Sunrain SolarEast

R290 Air Source Monoblock Heat Pump

sunrainhvac.com

Eco-Smart Comfort: R290 Air Source Heat Pump

Sunrain R290 air source heat pump offers eco-friendly and energy-efficient heating and cooling solutions. Utilising 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 minimises 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.

BLN-006|012 TC1
BLN-012 TC3

BLN-018 TC1
BLN-018TC3

CE ErP heat pump KEYMARK Federal Office for Economic Affairs and Export Control

SG Ready Smart Heat Pumps MCS CERTIFIED ECO FRIENDLY R290 GAS

Advantages of R290 Monoblock Heat Pump

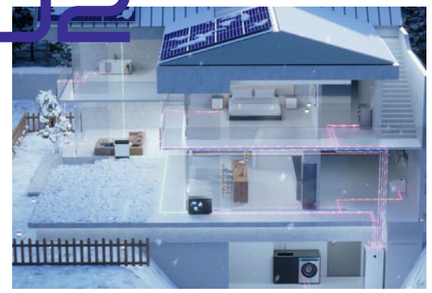
09

/01

"Advantages Of R290 Refrigerant: Eco-friendly "

R290 refrigerantoffers numerous advantages. With a low Global Warming Potential (GWP) of 3, it significantlyreduces environmental impact. It is energy efficient, safe, and reliable, making it an eco-friendlychoice. R290 is also cost-effective, compatible with existingsystems, and helps reduce carbon emissions, making it ideal for sustainable cooling and heating solutions.

/02



"Linkage Control With PV System"

This feature enables seamless integration with photovoltaic (PV) systems, allowing real-timeoptimisationof energy use. By linking the heat pump with solar power, it maximisesenergy efficiency, reduces operating costs, and enhances the overall sustainability of the system.

/03

"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 significantlyto the preservation of the ecological environment. The 5"color screen has an intuitiveinterface for simple navigation and accurate temperaturechanges.

/04

"Powerful EVI Heating, Reliable To -25°C!"

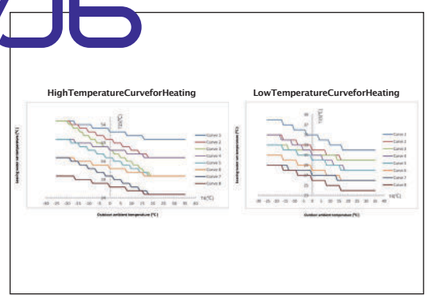
Solareast air source heat pumps,with their EVI technology, operate consistently in temperatures as low as -25°C.Providing you with consistent and reliable heating performance, no matter how harsh the winter.

/05

"Efficient IoT Solution"

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

/06



"Customisable Heating Curve"

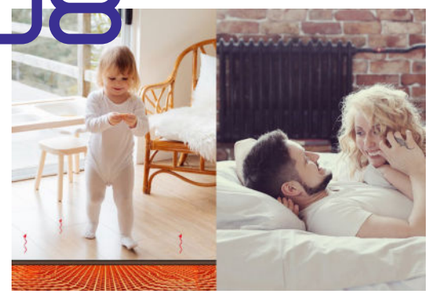
The customisable heating curve feature enables precise control over the heating system, enhancing efficiency and adaptability. By adjusting heating curves to suit varying temperature ranges, users can optimise energy savings and ensure consistent indoor comfort. This advanced functionality seamlessly meets diverse environmental conditions and user-specific requirements, delivering tailored heating solutions.

/07

"Cascade System Up To 16 Heat Pumps"

The cascade system enables the connection of up to 16 heat pumps in a series, providing scalable and efficient heating solutions. This system ensures optimal performance, flexibility, and energy efficiency across large-scale applications, meeting diverse heating demands with precision.

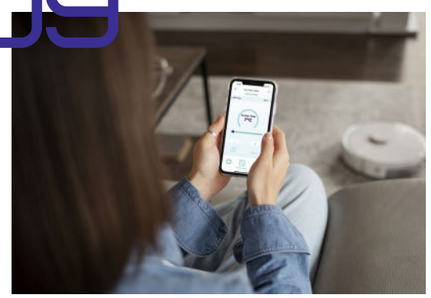
/08



"Multi-temperature Zone"

The multi-temperaturezonefeature enables independent temperature control fordifferentareas within a space, such as setting floorheating in the living room to a comfortable 35°C while maintaining a warmer 55°C in the room. This customizable approach ensures optimizedcomfort and energy efficiency across multiplezones, ideal fordiverse heating needs in residential or commercial settings.

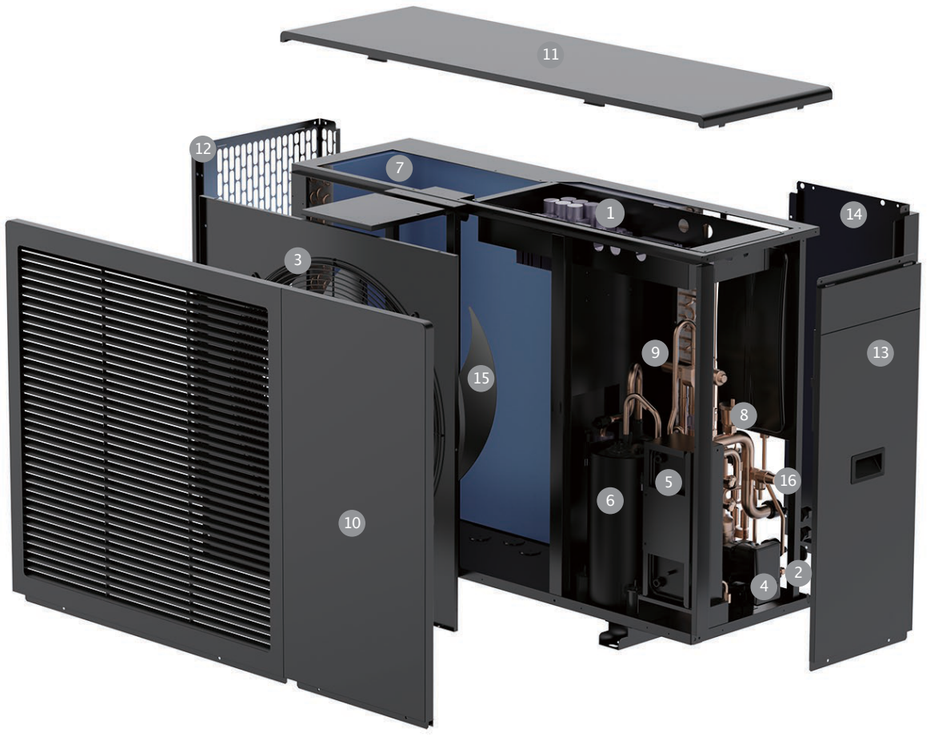
/09



"WIFI Module 5G/2.4G Compatible"

Stay connected with our innovative air energy heat pump, which includes a 5G/2.4Gcompatible WIFI module. Using your smartphone or tablet, you can operate and monitoryour heat pump system fromanywhere. For maximumcomfort and energy efficiency, enjoy the simplicity of altering settings, scheduling temperature adjustments, and getting real-time notifications.

Exploded Diagram

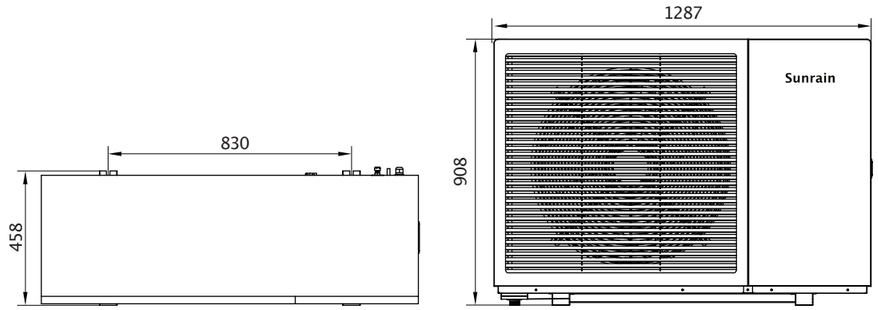


Components

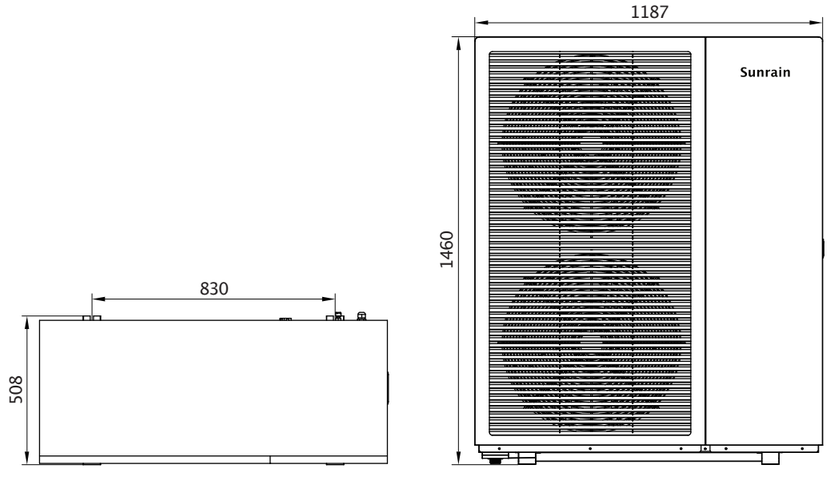
1. Main board
2. Right rear support
3. Front net of air outlet
4. Water pump
5. Plate heat exchanger
6. Compressor
7. Evaporator
8. Exhaust valve
9. Four way valve
10. Front panel
11. Top cover
12. Side net
13. Right side panel
14. Rear panel
15. Fan
16. Drain valve

SolarEast

Product Dimensions



6kW



18kW

TECHNICAL DATA

Model			**BLN-006TC1**	**BLN-008TC1**	**BLN-008TC3**	**BLN-012TC1**	**BLN-012TC3**	**BLN-018TC1**	**BLN-018TC3**
Power supply		V/Ph/Hz	220~240/1/50	220~240/1/50	380~415/3/50	220~240/1/50	380~415/3/50	220~240/1/50	380~415/3/50
Nominal Heating (Max) (A7/6℃,W30/35℃)	Heating capacity	kW	2.92~9.10	4.10~12.10	4.10~12.10	4.30~15.20	4.30~15.20	7.24~21.90	7.24~21.90
	Power input	kW	0.61~2.11	0.79~2.85	0.79~2.85	0.87~3.73	0.87~3.73	1.50~5.88	1.50~5.88
	Current input	A	2.80~9.25	3.45~13.04	1.62~4.57	4.02~16.38	1.78~6.04	6.86~30.25	2.82~9.16
	COP	W/W	4.31~5.66	4.24~5.57	4.24~5.57	4.07~5.57	4.07~5.57	3.82~5.59	3.82~5.59
Nominal Heating (Max) (A7/6℃,W47/55℃)	Heating capacity	kW	2.99~8.16	4.05~12.15	4.05~12.15	4.25~14.55	4.25~14.55	6.36~19.45	6.36~19.45
	Power input	kW	1.03~2.92	1.38~4.06	1.38~4.06	1.45~4.28	1.45~4.28	2.15~6.85	2.15~6.85
	Current input	A	4.57~12.79	5.73~17.70	2.70~6.43	6.71~18.80	2.84~6.78	9.84~30.12	3.71~10.60
	COP	W/W	2.79~3.46	2.99~3.45	2.99~3.45	2.83~3.45	2.83~3.45	2.84~3.57	2.84~3.57
Nominal Cooling (Max) (A35/24℃,W12/7℃)	Cooling capacity	kW	1.38~5.70	3.65~8.59	3.65~8.59	3.65~11.04	3.65~11.04	4.55~17.20	4.55~17.20
	Power input	kW	0.67~2.44	1.12~3.31	1.12~3.31	1.12~3.97	1.12~3.97	1.85~7.31	1.85~7.31
	Current input	A	3.06~10.27	5.18~14.47	1.97~5.25	5.18~17.44	1.97~6.30	8.47~32.1	2.99~11.26
ERP level（outlet water temp. at 35℃）		/	A+++	A+++	A+++	A+++	A+++	A+++	A+++
Max. input power		kW	3.5	5.40	5.85	5.40	5.85	7.5	10.5
Max. input current		A	15.0	25.0	10.0	25.0	10.0	35.0	17.0
Refrigerant Type / Charge / GWP		... / kg	R290 / 0.55 / 3	R290 / 1.05 / 3	R290 / 1.05 /3	R290 / 1.05 / 3	R290 / 1.05 /3	R290 / 1.4 / 3	R290 / 1.4 / 3
Rated water flow		m^3/h	1.00	1.4	1.4	2.06	2.06	3.1	3.1
Fan quantity		/	1	1	1	1	1	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)	46	43	43	53	54	56	56
Maxoutlet water temperature		℃	75	75	75	75	75	75	75
Water piping connections		/	G1	G1	G1	G1	G1	G1 – 1/ 4	G1 – 1/ 4
Water Pressure drop		kPa	20	20	20	20	20	55	55
Operating temperature range (heating mode)		℃	-25~45						
Operating temperature range (cooling mode)		℃	16~45						
Unpacked dimensions (L*D*H)		mm	1187*418*805	1287*448*904	1287*448*904	1287*448*904	1287*448*904	1187*488*1456	1187*488*1456
Packed dimensions (L*D*H)		mm	1217*463*920	1317*493*1020	1317*493*1020	1317*493*1020	1317*493*1020	1217*538*1570	1217*538*1570
UnPacked weight		kg	110	134	134	134	134	195	195
Packed weight		kg	122	146	146	146	146	208	208

* Please refer to the nameplate for product upgrades or changes in specifications without prior notice.