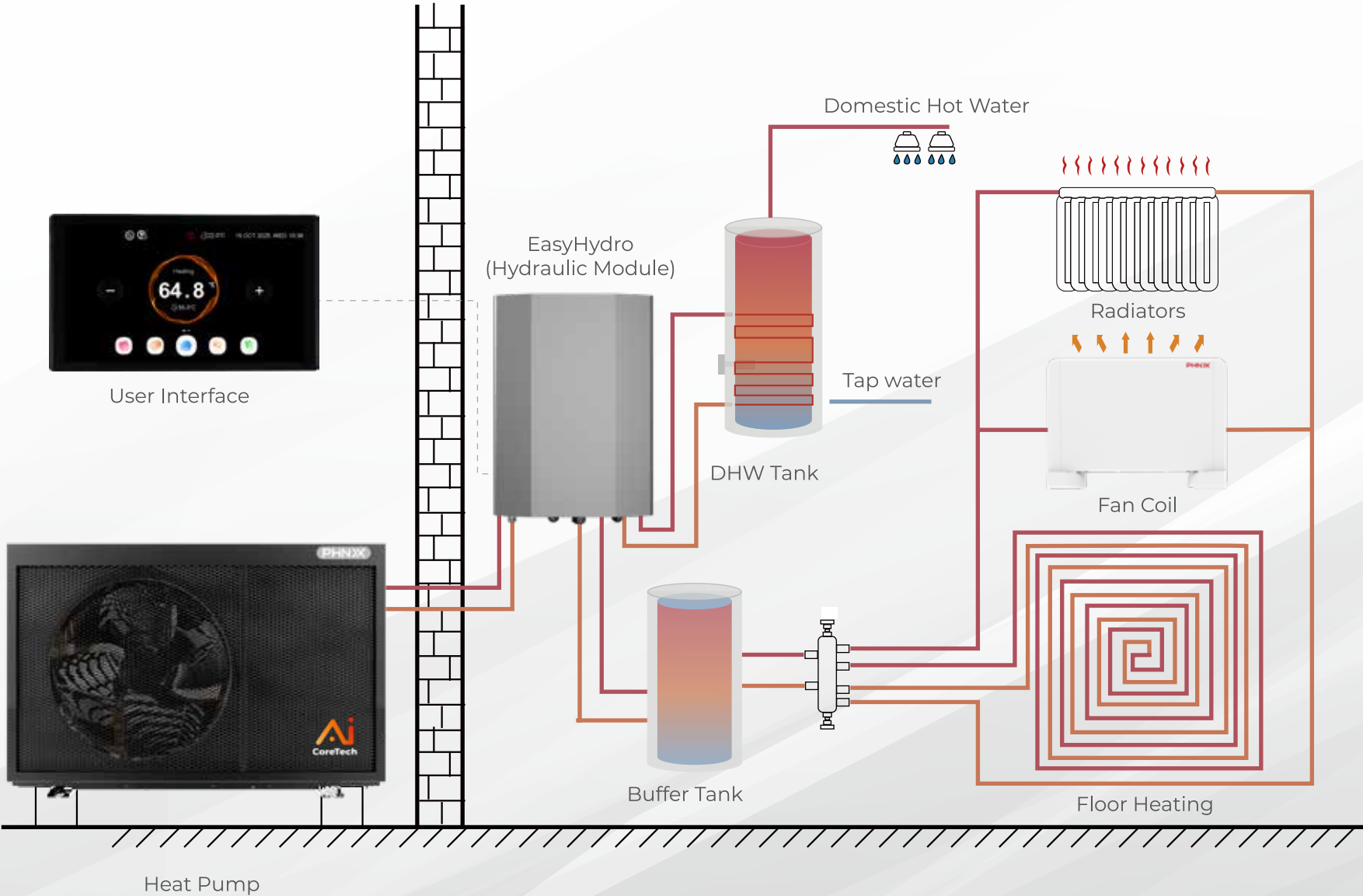


- 1 Main Board
- 2 Adapter Board for Terminal Block (Strong Current)
- 3 Adapter Board for Terminal Block (Weak Current)

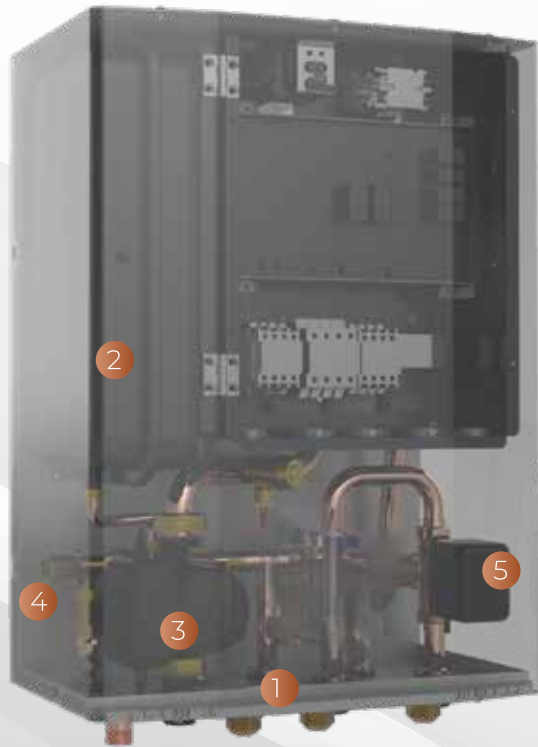
# Specification

| Model                     |                |
|---------------------------|----------------|
| Rated Voltage / Frequency | 220-240V~/50Hz |
| Moisture Resisitance      | IP20           |
| Electrical Shockproof     | I              |
| Net Weight                | 7 kg           |
| W/H/D                     | 493/392/95mm   |
| Rated Current             | 5A             |

# Installation with EasyHydro



# Integrated Design



- 1

Color Screen Controller
- 2

10L Expansion Tank
- 3

Water Pump(Optional)
- 4

3-way Valve
- 5

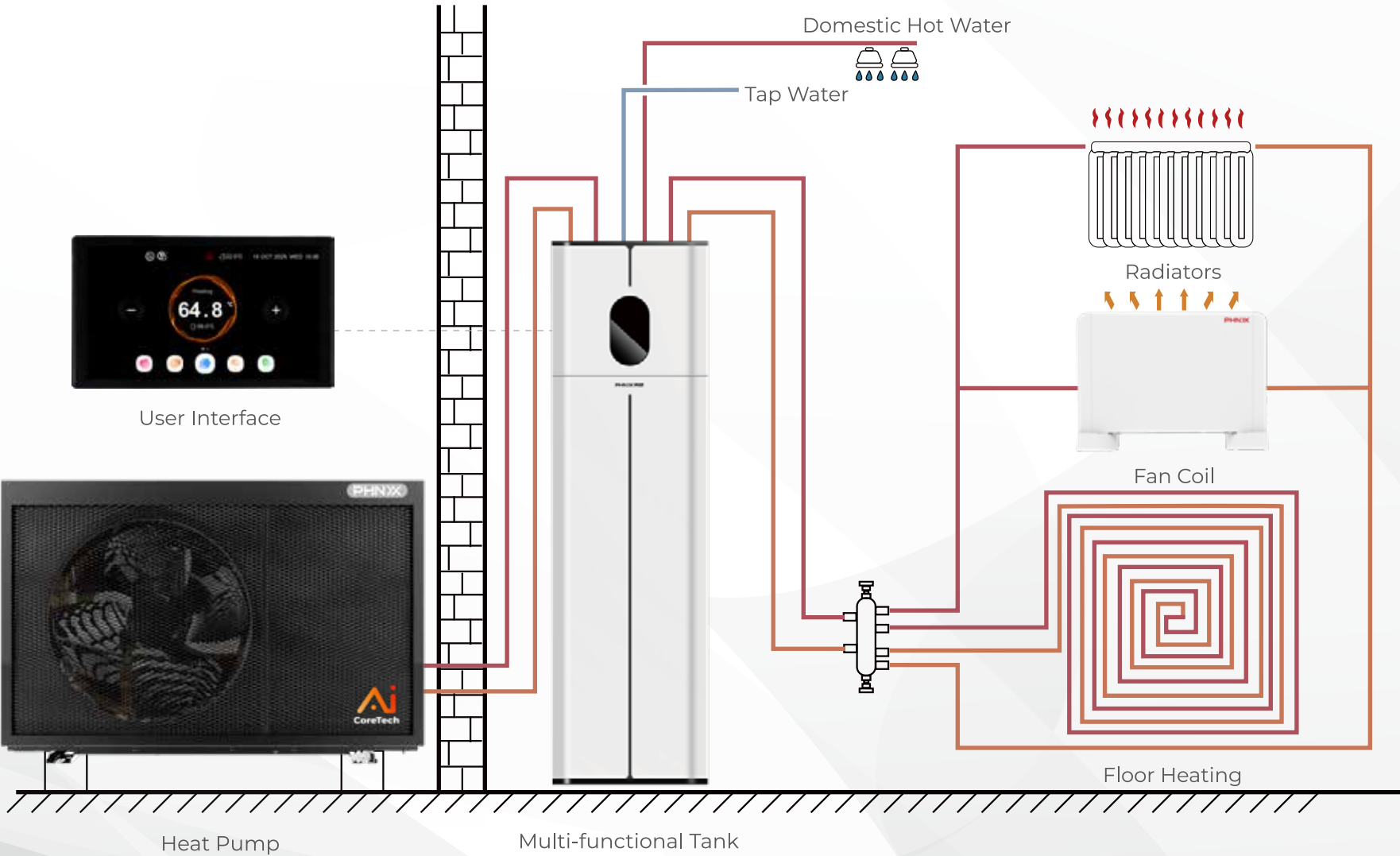
Electric Heater

# Specification

| Model                           |       | EHB030-C             | EHB090S-C         |
|---------------------------------|-------|----------------------|-------------------|
| Power Supply                    | /     | 220-240V~/50Hz       | 380-415V/3N~/50Hz |
| Water Temp. Range               | °C    | 5~75                 |                   |
| Filling Water Connection        | inch  | 3/4                  |                   |
| Drain Connection                | inch  | 3/4                  |                   |
| Heat Pump Side Water Connection | inch  | 1                    |                   |
| Heating Side Water Connection   | inch  | 1                    |                   |
| Hot Water Side Water Connection | inch  | 1                    |                   |
| Max. Water Pressure             | bar   | 3                    |                   |
| Main Circulation Water Pump     | /     | Water Pump(Optional) |                   |
| *Water Head                     | m     | 9.8                  |                   |
| *Water Pressure Drop            | kPa   | 22                   |                   |
| Expansion Tank                  | L     | 10                   |                   |
| Electrical Heater               | kW    | 3                    | 3+6               |
| *Sound Pressure at 1 Meter      | dB(A) | 35                   |                   |
| Water Return Pipe Design        | /     | Yes                  |                   |
| Dual Zone Control               | /     | Yes                  |                   |
| Net Weight                      | kg    | 53                   |                   |
| Unit Dimensions (L x W x H)     | mm    | 665×485×295          |                   |

\*The test flow rate is 1.7m³/h

# Installation with Multi-functional Tank



# Integrated Design



## Specification

| Model                         |      | HB60-180               | HB60S-180       |
|-------------------------------|------|------------------------|-----------------|
| Power Supply                  | /    | 220V-240V~/50Hz        | 380V-415V~/50Hz |
| Max. Power Input              | kW   | 6                      | 13.2            |
| Max. Current Input            | A    | 26                     | 30              |
| Net Weight                    | kg   | 137                    | 137             |
| Electrical Heater for Heating | kW   | 3                      | 3+6             |
| Electrical Heater for DHW     | kW   | 2                      |                 |
| DHW Tank Volume               | L    | 180                    |                 |
| Buffer Tank Volume            | L    | 60                     |                 |
| Expansion Tank                | L    | 12                     |                 |
| Water Connection (inch)       | inch | 1                      |                 |
| Cabinet Type                  | /    | Galvanized sheet metal |                 |
| Unit Dimension(L/W/H)         | mm   | 695×595×1800           |                 |
| Shipping Dimension(L/W/H)     | mm   | 780×685×1950           |                 |

- 1

Color Screen Controller
- 2

12L Expansion Tank
- 3

Water Pump
- 4

3-way Valve
- 5

Electric Heater for House Heating
- 6

Buffer Tank
- 7

DHW Tank
- 8

Electrical Heater for DHW

# Inverter Commercial Heat Pump

Energy-efficient Solutions Earn High Long-term Property ROI

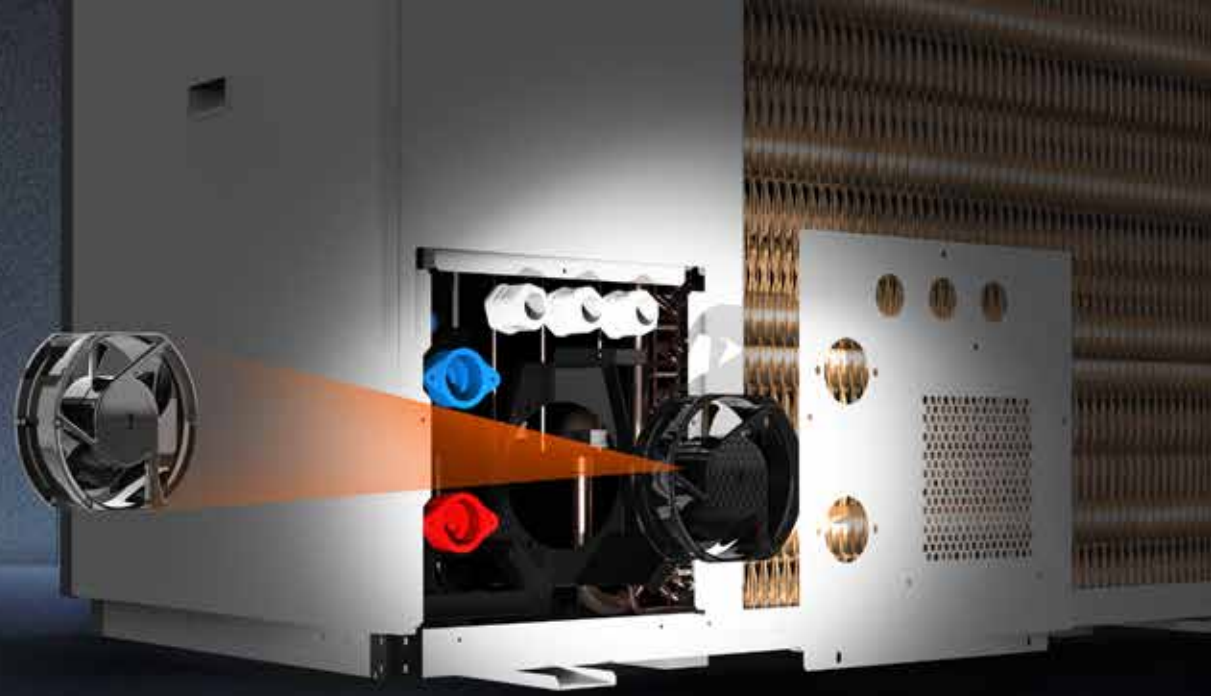
**SEER**  
4.83 @7°C  
6.81 @18°C



**SCOP**  
A+++ @35°C  
A+++ @55°C

# Refrigerant Exhaust Fan

The ATEX certified fan accelerates the diffusion of R290 gas to avoid its accumulation leading to danger in case of leakage.



# Leakage Detector

By NDIR technology, it detects the leakage of R290 gas in the range of 0~100% LFL with high precision of  $\pm 2.5\%$  per second.

# Integrated Design



## 1 European Aesthetic Design

Minimalist design with an aluminum alloy front gives PHNIX large heat pump a harmonious presence in European buildings. More new appearances are on request.



## 2 Standardized Installation

With integrated electrical wiring and water connections and key components such as anti-freezing valve preloaded to make installation easier, more efficient.



## 3 Optimized Airflow Design

This product series is equipped with dual EC fans, an optimized evaporator, and insulated air chambers, which ensure fluid airflow, delivering not only higher transfer efficiency but also a more comfortable experience.

Sound Power Level reaches **54** dB(A) in accordance with the ErP Directive



# Specification

| Model                                                                             |       | P20            | P40            | P40S              | P60            | P60S              |
|-----------------------------------------------------------------------------------|-------|----------------|----------------|-------------------|----------------|-------------------|
| Power Supply                                                                      | /     | 220-240V~/50Hz | 220-240V~/50Hz | 380~415V/3N~/50Hz | 220-240V~/50Hz | 380~415V/3N~/50Hz |
| Heating Condition - Ambient Temp. (DB/WB): 7/6°C, Water Temp. (In/Out): 30/35°C   |       |                |                |                   |                |                   |
| Nominal Heating Capacity                                                          | kW    | 6              | 12             | 12                | 17             | 17                |
| Heating Capacity Range(Standard)                                                  | kW    | 1.90-6.38      | 4.29-12.80     | 4.46-12.80        | 6-18.5         | 6-18.5            |
| Heating Capacity Range(Boost)                                                     | kW    | 6.00/10.69     | 12.00/17.71    | 12.00/17.71       | 17.00/24.06    | 17.00/24.06       |
| Heating Power Input Range                                                         | kW    | 0.44-1.27      | 0.70-2.74      | 0.74-2.74         | 1.3-5.58       | 1.3-5.58          |
| Heating Condition - Ambient Temp. (DB/WB): 7/6°C, Water Temp. (In/Out): 47/55°C   |       |                |                |                   |                |                   |
| Nominal Capacity                                                                  | kW    | 6              | 12             | 12                | 17             | 17                |
| Heating Capacity Range                                                            | kW    | 1.06-6.72      | 4.35-12.16     | 4.25-12.16        | 6-18           | 6-18              |
| Heating Power Input Range                                                         | kW    | 0.65-2.12      | 0.94-3.80      | 0.92-3.80         | 1.8-5.45       | 1.8-5.45          |
| Cooling Condition - Ambient Temp. (DB/WB): 35/24°C, Water Temp. (In/Out): 23/18°C |       |                |                |                   |                |                   |
| Cooling Capacity Range                                                            | kW    | 2.05-10.05     | 4.63-17.99     | 4.63-17.99        | 6.0-23.0       | 6.0-23.0          |
| Cooling Power Input Range                                                         | kW    | 0.53-2.62      | 0.91-5.38      | 0.91-5.38         | 1.3-7.3        | 1.3-7.3           |
| Cooling Condition - Ambient Temp. (DB/WB): 35/24°C, Water Temp. (In/Out): 12/7°C  |       |                |                |                   |                |                   |
| Cooling Capacity Range                                                            | kW    | 1.12-6.82      | 3.44-14.14     | 3.44-14.14        | 4-17           | 4-18              |
| Cooling Power Input Range                                                         | kW    | 0.57-2.54      | 1.01-5.14      | 1.01-5.14         | 1.7-7.1        | 1.7-7.2           |
| Max. Power Input                                                                  | kW    | 3.5            | 6.09           | 6.09              | 8.74           | 10.4              |
| Max. Current Input                                                                | A     | 15.5           | 26.68          | 8.91              | 38             | 15                |
| Refrigerant Type                                                                  | /     |                |                | R290              |                |                   |
| Refrigerant Volume                                                                | kg    | 0.7            | 1              | 1                 | 1.3            | 1.3               |
| Sound Pressure (1m)                                                               | dB(A) | 39             | 42             | 42                | 46             | 45                |
| Sound Power Level (EN12102)                                                       | dB(A) | 48             | 51             | 51                | 53             | 51                |
| Net Weight                                                                        | kg    | 133            | 145            | 148               | 191            | 200               |
| Unit Dimension(L/W/H)                                                             | mm    | 1370×590×915   | 1370×590×915   | 1370×590×915      | 1370×590×1335  | 1370×590×1335     |
| Shipping Dimension(L/W/H)                                                         | mm    | 1490×610×1050  | 1490×610×1050  | 1490×610×1050     | 1490×610×1470  | 1490×610×1470     |
| Circulation Pump                                                                  | /     |                |                | Yes               |                |                   |
| Operating Ambient Temperature                                                     | °C    |                |                | -30~45            |                |                   |
| Fan Motor Type                                                                    | /     |                |                | DC motor          |                |                   |
| Water Connection                                                                  | inch  |                |                | 1                 |                |                   |
| Rated Water Flow                                                                  | m³/h  | 1.03           | 2.06           | 2.06              | 2.92           | 2.92              |
| Water Pressure Drop @Rated Water Flow                                             | kPa   | 12             | 23             | 23                | 40             | 40                |
| Circulation Pump Head @Rated Water Flow                                           | m     | 7              | 7.8            | 7.8               | 10.4           | 10.4              |
| Cabinet type                                                                      | /     |                |                | Aluminum alloy    |                |                   |

\*More sizes P15, P30(S), P50(S) will be available in September.

# Specification

| Model                                                                            |       | P100S                |
|----------------------------------------------------------------------------------|-------|----------------------|
| Power Supply                                                                     | /     | 380~415V / 3N~/ 50Hz |
| Heating Condition - Ambient Temp. (DB/WB): 7/6°C, Water Temp. (In/Out): 30/35°C  |       |                      |
| Nominal Heating Capacity                                                         | kW    | 24                   |
| Heating Capacity Range                                                           | kW    | 11.00~40.00          |
| Heating Power Input Range                                                        | kW    | 3.46~14.30           |
| Heating Condition - Ambient Temp. (DB/WB): 7/6°C, Water Temp. (In/Out): 47/55°C  |       |                      |
| Nominal Capacity                                                                 | kW    | 24                   |
| Heating Capacity Range                                                           | kW    | 10.80~40.00          |
| Heating Power Input Range                                                        | kW    | 3.63~15.00           |
| Cooling Condition - Ambient Temp. (DB/WB): 35/24°C, Water Temp. (In/Out): 12/7°C |       |                      |
| Cooling Capacity Range                                                           | kW    | 8.45~31.00           |
| Cooling Power Input Range                                                        | kW    | 3.58~13.13           |
| Max. Power Input                                                                 | kW    | 17.00                |
| Max. Current Input                                                               | A     | 28.00                |
| Refrigerant Type                                                                 | /     | R290                 |
| Refrigerant Volume                                                               | kg    | 3.2                  |
| Sound Pressure (1m)                                                              | dB(A) | 38                   |
| Sound Power Level (EN12102)                                                      | dB(A) | 54                   |
| Net Weight                                                                       | kg    | 420                  |
| Unit Dimension(L/W/H)                                                            | mm    | 1515×680×1790        |
| Shipping Dimension(L/W/H)                                                        | mm    | 1545×745×1995        |
| Circulation Pump                                                                 | /     | YES                  |
| Operating Ambient Temperature                                                    | °C    | -30~43               |
| Fan Motor Type                                                                   | /     | EC Fan Motor         |
| Water Connection                                                                 | inch  | G1.5"                |
| Rated Water Flow                                                                 | m³/h  | 4.13                 |
| Water Pressure Drop @Rated Water Flow                                            | kPa   | 52                   |
| Circulation Pump Head @Rated Water Flow                                          | m     | 14                   |
| Cabinet type                                                                     | /     | Aluminum alloy       |