GOODHEAT
GOODWE GROUP MEMBER

FOCUS ON GOOD HEAT PUMP
FOCUS ON GOOD HEAT

# AIR TO WATER HEAT PUMP


FOSHAN GOODHEAT TECHNOLOGY LTD

+86-0757-22929908

info@goodheatglobal.com

www.goodheatglobal.com

No.5-6, Wusha Xinyue Road, Wusha Community, Daliang Street,
Shunde, Foshan, Guangdong, China.

# GOODWE

GOODWE, as a national high-tech enterprise, was established in 2010 and is headquartered in Suzhou China. Product range covers air to water heat pump, PV inverter, building material, battery, EV charger, etc. GOODWE solar inverters have been used in residential and commercial application ranging from 0.7kW to 350kW.

GOODWE has more than 5000 employees which is regarded as the Global Top 3 hybrid inverter supplier by Wood Mackenzie in 2021. it has also ranked as one of the Top 10 inverter suppliers by IHS Markit and has achieved consecutive TUV Rheinland All Quality Matters Awards.

## SCALE

**4 Production Bases**
Jiangsu, Anhui, Vietnam, **Foshan**

**5000+**
Staff Members

**5 R&D Centers**
Suzhou, Shenzhen, Wuhan, Nanjing, **Shunde**

**1000+**
R&D Engineers

**25 Overseas Customer Service Centers**
AUS, GBR, NLD, DEU, MEX, BRA, POL, ESP, ITA, ZAF, CHL, ARG, PRT, GRC, IND, TUR, JPN, UKR, USA, VNM, THA, MYS, RUS, ARE, FRA.

## HONER

**2015-2021**
The Sole Inverter Brand to Have Won the Award for 7 Consecutive Years

**2019**
PV Magazine Award

**2017-2021**
EuPD Top Brand for 5 Consecutive Years

**2021**
Global Top 3 Hybrid Inverter Supplier

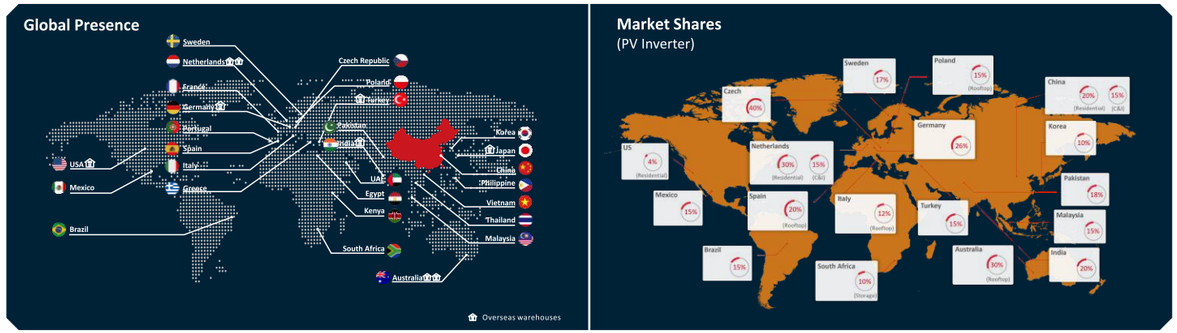
**2021**
The Most Financially Stable Inverter Company

**2021**
World's Top 6 PV Inverter Supplier

**2022**
Silver Medal in EcoVadis Sustainability Rating

**2022-2023**
EH Series 5kW No.6
ET Series 10kW No.6

## NETWORK

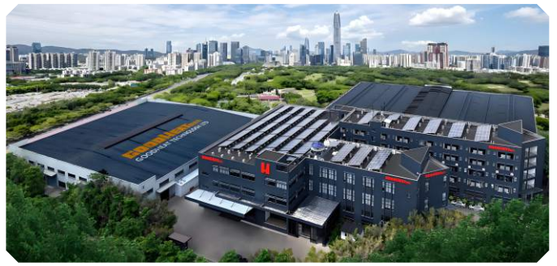





# GOODHEAT

GOODHEAT, as a member of GOODWE Group, is located in Foshan, China. It specializes in the development, manufacturing, and sales of air to water heat pump products. Product range covers residential and commercial heat pump, heat pump water heater, swimming pool heat pump, etc.

The company has four explosion-proof laboratories complied with international standard, covering the development and validation of products which capacity ranges from 3kW to 500kW. It has five international automatic production lines with yearly capacity of 300,000 units.



## PRODUCTION LINES


Automated Ex-Proof Heat Pump Water Heater Production Line


Ex-Proof Commercial Heat Pump Production Line


Automated Ex-Proof Residential Heat Pump Production Line

CNC Sheet Metal Production Line


Automated Powder Coating Line

## MANUFACTURING STRENGTH

**300000**
Yearly production capacity

**5**
World-Class Production Lines

**30000m²**
Phase I production base

**5**
Production standards of EU/NA/AU/CN + EX

## R&D STRENGTH


**2**
R&D doctors

**40+**
R&D engineers

**4**
Labs invested 10M

**-45~65℃**
Lab AT Range

**1000+**
Reliability

**3-500kW**
Heating capacity range

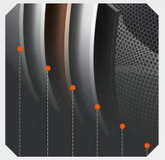
# HEATING & COOLING & DOMESTIC HOT WATER

SG-Ready CE RoHS ErP TUV

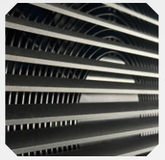
55°C A+++
35°C A+++

# KEY COMPONENTS

### Six-layer protective casing design
• 800 hours aging test; mid-crystal ceramic oxidation process, durability increased by 30%; corrosion and rust resistance with 500 hours salt spray test.



### Integrated pneumatic grille design
• 30.6° angled airflow with reversed flow, eliminating direct wind discomfort. Low air resistance and low wind noise.



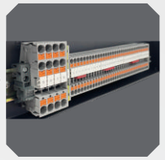
### Air outlet protective mesh designed according to European standards
• complies with the EU EN 13120 child finger test standard requiring an 8mm gap.

### DC Inverter brushless motor
• Intelligent variable speed control with ultra-low noise for efficient and quiet performance.

### Biomimetic Fan
• Large air volume with low-noise operation for efficient and quiet airflow.

### Built-in Expaansion Tank

### DC Inverter Compressor
• Stepless frequency conversion for wider operating range, 30% more energy-efficient than traditional scroll compressors, with low noise and minimal vibration.



### 35-position modular control center
• easy plug-and-play, compact and sturdy; supports end-point linkage; multi-energy coupled control; multi-zone temperature control; multi-scenario and multi-mode control; SG-ready; backup power control.

### Drive Board
• Plug & Play

### Built-in Four-way Valve

### Built-in Safety Valve

### Gas Seperator (optional)

### DC Inverter Water Pump
• Low noise with stepless speed regulation for precise and quiet operation.

### Refrigerant Leak Sensor

# R290 – THE NATURAL CHOICE FOR A BETTER FUTURE


## Low GWP. High Efficiency. 100% Green.

R290, or propane, is a natural refrigerant with zero ozone depletion potential and extremely low global warming potential (GWP = 3). It is increasingly being adopted in heat pump systems as an environmentally responsible alternative to traditional HFC refrigerants.

At GOODHEAT, sustainability is at the core of our design philosophy. By integrating R290 into our heat pump technology, we are contributing to a cleaner planet and helping our customers reduce their carbon footprint.

**GWP = 3**
99% lower than conventional refrigerants

**High Energy Efficiency**
Reduced consumption, lower emissions

**Safe & Certified**
Meets EN378 / IEC international standards

**Natural Refrigerant**
Non-toxic, ozone-friendly

**Ready for the Future**
F-Gas regulation compliant

Rated A+++ for energy efficiency, GOODHEAT's R290 heat pumps deliver outstanding seasonal performance at both 35°C and 55°C flow temperatures. Whether for underfloor heating or high-temp radiators, they provide maximum comfort with minimum energy use.

Thanks to its low-charge design, R290 reduces operating costs while ensuring long-term sustainability. Designed for residential and light commercial spaces, it's silent, compact, and adaptable—all while meeting the most demanding safety and climate regulations.

# SMART CONTROL

## Wired Controller

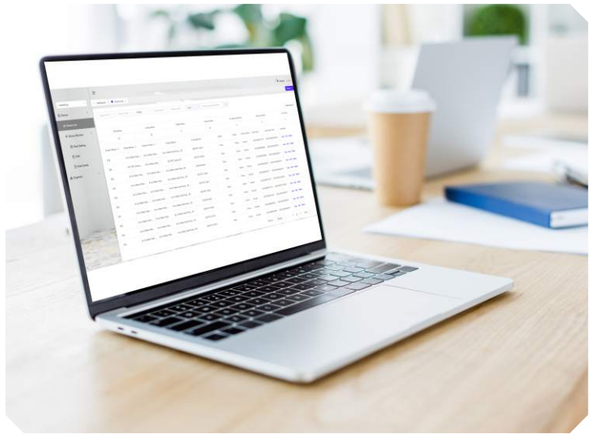
- 7 inch / 4 inch LCD touch screen
- Error code display and query
- Multiple language
- 16-unit cascade
- Built-in temperature sensor
- Built-in WiFi module
- Built-in 4G module(optional)
- Wired controller and thermostat functions combined into one
- Multi-temperature zones


## App

- Operating status query
- Error query
- Power consumption statistics
- Schedule setting
- Time setting
- Mode selection
- Multi-temperature zones
- Support engineering mode
- Multi-household management

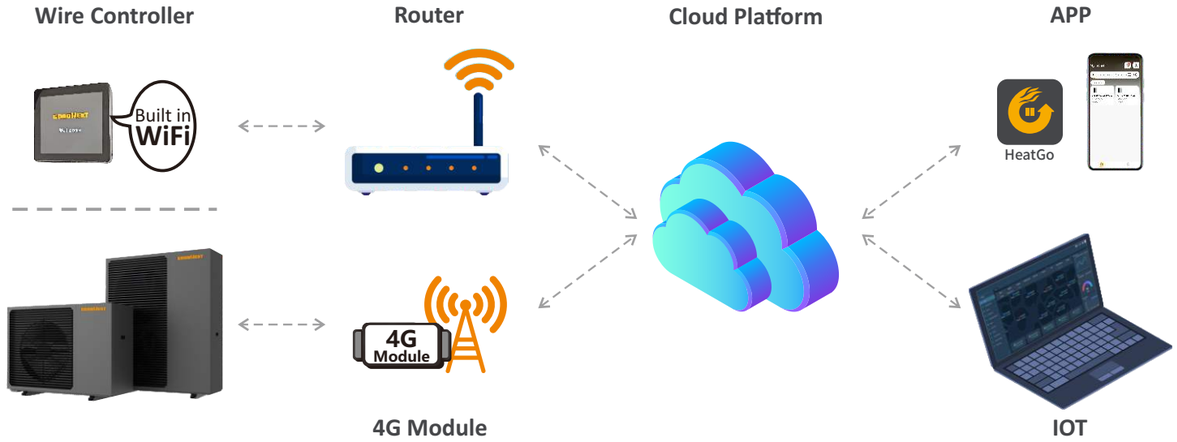

## IOT

- Device information collection
- Operation Data Collection and Viewing
  - Parameter checking and setting
  - Operation curve
  - Troubleshooting
- OTA
  - Fix code defects quickly
  - Remote mainboard upgrade
- Project Engineering Management

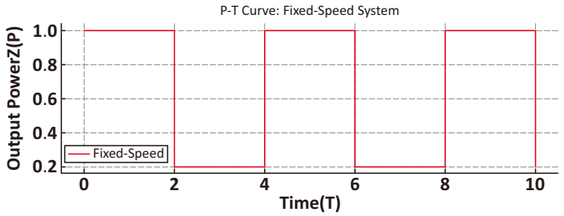


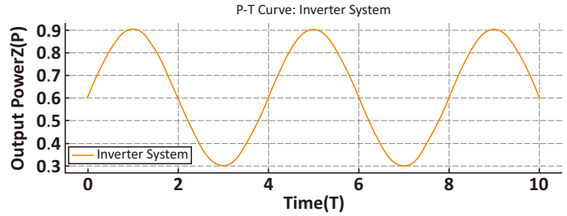


# REMOTE CONTROL MANAGEMENT




# FULL DC INVERTER TECHNOLOGY




## DC Inverter Compressor

Precise compressor control ensures stable water temperature, reduces noise, and extends compressor lifespan.

## DC Inverter fan motor

Adjusts output power through motor speed control for faster startup, improved energy efficiency, and cost savings.

## DC Inverter Water Pump

Intelligently regulates water flow with real-time flow feedback for optimal performance and efficiency.

**Inverter technology saves over 30% more energy compared to fixed-speed systems.**


# MULTIPLE FUNCTIONS

## Zero Cold Water

Our air source heat pump's Zero Cold Water feature ensures instant hot water at your tap. By circulating water continuously through the pipes, it prevents cold water waste and delivers warm water immediately, saving water and enhancing comfort.

## Dual Temperature Zone

This air source heat pump supports dual temperature zones, enabling it to supply 35°C water for underfloor heating and 55°C water for fan coil units or radiators at the same time. This intelligent system maximizes comfort and energy efficiency by meeting the specific temperature needs of different heating terminals throughout the space.

## Sterilization mode

The air source heat pump is equipped with a sterilization function that raises the outlet water temperature up to 75°C . This high-temperature cycle effectively eliminates 99% of Legionella bacteria, ensuring safer domestic hot water. With automatic weekly sterilization, the system maintains hygiene and peace of mind without manual intervention.

## Smart Defrosting

Our air source heat pumps use smart sensors and intelligent control to detect frost precisely and defrost only when needed. This reduces energy use, lowers noise, and keeps your home warm and comfortable—even in freezing conditions. Adaptive technology ensures reliable performance and longer equipment life in any climate.

## Multi-Energy Integration

GOODHEAT heat pumps integrate solar thermal, electric heating, photovoltaics, gas heating, and more, using intelligent control for real-time switching and coordination. This maximizes efficiency, lowers costs, improves reliability through energy redundancy, and increases renewable use for a cost-effective, sustainable solution.

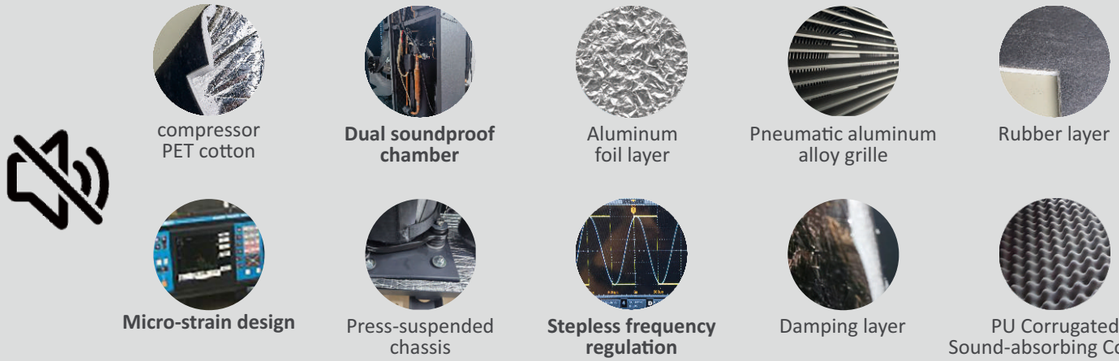
## Smart Grid Compatibility

GOODHEAT heat pumps support SG Ready standards, responding to grid signals for dynamic pricing, load, and renewable availability. They optimize operation to cut costs, ease peak demand, and boost renewable use—ideal for energy-conscious, future-ready buildings.

# ULTRA-QUIET

## As low as 39dB(A)

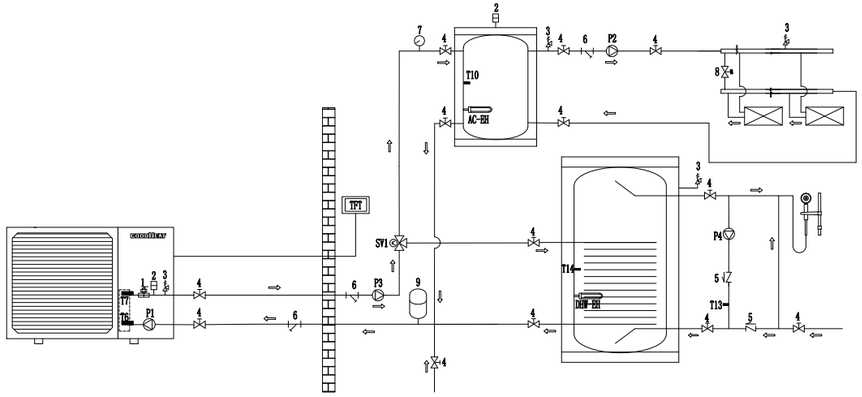
## 10-layer noise reduction design





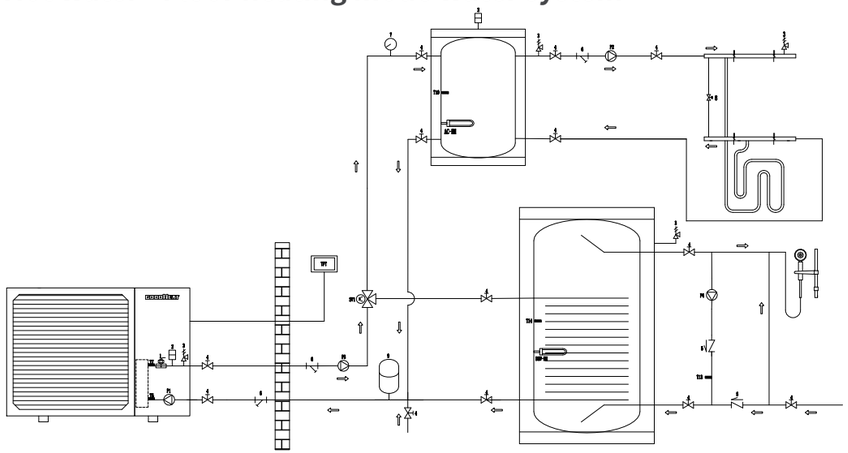

# GOODHEAT Air to Water Heat Pump System

## Hot water+Fan coil heating or Hot water+Fan coil cooling mode, water system



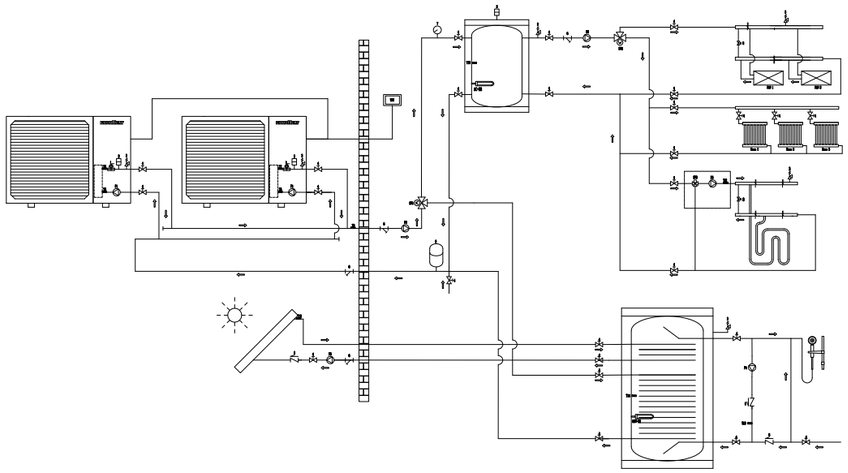
| | | |
|---|---|---|
| 1 | | Water flow switch |
| 2 | | Automatic exhaust valve |
| 3 | | Safety valve |
| 4 | | Stop valve |
| 5 | | Check valve |
| 6 | | Y-type filter |
| 7 | | Pressure gauge |
| 8 | | Differential pressure bypass valve |
| 9 | | Expansion tank |
| SV1 | | Hot water three-way valve |
| T6 | | Inlet water temp. |
| T7 | | Outlet temp. |
| T10 | | Buffer tank water temp. |
| T13 | | Hot water return temperature |
| T14 | | Domestic hot water tank temp. |
| AC-EH | | Buffer tank heater |
| DHW-EH | | Domestic hot water tank heater |
| P1 | | Heat pump unit circulating water pump |
| P2 | | Secondary water system circulating water pump |
| P3 | | Primary water system booster pump |
| P4 | | Hot water return pump |

## Hot water+ Floor heating mode water system



| | | |
|---|---|---|
| 1 | | Water flow switch |
| 2 | | Automatic exhaust valve |
| 3 | | Safety valve |
| 4 | | Stop valve |
| 5 | | Check valve |
| 6 | | Y-type filter |
| 7 | | Pressure gauge |
| 8 | | Differential pressure bypass valve |
| 9 | | Expansion tank |
| SV1 | | Hot water three-way valve |
| SV2 | | Fan coil unit three-way valve |
| SV3 | | Zone 2 Mixing Valve |
| P5 | | Auxiliary heat source pump |
| P6 | | Zone 2 water pump |
| T6 | | Inlet water temp. |
| T7 | | Outlet temp. |
| T9 | | Final mixed water temp. |
| T10 | | Buffer tank water temp. |
| T11 | | Zone 2 Water Temp. |
| T12 | | Auxiliary heat source hot water temp. |
| T13 | | Hot water return temperature |
| T14 | | Domestic hot water tank temp. |
| AC-EH | | Buffer tank heater |
| DHW-EH | | Domestic hot water tank heater |
| P1 | | Heat pump unit circulating water pump |
| P2 | | Secondary water system circulating water pump |
| P3 | | Primary water system booster pump |
| P4 | | Hot water return pump |

## Cascade+ Auxiliary heat source+ Blend mode waterway system



| | | |
|---|---|---|
| 1 | | Water flow switch |
| 2 | | Automatic exhaust valve |
| 3 | | Safety valve |
| 4 | | Stop valve |
| 5 | | Check valve |
| 6 | | Y-type filter |
| 7 | | Pressure gauge |
| 8 | | Differential pressure bypass valve |
| 9 | | Expansion tank |
| SV1 | | Hot water three-way valve |
| SV2 | | Fan coil unit three-way valve |
| SV3 | | Zone 2 Mixing Valve |
| P5 | | Auxiliary heat source pump |
| P6 | | Zone 2 water pump |
| T6 | | Inlet water temp. |
| T7 | | Outlet temp. |
| T9 | | Final mixed water temp. |
| T10 | | Buffer tank water temp. |
| T11 | | Zone 2 Water Temp. |
| T12 | | Auxiliary heat source hot water temp. |
| T13 | | Hot water return temperature |
| T14 | | Domestic hot water tank temp. |
| AC-EH | | Buffer tank heater |
| DHW-EH | | Domestic hot water tank heater |
| P1 | | Heat pump unit circulating water pump |
| P2 | | Secondary water system circulating water pump |
| P3 | | Primary water system booster pump |
| P4 | | Hot water return pump |

# R290 RESIDENTIAL AIR TO WATER HEAT PUMP

## Modes:

Radiator Heating

Floor Heating

Domestic Hot Water

Cooling

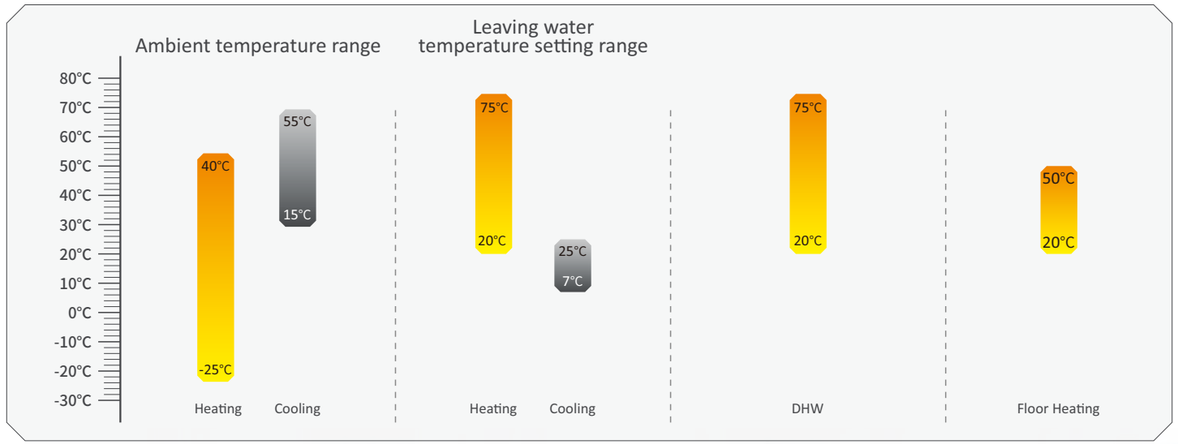
Floor Heating + Domestic Hot Water

Cooling + Domestic Hot Water

Radiator Heating + Domestic Hot Water

## Features:

- Eco-friendly R290 refrigerant, **ODP=0, GWP=3**
- **A+++ at 55℃** & **A+++ at 35℃**
- Outlet water temperature up to **75℃**
- Smart sterilization every 7 days, effectively kills **99%** of Legionella.
- Noise as low as **39dB(A)** at 1 meter
- Support Modbus protocol, reserved RS485 port
- Equipped with R290 refrigerant leakage sensor
- builgt-in 4G module (optional)
- built-in gas separator(optional)
- Self-developed APP
- SG-ready
- PV-ready(optional)


# R290-SPECIFICATION (1)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | |  | | | | | |
| **Capacity** | | | **6kW** | **8kW** | **10kW** | **10kW** | **12kW** | **12kW** |
| **Sales Model** | | | **GSHVSH-6AA1** | **GSHVSH-8AA1** | **GSHVSH-10AA1** | **GSHVTH-10AA1** | **GSHVSH-12AA1** | **GSHVTH-12AA1** |
| Power Supply | | | 220~240V~/50Hz | 220~240V~/50Hz | 220-240~/50Hz | 380~415V/ 3N~/50Hz | 220-240~/50Hz | 380~415V/ 3N~/50Hz |
| Heating Capacity (Max) (A7/6°C,W30/35°C) | Heating Capacity | kW | 6.07(2.63~9.10) | 8.11(3.57~12.29) | 10.25(4.39~13.50) | 10.25(4.39~13.50) | 11.98(4.39~15.45) | 11.98(4.39~15.45) |
| | Power Input | kW | 1.19(0.54~2.28) | 1.60(0.74~3.17) | 2.07(0.89~3.55) | 2.07(0.89~3.55) | 2.45(0.89~4.06) | 2.45(0.89~4.06) |
| | COP | W/W | 5.10(4.20~5.40) | 5.07(4.10~5.35) | 4.95(3.90~5.30) | 4.95(3.90~5.30) | 4.89(3.85~5.20) | 4.89(3.85~5.20) |
| Heating Capacity (Max) (A7/6°C,W47/55°C) | Heating Capacity | kW | 5.99(2.99~8.19) | 8.11(3.65~10.96) | 10.07(3.85~11.75) | 10.07(3.85~11.75) | 11.55(3.85~13.35) | 11.55(3.85~13.35) |
| | Power Input | kW | 1.87(1.03~2.92) | 2.65(1.11~3.87) | 3.12(1.20~4.35) | 3.12(1.20~4.35) | 3.71(1.20~5.03) | 3.71(1.20~5.03) |
| | COP | W/W | 3.20(2.90~3.46) | 3.18(2.83~3.45) | 3.23(2.75~3.57) | 3.23(2.75~3.57) | 3.11(2.65~3.57) | 3.11(2.65~3.57) |
| Cooling Capacity (Max) (A35/24°C,W12/7°C) | Cooling Capacity | kW | 5.00(1.38~5.70) | 7.10(1.44~8.11) | 8.50(3.65~9.45) | 8.50(3.65~9.45) | 10.00(3.65~11.04) | 10.00(3.65~11.04) |
| | Power Input | kW | 1.77(0.67~2.44) | 2.51(0.90~3.20) | 3.01(1.12~3.51) | 3.01(1.12~3.51) | 3.68(1.12~3.97) | 3.68(1.12~3.97) |
| | EER | W/W | 2.82(2.03~3.20) | 2.83(2.00~3.15) | 2.82(2.00~3.10) | 2.82(2.00~3.10) | 2.72(1.95~3.00) | 2.72(1.95~3.00) |
| ERP Level(Outlet water temp. at 35°C/55°C) | | / | A+++/A+++ | A+++/A+++ | A+++/A+++ | A+++/A+++ | A+++/A+++ | A+++/A+++ |
| Rated Input Power | | kW | 3.6 | 4.65 | 5.05 | 5.05 | 5.45 | 5.86 |
| Rated Input Current | | A | 15.0 | 20.4 | 23.0 | 8.5 | 25.0 | 10.0 |
| Refrigerant Type | | ... | R290 | | | | | |
| Rated water flow | | $m^3/h$ | 1.00 | 1.37 | 1.7 | 1.7 | 2.06 | 2.06 |
| Fan quantity | | / | 1 | | | | | |
| Fan motor type | | / | DC inverter | | | | | |
| Compressor | | / | DC inverter | | | | | |
| Circulating pump | | / | Inverter type / Built-in | | | | | |
| IP Class | | / | IPX4 | | | | | |
| Sound pressure at 1m distance | | dB(A) | 43 (39~51) | 43 (39~51) | 44 (39~52) | 44 (39~52) | 46 (39~52) | 46 (39~52) |
| Sound pressure at 3m distance | | dB(A) | 35 (32~44) | 35 (32~44) | 37 (32~45) | 37 (32~45) | 39 (32~45) | 39 (32~45) |
| Max. outlet water Temp. | | ℃ | 75 | | | | | |
| Water Piping Connections | | inch | G1 | | | | | |
| Water Pressure Drop | | kPa | 20 | 25 | 20 | 20 | 20 | 20 |
| Operating temperature range (Heating mode) | | ℃ | -25~45 | | | | | |
| Operating temperature range (Cooing mode) | | ℃ | 16~45 | | | | | |
| UnPacked Weight | | kg | 110 | 125 | 145 | 145 | 145 | 145 |
| Packed Weight | | kg | 115 | 135 | 165 | 165 | 165 | 165 |
| Unpacked Dimensions ( L×D× H ) | | mm | 1290×460× 955 | | | | | |
| Packed Dimensions （L× D×H ) | | mm | 1320×500×1094 | | | | | |



# R290-SPECIFICATION (2)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | |  | |  | | | |
| **Capacity** | | | **16kW** | **16kW** | **18kW** | **18kW** | **24kW** | |
| **Sales Model** | | | **GSHVSH-16AA1** | **GSHVTH-16AA1** | **GSHVSH-18AA1** | **GSHVTH-18AA1** | **GSHVTH-24AA1** | |
| Power Supply | | | 220~240V~/50Hz | 380~415V/ 3N~/50Hz | 220~240V ~/ 50Hz | 380~415V/ 3N/50Hz | 380~415V/ 3N/ 50Hz | |
| Heating Capacity (Max) (A7/6°C,W30/35°C) | Heating Capacity | kW | 16.20(6.17~18.51) | 16.20(6.17~18.51) | 17.60(6.50~22.00) | 17.60(6.50~22.00) | 24.05(9.63~29.13) | |
| | Power Input | kW | 3.38(1.26~4.83) | 3.38(1.26~4.83) | 3.62(1.35~5.88) | 3.62(1.35~5.88) | 4.96(2.00~7.82) | |
| | COP | W/W | 4.79(3.75~5.00) | 4.79(3.75~5.00) | 4.86(3.82~5.30) | 4.86(3.82~5.30) | 4.85(3.86~5.30) | |
| Heating Capacity (Max) (A7/6°C,W47/55°C) | Heating Capacity | kW | 15.89(5.75~17.20) | 15.89(5.75~17.20) | 17.85(5.45~18.89) | 17.85(5.45~18.89) | 23.85(8.45~25.89) | |
| | Power Input | kW | 5.30(1.81~5.84) | 5.30(1.81~5.84) | 5.88(2.15~6.85) | 5.88(2.15~6.85) | 8.01(2.86~9.12) | |
| | COP | W/W | 3.00(2.83~3.45) | 3.00(2.83~3.45) | 3.03(2.64~3.57) | 3.03(2.64~3.57) | 2.98(2.84~3.57) | |
| Cooling Capacity (Max) (A35/24°C,W12/7°C) | Cooling Capacity | kW | 13.00(4.03~13.51) | 13.00(4.03~13.51) | 15.00(4.55~17.20) | 15.00(4.55~17.20) | 17.00(6.15~19.50) | |
| | Power Input | kW | 4.60(1.45~5.03) | 4.60(1.45~5.03) | 5.52(1.85~7.31) | 5.52(1.85~7.31) | 6.14(2.50~9.75) | |
| | EER | W/W | 2.83(1.98~3.05) | 2.83(1.98~3.05) | 2.72(1.96~2.98) | 2.72(1.96~2.98) | 2.77(2.03~3.00) | |
| ERP Level(Outlet water temp. at 35°C/55°C) | | / | A+++/A++ | | A+++/A+++ | | | |
| Rated Input Power | | kW | 6.95 | 6.95 | 7.5 | 10.52 | 12.52 | |
| Rated Input Current | | A | 30.5 | 11.7 | 35.0 | 17.3 | 19.5 | |
| Refrigerant Type | | ... | R290 | | | | | |
| Rated water flow | | $m^3/h$ | 2.75 | 2.75 | 3.1 | 3.1 | 4.2 | |
| Fan quantity | | / | 1 | 1 | 2 | 2 | 2 | |
| Fan motor type | | / | DC inverter | | | | | |
| Compressor | | / | DC inverter | | | | | |
| Circulating pump | | / | Inverter type / Built-in | | | | | |
| IP Class | | / | IPX4 | | | | | |
| Sound pressure at 1m distance | | dB(A) | 48 (39~55) | 48(39~55) | 49 (39~55) | 49 (39~55) | 52(50~60) | |
| Sound pressure at 3m distance | | dB(A) | 41 (32~48) | 41 (32~48) | 47 (32~48) | 47 (32~48) | 45 (43~53) | |
| Max. outlet water Temp. | | ℃ | 75 | | | | | |
| Water Piping Connections | | inch | G5/4 | G5/4 | G5/4 | G5/4 | G3/2 | |
| Water Pressure Drop | | kPa | 55 | 55 | 55 | 55 | 60 | |
| Operating temperature range (Heating mode) | | ℃ | -25~45 | | | | | |
| Operating temperature range (Cooing mode) | | ℃ | 16~45 | | | | | |
| UnPacked Weight | | kg | 190 | 190 | 220 | 220 | 220 | |
| Packed Weight | | kg | 220 | 220 | 240 | 240 | 240 | |
| Unpacked Dimensions ( L×D× H ) | | mm | 1490×460×1005 | | 1190×500×1515 | | | |
| Packed Dimensions （L× D×H ) | | mm | 1520×540×1140 | | 1220×540×1640 | | | |

# R32 RESIDENTIAL AIR TO WATER HEAT PUMP

## Modes:

Radiator Heating

Floor Heating

Domestic Hot Water

Cooling

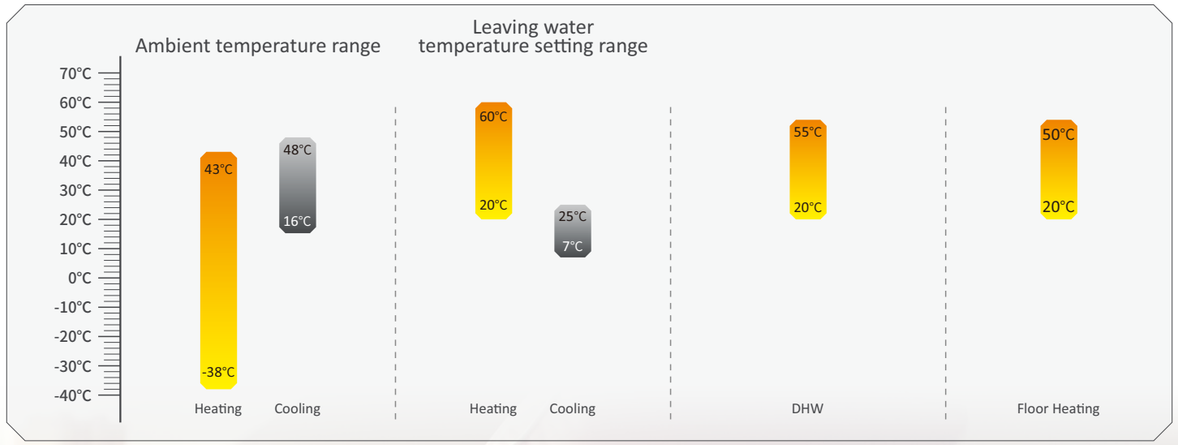
Floor Heating + Domestic Hot Water

Cooling + Domestic Hot Water

Radiator Heating + Domestic Hot Water

## Features:

- EVI technology
- Eco-friendly R32 refrigerant, **GWP≈675**
- **A++ at 55°C** & **A+++ at 35°C**
- Outlet water temperature up to **60°C**
- Operates in ambient temperatures as low as **-38°C**.
- Noise as low as **49dB(A)** at 1 meter
- Support Modbus protocol, reserved RS485 port
- 4G module (optional)
- Self-developed APP
- SG-ready
- PV-ready(optional)


# R32-SPECIFICATION (1)

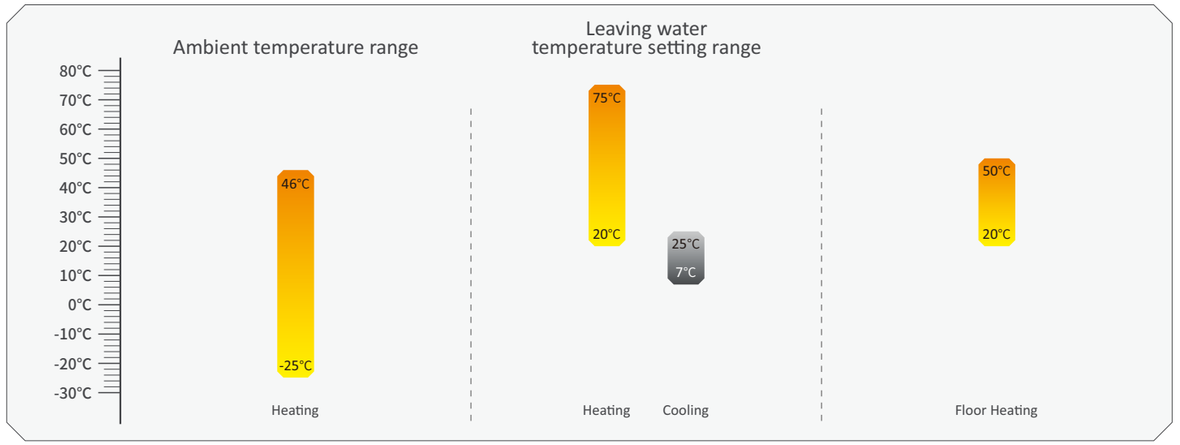
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | |  | | | | | | | |
| **Capacity** | | | **6kW** | **8kW** | **10kW** | **10kW** | **12kW** | **12kW** | **14kW** | **14kW** |
| **Model** | | | **GSHVSH-6BA1** | **GSHVSH-8BA1** | **GSHVSH-10BA1** | **GSHVTH-10BA1** | **GSHVSH-12BA1** | **GSHVTH-12BA1** | **GSHVSH-14BA1** | **GSHVTH-14BA1** |
| Power Supply | | | 220~240V~/50Hz | 220~240V~/50Hz | 220~240V~/50Hz | 220~240V~/50Hz | 220~240V~/50Hz | 380~415V/3N~/50Hz | 220~240V~/50Hz | 380~415V/3N~/50Hz |
| Nominal Heating (Max) (A7/6°C,W30/35°C) | Heating Capacity | kW | 6.05 (2.80~8.80) | 8.20 (5.10~10.85) | 10.05 (5.10~12.90) | 10.05 (5.10~12.90) | 12.00 (5.90~15.12) | 12.00 (5.90~15.12) | 14.05 (6.10~16.99) | 14.05 (6.10~16.99) |
| | Power Input | kW | 1.29 (0.59~1.95) | 1.74 (0.86~2.42) | 2.16 (0.86~2.88) | 2.16 (0.86~2.88) | 2.45 (1.15~3.61) | 2.45 (1.15~3.61) | 2.99 (1.15~4.15) | 2.99 (1.15~4.15) |
| | COP | / | 4.70 (4.25~5.05) | 4.70 (4.23~5.08) | 4.65 (4.23~5.05) | 4.65 (4.23~5.05) | 4.90 (4.15~5.06) | 4.90 (4.15~5.06) | 4.70 (4.15~5.05) | 4.70 (4.15~5.05) |
| Nominal Heating (Max) (A7/6°C,W47/55°C) | Heating Capacity | kW | 5.88 (2.30~7.62) | 8.05 (3.85~9.41) | 9.50 (3.85~11.20) | 9.50 (3.85~11.20) | 12.00 (4.90~13.15) | 12.00 (4.90~13.15) | 13.98 (4.90~15.10) | 13.98 (4.90~15.10) |
| | Power Input | kW | 1.78 (0.75~2.61) | 2.44 (1.13~3.15) | 2.92 (1.13~3.75) | 2.92 (1.13~3.75) | 3.96 (1.65~4.56) | 3.96 (1.65~4.56) | 4.30 (1.65~5.25) | 4.30 (1.65~5.25) |
| | COP | / | 3.30 (2.92~3.33) | 3.30 (2.99~3.46) | 3.25 (2.99~3.46) | 3.25 (2.99~3.46) | 3.03 (2.87~3.38) | 3.03 (2.87~3.38) | 3.25 (2.87~3.38) | 3.25 (2.87~3.38) |
| Nominal Cooling (Max) (A35/24°C,W12/7°C) | Cooling Capacity | kW | 5.00 (1.80~7.10) | 7.0 (2.60~8.50) | 8.50 (2.60~10.30) | 8.50 (2.60~10.30) | 10.00 (4.50~11.85) | 10.00 (4.50~11.85) | 11.5 (4.50~13.50) | 11.5 (4.50~13.50) |
| | Power Input | kW | 2.0 (0.61~2.43) | 2.69 (0.91~2.93) | 3.40 (0.91~3.65) | 3.40 (0.91~3.65) | 4.00 (1.45~4.30) | 4.00 (1.45~4.30) | 4.42 (1.45~4.85) | 4.42 (1.45~4.85) |
| | EER | / | 2.50 (2.45~3.05) | 2.60 (2.45~3.05) | 2.50 (2.35~3.00) | 2.50 (2.35~3.00) | 2.50 (2.40~2.96) | 2.50 (2.40~2.96) | 2.60 (2.42~2.89) | 2.60 (2.42~2.89) |
| ERP Level (Outlet water temp. at 35°C/55°C) | | / | A+++/A++ | | | | | | | |
| Rated Input Power | | kW | 2.78 | 3.49 | 3.79 | 3.89 | 5.05 | 5.05 | 6.11 | 6.11 |
| Rated Input Current | | A | 12 | 15 | 17 | 6.5 | 22.2 | 8.5 | 27.50 | 10.50 |
| Refrigerant Type | | / | R32 | | | | | | | |
| Rated water flow | | $m^3/h$ | 1.1 | 1.38 | 1.72 | 1.72 | 2.06 | 2.06 | 2.41 | 2.41 |
| Pressure drop at rating water flow | | kPa | 29 | | | | 32 | | | |
| Fan quantity | | / | 1 | | | | | | | |
| Fan motor type | | / | DC inverter | | | | | | | |
| Compressor | | / | Panasonic / DC inverter / Rotary / EVI | | | | | | | |
| Circulating pump | | / | Inverter type / Builtin | | | | | | | |
| IP Class | | / | IPX4 | | | | | | | |
| Max outlet water temperature | | ℃ | 60 | | | | | | | |
| Operating temperature range (Heating mode) | | ℃ | -38~43 | | | | | | | |
| Operating temperature range (Cooing mode) | | ℃ | 16~48 | | | | | | | |
| Sound pressure at 1m distance | | dB(A) | 49 | 43(39~52) | 45(39~52) | 45(39~52) | 45(39~53) | 45(39~53) | 46(39~53) | 46(39~53) |
| Water piping connections | | inch | G1 | | | | | | G5/4 | |
| UnPacked Weight | | kg | 113 | 120 | 120 | 121 | 128 | 126 | 132 | 131 |
| Packed Weight | | kg | 125 | 132 | 132 | 133 | 140 | 138 | 144 | 143 |
| Unpacked Dimensions (L×D×H) | | mm | 1170×462×855 | | | | | | | |
| Packed Dimensions (L×D×H) | | mm | 1230×540×1010 | | | | | | | |



# R32-SPECIFICATION (2)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | |  | |  | | | | | |
| **Capacity** | | **16kW** | **16kW** | **18kW** | **18kW** | **24kW** | **30kW** | **34kW** |
| **Model** | | **GSHVSH-16BA1** | **GSHVTH-16BA1** | **GSHVSH-18BA1** | **GSHVTH-18BA1** | **GSHVTH-24BA1** | **GSHVTH-30BA1** | **GSHVTH-34BA1** |
| Power Supply | | 220~240V~/50Hz | 380~415V/3N~/50Hz | 220~240V~/50Hz | 380~415V/3N~/50Hz | 380~415V/3N~/50Hz | 380~415V/3N~/50Hz | 380~415V/3N~/50Hz |
| Nominal Heating (Max) (A7/6°C,W30/35°C) | Heating Capacity | kW | 15.80 (6.37~19.11) | 15.80 (6.37~19.11) | 18.21 (6.90~21.00) | 18.21 (6.90~21.00) | 24.05 (7.90~26.20) | 30.05 (9.17~32.71) | 34.15 (9.17~36.80) |
| | Power Input | kW | 3.43 (1.31~4.93) | 3.43 (1.31~4.93) | 3.65 (1.36~5.28) | 3.65 (1.36~5.28) | 5.29 (1.78~6.45) | 6.60 (2.51~8.07) | 7.59 (2.51~9.09) |
| | COP | / | 4.64 (4.10~5.02) | 4.64 (4.10~5.02) | 4.99 (4.05~5.05) | 4.99 (4.05~5.05) | 4.55 (4.03~5.02) | 4.55 (4.05~5.03) | 4.50 (4.05~5.03) |
| Nominal Heating (Max) (A7/6°C,W47/55°C) | Heating Capacity | kW | 15.70 (4.90~17.6) | 15.70 (4.90~17.6) | 18.10 (6.30~19.90) | 18.10 (6.30~19.90) | 22.99 (6.90~26.10) | 29.86 (9.73~31.82) | 33.50 (9.73~36.80) |
| | Power Input | kW | 4.83 (1.65~5.33) | 4.83 (1.65~5.33) | 5.82 (1.65~6.82) | 5.82 (1.65~6.82) | 8.04 (1.95~8.55) | 10.12 (2.75~10.36) | 11.55 (2.75~12.06) |
| | COP | / | 3.25 (2.87~3.38) | 3.25 (2.87~3.38) | 3.11 (2.91~3.34) | 3.11 (2.91~3.34) | 2.86 (3.05~3.42) | 2.95 (3.05~3.42) | 2.90 (3.05~3.42) |
| Nominal Cooling (Max) (A35/24°C,W12/7°C) | Cooling Capacity | kW | 13.00 (5.05~15.00) | 13.00 (5.05~15.00) | 15.00 (5.50~17.50) | 15.00 (5.50~17.50) | 19.50 (5.20~21.30) | 23.5 (7.33~26.70) | 28.5 (7.33~30.03) |
| | Power Input | kW | 5.20 (1.65~5.33) | 5.20 (1.65~5.33) | 6.00 (1.65~6.25) | 6.00 (1.65~6.25) | 7.80 (1.95~8.20) | 9.40 (2.75~10.27) | 11.40 (2.75~11.56) |
| | EER | / | 2.50 (2.42~2.85) | 2.50 (2.42~2.85) | 2.50 (2.38~2.96) | 2.50 (2.38~2.96) | 2.50 (2.34~2.95) | 2.50 (2.36~2.98) | 2.50 (2.35~2.92) |
| ERP Level (Outlet water temp. at 35°C/55°C) | | / | A+++/A++ | | | | | | |
| Rated Input Power | | kW | 7.12 | 7.12 | 7.80 | 7.56 | 11.50 | 11.65 | 13.10 |
| Rated Input Current | | A | 33.00 | 12.50 | 35.00 | 13.00 | 18.50 | 19.76 | 22.00 |
| Refrigerant Type | | / | R32 | | | | | | |
| Rated water flow | | $m^3/h$ | 2.75 | 2.75 | 3.10 | 3.10 | 4.12 | 5.85 | 5.85 |
| Pressure drop at rating water flow | | kPa | 32 | | | | 35 | 39 | |
| Fan quantity | | / | 1 | | 2 | | | | |
| Fan motor type | | / | DC inverter | | | | | | |
| Compressor | | / | Panasonic / DC inverter / Rotary / EVI | | | | | | |
| Circulating pump | | / | Inverter type / Builtin | | | | | | |
| IP Class | | / | IPX4 | | | | | | |
| Max outlet water temperature | | ℃ | 60 | | | | | | |
| Operating temperature range (Heating mode) | | ℃ | -38~43 | | | | | | |
| Operating temperature range (Cooing mode) | | ℃ | 16~48 | | | | | | |
| Sound pressure at 1m distance | | dB(A) | 48(39~54) | 48(39~54) | 48(39~54) | 48(39~54) | 52 (40~58) | 52 (42~62) | 52 (42~62) |
| Water piping connections | | inch | G5/4 | | | | | G3/2 | |
| UnPacked Weight | | kg | 132 | 131 | 175 | 174 | 181 | 212 | 212 |
| Packed Weight | | kg | 144 | 143 | 189 | 188 | 195 | 228 | 228 |
| Unpacked Dimensions (L×D×H) | | mm | 1170×462×855 | | 1130×452×1443 | | | 1220×452×1657 | |
| Packed Dimensions (L×D×H) | | mm | 1230×540×1010 | | 1190×540×1600 | | | 1280×540×1815 | |

# R290 COMMERCIAL AIR TO WATER HEAT PUMP




## Modes:

Radiator/
Fan Coil Heating

Floor Heating

## Features:

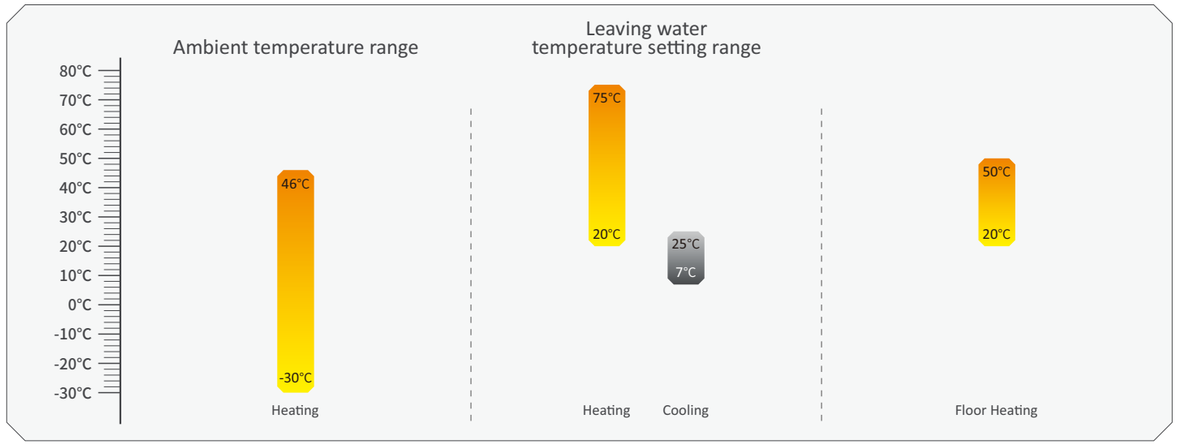
- EVI technology
- Eco-friendly R290 refrigerant, **ODP=0, GWP=3**
- **A++ at 55°C** & **A+++ at 35°C**
- Outlet water temperature up to **75°C**
- Operates in ambient temperatures as low as **-25°C**.
- Noise as low as **65dB(A)** at 1 meter
- Support Modbus protocol,
  reserved RS485 port4G module (optional)
- Self-developed APP
- SG-ready
- PV-ready(optional)




# SPECIFICATION

| | |  |  | |
|---|---|---|---|---|
| Model | | GSHVTV-50AA1 | GSHVTV-75AA1 | GSHVTV-100AA1 |
| Power Supply | | | 380V~415V/3/50Hz | |
| Nominal Heating (Max) (A7/6°C,W30/35°C) | | | | |
| Heating Capacity | kW | 18.50~50.50 | 25.00~76.0 | 35.50~105.00 |
| Power Input | kW | 3.95~14.80 | 5.75~21.71 | 7.95~30.43 |
| COP1 | / | 3.5~4.70 | 3.55~4.65 | 3.5~4.62 |
| Nominal Heating (Max) (A7/6°C,W47/55°C) | | | | |
| Heating Capacity | kW | 10.85~40.00 | 19.58~67.27 | 26.85~93.45 |
| Power Input | kW | 3.74~13.79 | 6.19~26.91 | 8.52~37.38 |
| COP2 | / | 3.02~3.52 | 2.50~3.38 | 2.55~3.28 |
| Nominal Cooling (Max) (A35/24°C,W12/7°C) | | | | |
| Cooling Capacity | kW | 10.15~28.50 | 13.5~ 48.5 | 16.20~ 65.50 |
| Power Input | kW | 3.63~12.95 | 6.91~20.90 | 7.35~ 33.41 |
| EER | / | 2.20~2.70 | 2.00~2.45 | 2.00~2.50 |
| Max Power Input | kW | 19.3 | 30.5 | 40.5 |
| Max Current | A | 35.0 | 54.5 | 82.0 |
| ERP level(35°C)/(55°C) | / | A+++/A++ | | |
| Maximun Allowable Pressure | MPa | 3.2 | | |
| Refrigerant | / | R290 | | |
| ELectrical Shockproof | / | I | | |
| Compressor quantity | / | 1 | 2 | |
| Fan motor quantity | / | 1 | 2 | |
| Fan motor Type | / | DC | | |
| Expansion Valve | / | EEV/sanhua | | |
| Air Flow Direction | / | Vertical | | |
| IP class | / | IPX4 | | |
| Water Flow Volume | $m^3/h$ | 6.0 | 9.0 | 12.5 |
| Water Pressure Drop | kPa | 65 | 75 | 76 |
| Working temperature range | °C | -25~46 | | |
| Noise | dB(A) | 55(39-55) | 62(54-72) | |
| Water connection | / | G3/2 | Flange DN80 | |
| Net Weight | kg | 450 | 780 | 900 |
| Dimensions(L×W×H) | mm | 1100×1100×2150 | 2200×1100×2255 | |
| Packing(L×W×H) | mm | 1144×1144×2250 | 2260×1160×2385 | |

# R32 COMMERCIAL AIR TO WATER HEAT PUMP




## Modes:

Radiator/
Fan Coil Heating

Floor Heating

## Features:

- EVI technology
- Eco-friendly R32 refrigerant, **GWP≈675**
- **A++ at 55°C** & **A+++ at 35°C**
- Outlet water temperature up to **75°C**
- Operates in ambient temperatures as low as **-38°C**.
- Noise as low as **60dB(A)** at 1 meter
- Support Modbus protocol, reserved RS485 port
- 4G module (optional)
- Self-developed APP
- SG-ready




# SPECIFICATION

| | |  |  | |
|---|---|---|---|---|
| **Capacity** | | **50kW** | **100kW** | **210KW** |
| **Model** | | **GSHVTV-50BA1** | **GSHVTV-100BA1** | **GSHVTV-210BA1** |
| Power Supply | | 380V~415V/3/50Hz | | |
| Nominal Heating (Max) (A7/6°C,W30/35°C) | | | | |
| Heating Capacity | kW | 46.0(13.9~52.8) | 92.0(28.5~107.8) | 176.0(49.7~213.0) |
| Power Input | kW | 11.1(3.0~15.2) | 22.2(5.9~30.3) | 42.33(11.1~60.0) |
| COP | / | 4.14(3.50~4.75) | 4.15(3.52~4.80) | 4.16(3.55~4.82) |
| Nominal Heating (Max) (A7/6°C,W47/55°C) | | | | |
| Heating Capacity | kW | 43.3(13.5~49.5) | 86.5(27.9~102.3) | 172.0(48.6~202.0) |
| Power Input | kW | 16.5(4.3~19.5) | 32.8(9.0~40.1) | 64.89(17.1~79.2) |
| COP | / | 2.63(2.53~3.12) | 2.64(2.53~3.12) | 2.65(2.55~3.12) |
| Nominal Heating (Max) (A-12°C/-14°C, W 50/55°C) | | | | |
| Heating Capacity | kW | 34.0(10.3~35.3) | 68.0(21.3~72.1) | 136.8(36.3~141.0) |
| Power Input | kW | 19.6(4.9~20.7) | 38.8(9.9~42.4) | 79.4(18.1~82.0) |
| COP | / | 1.73(1.70~2.20) | 1.75(1.70~2.20) | 1.72(1.65~2.15) |
| Nominal Cooling (Max) (A35/24°C,W12/7°C) | | | | |
| Cooling Capacity | kW | 28.0(12.2~30.6) | 56(25.2~62.5) | 106.0(39.4-135.2) |
| Power Input | kW | 12.1(5.1~17.2) | 27.0(10.7~31.1) | 46.1(18.7-73.1) |
| Max Power Input | kW | 22.0 | 43.0 | 82.0 |
| Max Current | A | 43.5 | 85.0 | 160.0 |
| Compressor quantity | / | 1 | 2 | |
| Expansion Valve | / | EEV | | |
| Air Flow Direction | / | Vertical | | |
| IP class | / | IPX4 | | |
| Water Flow Volume | $m^3/h$ | 8.0 | 16.0 | 30.0 |
| Water Pressure Drop | kPa | 70 | 73 | 76 |
| Working temperature range | °C | -35~46 | | |
| Noise | dB(A) | ⩽65 | ⩽68 | ⩽76 |
| Water connection | / | G1-1/2 | (Flange)DN 65 | (Flange)DN 80 |
| Net Weight | kg | 450 | 780 | 1250 |
| Dimensions(L×W×H) | mm | 1100×1100×2150 | 2000×1110×2250 | 2400×1160×2450 |