# R290 AIR SOURCE
## Monoblock Heat Pump

www.sunrain.com

# Eco-Smart Comfort: R290 Air Source Heat Pump

Solareast R290 air source heat pump offers eco-friendly and energy-efficient heating and cooling solutions. Utilizing propane (R290) as the refrigerant, it ensures exceptional efficiency while reducing environmental impact. With its advanced technology, it achieves significant energy savings, making it a cost-effective choice for both residential and commercial spaces.

The ultra-low Global Warming Potential (GWP) of 3 minimizes greenhouse gas emissions, contributing to a greener planet Designed for silent operation and easy installation, it provides reliable and hassle-free comfort Embrace the future of sustainable heating and cooling with our R290 air source heat pump, enjoying the eco-smart performance, energy savings, and superior comfort.
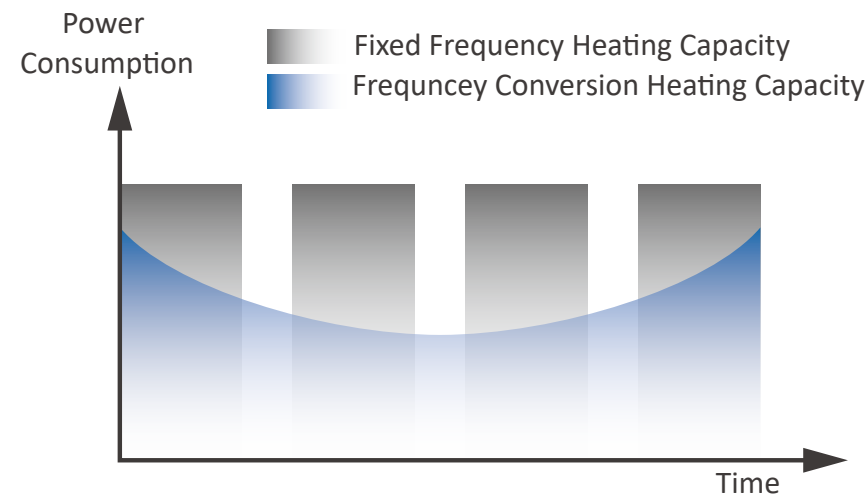
ECO FRIENDLY
R290
NATURAL REFRIGERANT

BLN-006/012TC1          BLN-018 TC1/ 018 TC3

CE   iE   Microgeneration Certification Scheme   SG Ready Smart Heat Pumps   ErP

# HOW THE SYSTEM WORKS.

**Power Consumption**

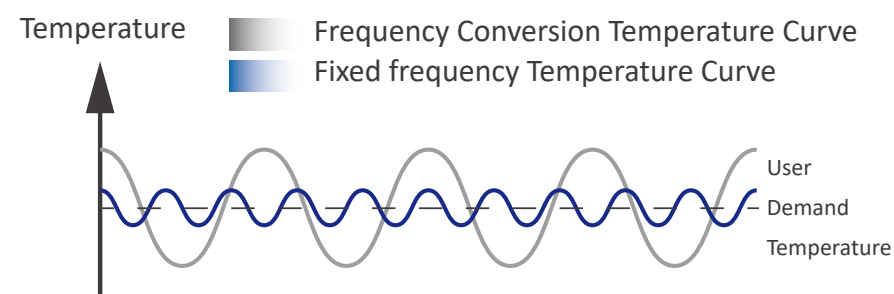■ Fixed Frequency Heating Capacity
■ Frequncey Conversion Heating Capacity

**Time**

Sunrain ultra-low temperature full DC inverter frequency modulation, which can save more energy up to 59%, compared with other variable frequency units.
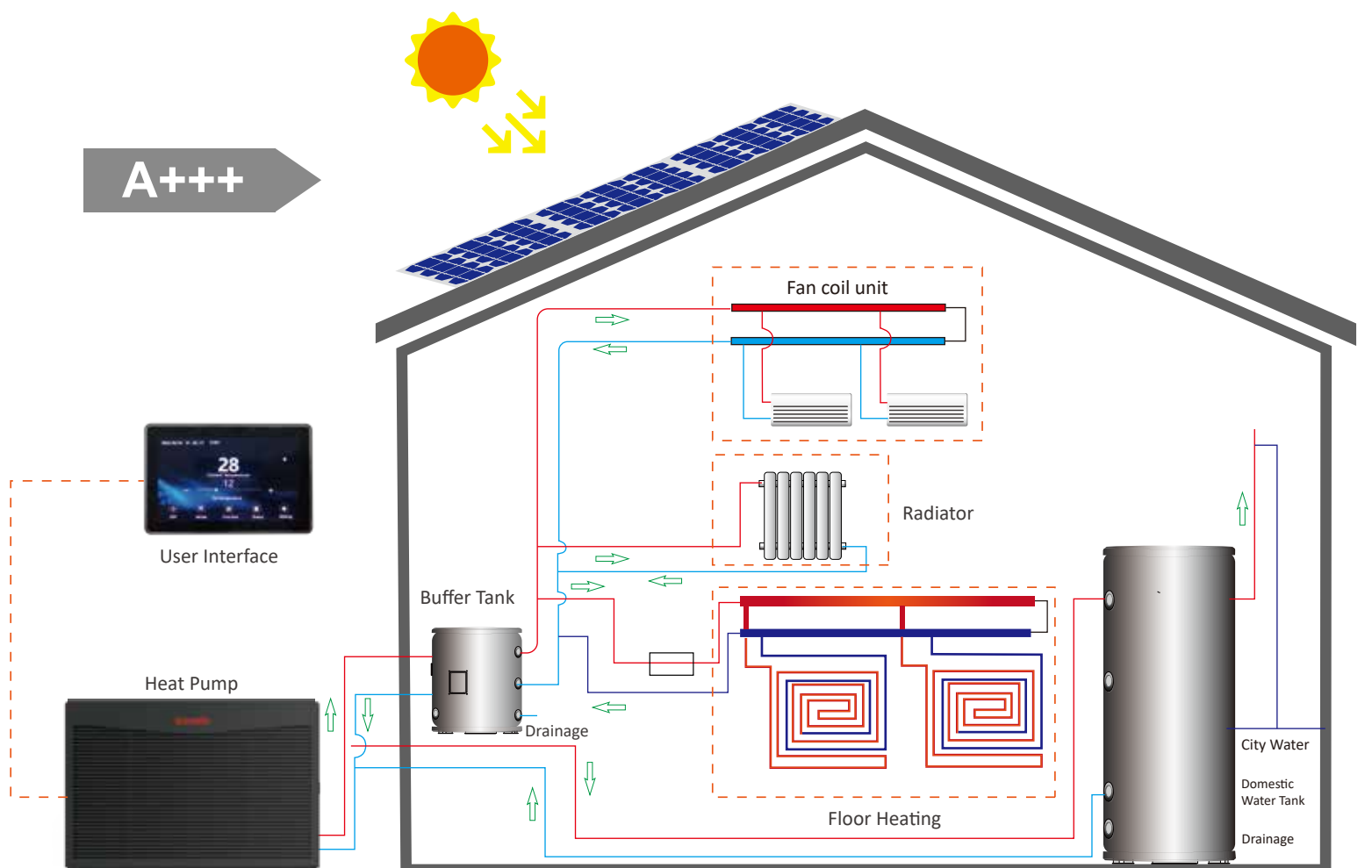
**Temperature**

■ Frequency Conversion Temperature Curve
■ Fixed frequency Temperature Curve

User Demand Temperature

A+++

Fan coil unit

User Interface

Radiator

Buffer Tank

Heat Pump

Drainage

Floor Heating

City Water

Domestic Water Tank

Drainage

# Hydro Tower

## Solareast Hydro Tower: the first choice for energy-efficient new builds

Modern heat pumps are among the most efficient and thus economical heating systems. With green electricity, their operation is absolutely climate-friendly. Not least for these reasons, most building owners today opt for a heat pump to heat their living spaces and to heat the water for bathing, showering and cooking. The new split-design heat pumps in the Solareast Hydro Tower range are the first choice here, given that their refrigerant is also particularly climate-friendly.

# Benefits of Hydro Tower

- Low operating costs due to high coefficient of performance
- Appealing, high-quality design of the internal and external unit
- Environmentally friendly refrigerant R290/R32.
- Reduced space requirements perfectly matched accessories for visually appealing installations
- Future-proof thanks to the most cutting-edge heat pump technology with natural refrigerant, reducing your carbon footprint
- Very quiet operation - can even be used in densely built-up terraced housing estates
- Outstanding quality and durability
- Choose from 200L or 250L Tank Options for Maximum Flexibility.
- Perfectly Compatible with Our R290/R32 Monoblock Heat Pump Solution.

# Advantages of R290 Monoblock Heat Pump

### Advantages of R290 Refrigerant: Eco-friendly

R290 refrigerant offers numerous advantages. With a low Global Warming Potential (GWP) of 3, it significantly reduces environmental impact. It is energy efficient, safe, and reliable, making it an eco-friendly choice. R290 is also cost-effective, compatible with existing systems, and helps reduce carbon emissions, making it ideal for sustainable cooling and heating solutions.

### Silent Comfort: Serene Climate Control

Our products offer a whisper-quiet operation, ensuring a serene environment. With advanced noise reduction technology, you can enjoy the perfect temperature without any disturbance. Experience tranquility at its best with our silent air source heat pumps.

### Power Consumption Module

The power consumption module provides users with direct access to daily electricity consumption data, as well as long-term consumption trends. This functionality empowers customers to understand the energy efficiency of our products compared to traditional boilers, highlighting substantial electricity savings and contributing significantly to the preservation of the ecological environment. The 5" color screen has an intuitive interface for simple navigation and accurate temperature changes
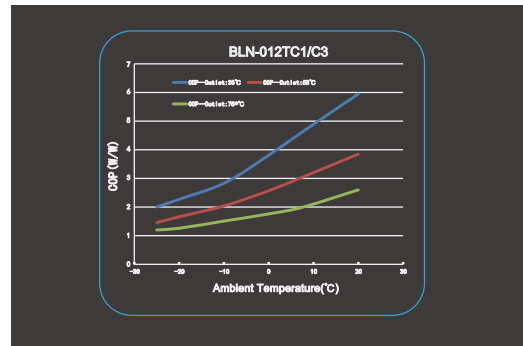
### Freezing Conditions? No Problem!

Sunrain air source heat pump thrives in frigid temperatures, operating flawlessly even at -25°C. Experience uninterrupted heating performance when you need it most. With our reliable technology, winter chills are no match for our resilient air source heat pump.

### SG Ready

Sunrain heat pump company proudly holds the SG Ready certification, developed by the German Heat Pump Association and 17 manufacturers. This seal confirms that our smart grid-capable heat pumps seamlessly communicate with "smart grids." Experience the benefits of utilizing surplus electricity for efficient heating, hot water, and mild summer cooling, ensuring an advantage in energy optimization and sustainability.

### Efficient IoT Solution

Sunrain's IoT customer management platform can effectively save labor costs for dealers. It can be connected with WIFI or DUT to realize remote monitoring of data and record all the operating parameters of the units and synchronize it to the management background of dealers and manufacturers. If the heat pump has an error report, the dealer can quickly provide users with the best solutions according to this report.

### Dual Temperature Zone

The air source heat pump has a dual temperature zone, allowing you to adjust your living room floor heating to a comfortable 35°C and your room heater to a warm 55°C. With our novel dual temperature zone function, you may enjoy tailored comfort at its best.
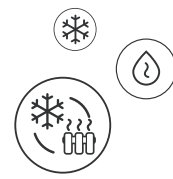
### Cut Costs, Conserve Energy

Sunrain heat pump company proudly holds the SG Ready certification, developed by the German Heat Pump Association and 17 manufacturers. This seal confirms that our smart grid-capable heat pumps seamlessly communicate with "smart grids." Experience the benefits of utilizing surplus electricity for efficient heating, hot water, and mild summer cooling, ensuring an advantage in energy optimization and sustainability.

### WIFI Module 5G/2.4G Compatible

Stay connected with our innovative air energy heat pump, which includes a 5G/2.4G Compatible WIFI Module. Using your smartphone or tablet, you can operate and monitor your heat pump system from anywhere. For maximum comfort and energy efficiency, enjoy the simplicity of altering settings, scheduling temperature adjustments, and getting real-time notifications.

# SPECIFICATION

## Performance Parameters

| Model | | | BLN-006TC1 | BLN-012TC1 | BLN-018TC1 | BLN-012TC3 | BLN-018TC3 |
|---|---|---|---|---|---|---|---|
| Rated voltage / Frequency | | | 220-240V~ / 50/60Hz | 220-240V~ / 50/60Hz | 220-240V~ / 50/60Hz | 380-415V/3N~/50/60Hz | 380-415V/3N~/50/60Hz |
| Heating[1] | Capacity | kW | 2.92-9.10 | 4.30-15.20 | 7.24-21.90 | 4.30-15.20 | 7.24-21.90 |
| | Input Power | kW | 0.61-2.11 | 0.87-3.73 | 1.50-5.88 | 0.87-3.73 | 1.50-5.88 |
| | Input Current | A | 2.80-9.25 | 4.02-16.38 | 6.86-30.25 | 1.78-6.04 | 2.82-9.16 |
| Heating[2] | Capacity | kW | 2.99-8.16 | 4.25-14.55 | 6.36-19.45 | 4.25-14.55 | 6.36-19.45 |
| | Input Power | kW | 1.03-2.92 | 1.45-4.28 | 2.15-6.85 | 1.45-4.28 | 2.15-6.85 |
| | Input Current | A | 4.57-12.79 | 6.71-18.80 | 9.84-30.12 | 2.84-6.78 | 3.71-10.60 |
| Cooling | Capacity | kW | 1.38-5.70 | 3.65-11.04 | 4.55-17.20 | 3.65-11.04 | 4.55-17.20 |
| | Input Power | kW | 0.67-2.44 | 1.12-3.97 | 1.85-7.31 | 1.12-3.97 | 1.85-7.31 |
| | Input Current | A | 3.06-10.27 | 5.18-17.44 | 8.47-32.1 | 1.97-6.30 | 2.99-11.26 |
| SCOP (Water Temp. At 35℃) | | | 4.98 | 4.90 | 4.91 | 4.90 | 4.93 |
| SCOP (Water Temp. At 55℃) | | | 3.84 | 3.86 | 3.94 | 3.86 | 3.93 |

## Basic Parameters

| Model | | BLN-006TC1 | BLN-012TC1 | BLN-018TC1 | BLN-012TC3 | BLN-018TC3 |
|---|---|---|---|---|---|---|
| Rated Input Power | kW | 3.5 | 5.40 | 7.50 | 5.85 | 10.5 |
| Rated Input Current | A | 15.0 | 25.0 | 35.0 | 10.0 | 17.0 |
| Refrigerant Type/Charge/GWP | .../kg | R290/0.55/3 | R290/0.90/3 | R290/1.4/3 | R290/0.90/3 | R290/1.4/3 |
| $CO_2$ Equivalent | / | 0.0017t | 0.0027t | 0.0042t | 0.0027t | 0.0042t |
| Operation Pressure(Low Side) | MPa | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Operation Pressure(High Side) | MPa | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Maximum Allowable Pressure | MPa | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Electrical Shockproof | / | I | I | I | I | I |
| IP Class | / | IPX4 | IPX4 | IPX4 | IPX4 | IPX4 |
| Max. Outlet Water Temp. | ℃ | 75 | 75 | 75 | 75 | 75 |
| Operating Ambient Temperature | ℃ | -25~45 | -25~45 | -25~45 | -25~45 | -25~45 |
| Water Piping Connections | inch | G1 | G1 | G1-1/4 | G1 | G1-1/4 |
| Rated Water Flow | m³/h | 1.0 | 2.06 | 3.10 | 2.06 | 3.1 |
| Water Pressure Drop | kPa | 20 | 20 | 55 | 20 | 55 |
| Min/Max Water Pressure | MPa | 0.1/0.3 | 0.1/0.3 | 0.1/0.3 | 0.1/0.3 | 0.1/0.3 |
| Noise Level | dB(A) | 48 | 50 | 55 | 50 | 55 |

## Sizing Guide

| Model | | BLN-006TC1 | BLN-012TC1 | BLN-018TC1 | BLN-012TC3 | BLN-018TC3 |
|---|---|---|---|---|---|---|
| Net Dimensions（L×W×H） | mm | 1187×418×805 | 1287×448×904 | 1187×488×1456 | 1287×448×904 | 1187×488×1456 |
| Packed Dimensions（L×W×H） | mm | 1217*463*920 | 1317*493*1020 | 1317*538*1570 | 1317*493*1020 | 1217*538*1570 |
| Net Weight | kg | 90 | 110 | 145 | 110 | 145 |
| Gross Weight | kg | 115 | 125 | 160 | 125 | 160 |
| Loading quantity 20GP/40HC | | 34/68 | 33/66 | 18/36 | 33/66 | 18/36 |

**Rated Test Conditions:**

Heating[1]: Ambient Temp 7℃/6℃(DB/WB),Water-In/Out Temp 30℃/35℃

Heating[2]: Ambient Temp 7℃/6℃(DB/WB),Water-In/Out Temp 47℃/55℃

Cooling: Ambient Temp 35℃/24℃(DB/WB),Water-In/Out Temp 12℃/7℃