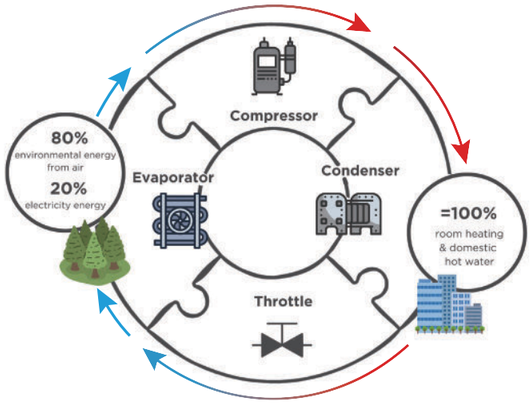
R290 Commercial Heat Pump

Heating from air

Sunrain SolarEast

CASE STUDY

R290 Commercial Heat Pump



Environmentally Conscious Choice

Heating From air

- **Eco-environmentally**
- **Energy saving**
- **High efficiency**

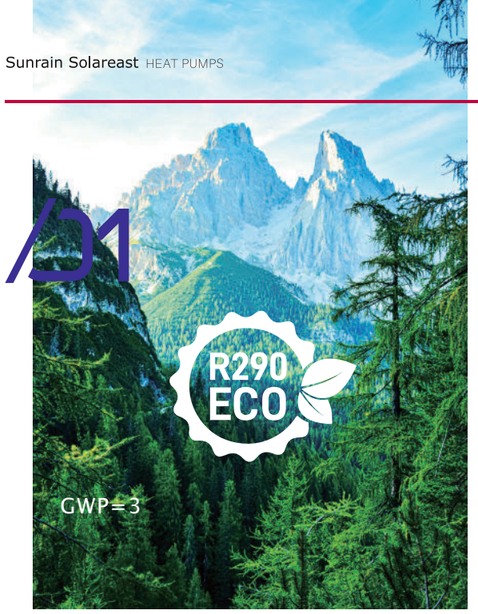
Traditional heating systems rely on fossil fuels or electric heaters with low efficiency, consuming more energy than heat produced. This leads to high costs and significant CO_2 emissions, further strained by rising energy prices and stricter regulations.

In contrast, commercial heat pumps use renewable energy from air achieving efficiencies far above 1and reducing energy use by up to 70%. They minimize CO_2 emissions, cut operating costs, and help businesses meet sustainability goals, making them the ideal choice for modern, eco-friendly heating solutions.

Applications

- Hotel
- Resort
- Office Building
- School
- Gym
- Hospital
- Shopping Mall
- Factory
- Greenhouse
- Apartment
- Restaurants
- Transportation Hubs

/01



R290 Eco-friendly Refrigerant

With a zero ODP and a GWP of only 3, R290 refrigerant is an environmentally responsible choice for heat pumps. Its superior thermodynamic properties ensure high energy efficiency and reliable operation, making it ideal for sustainable heating and cooling solutions.

/02

WiFi Remote Control

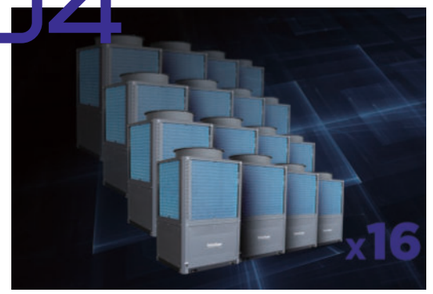
Users monitor and operate heat pumps from anywhere, anytime, using a smartphone or tablet. Real-time data access enables precise adjustments, energy optimisation, and performance tracking.This connectivity simplifies operation, reduces maintenance costs, and enhances user convenience, making it ideal for commercial applications.

/03

Integrates OTA and DTU Connectivity for Seamless IoT Management

Integrates OTA and DTU Connectivity for Seamless IoT Management With OTA updates and DTU connectivity, the system ensures efficient and reliable IoT management. OTA enables remote updates and optimisations, while DTU provides stable data transmission for real-time monitoring. These features enhance IoT functionality, offering convenience, scalability, and seamless integration for advanced heating solutions.

/04



Maximum 16 Heat Pumps Can Be Operated in Parallel

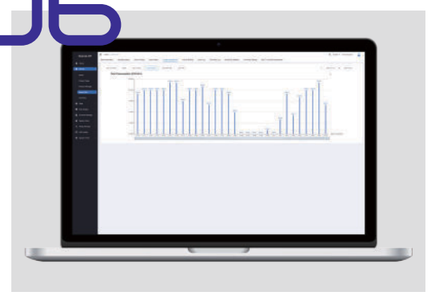
The system supports parallel operation of up to 16 heat pumps, offering unparalleled scalability for large commercial or industrial applications. This configuration allows for flexible capacity adjustment, ensuring efficient energy use based on real-time demand.

/05

MODBUS RS485 Communication

MODBUS RS485 adapter allows seamless integration of the heat pump system with home or building management systems. This enables real-time adjustments to the heat pump's output based on current heat demand and building specifications. A wide range of operating parameters, including modes, flow rates, and room temperatures, can be monitored, gathered, and modified, ensuring efficient and precise system operation.

/06

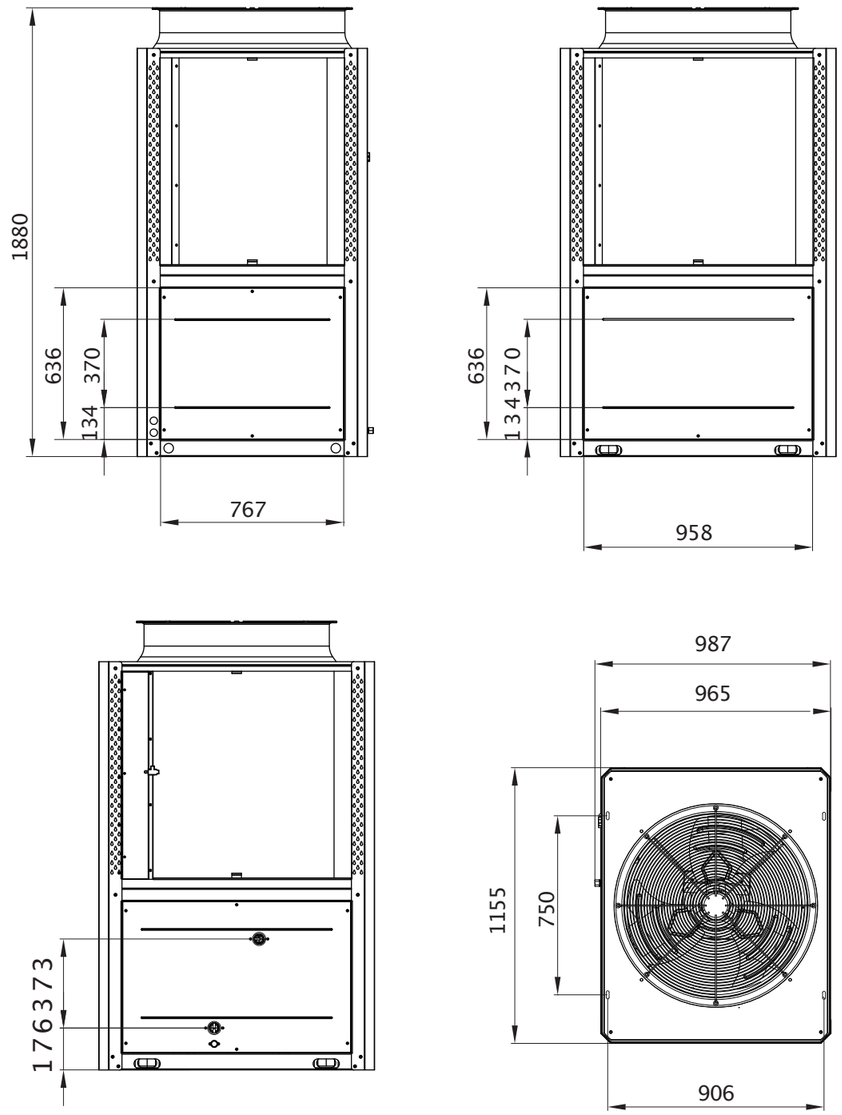


Power Consumption Module

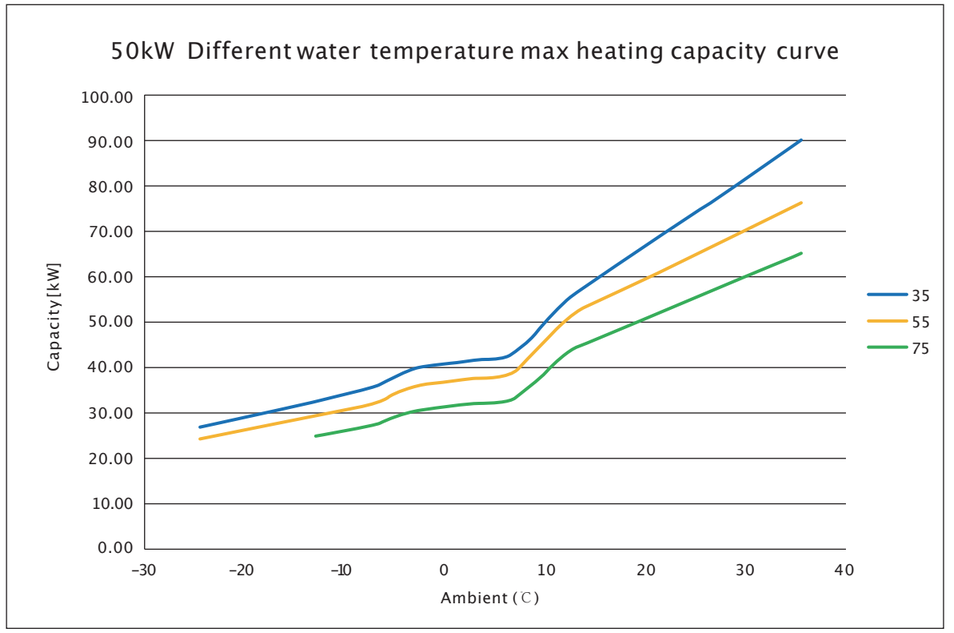
The power consumption module provides users with direct access to daily electricity consumption data, as well as long-term consumption trends. This functionality empowers customers to understand the energy efficiency of our products compared to traditional boilers, highlighting substantial electricity savings and contributing significantly to the preservation of the ecological environment.

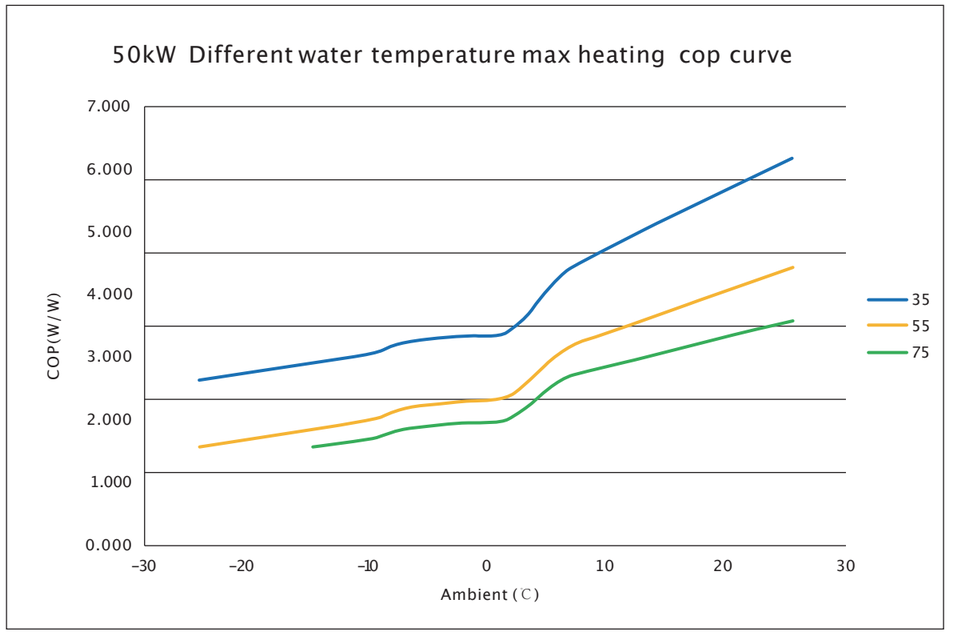
Equipment Dimensions

50kW Commercial Heating Heat Pump



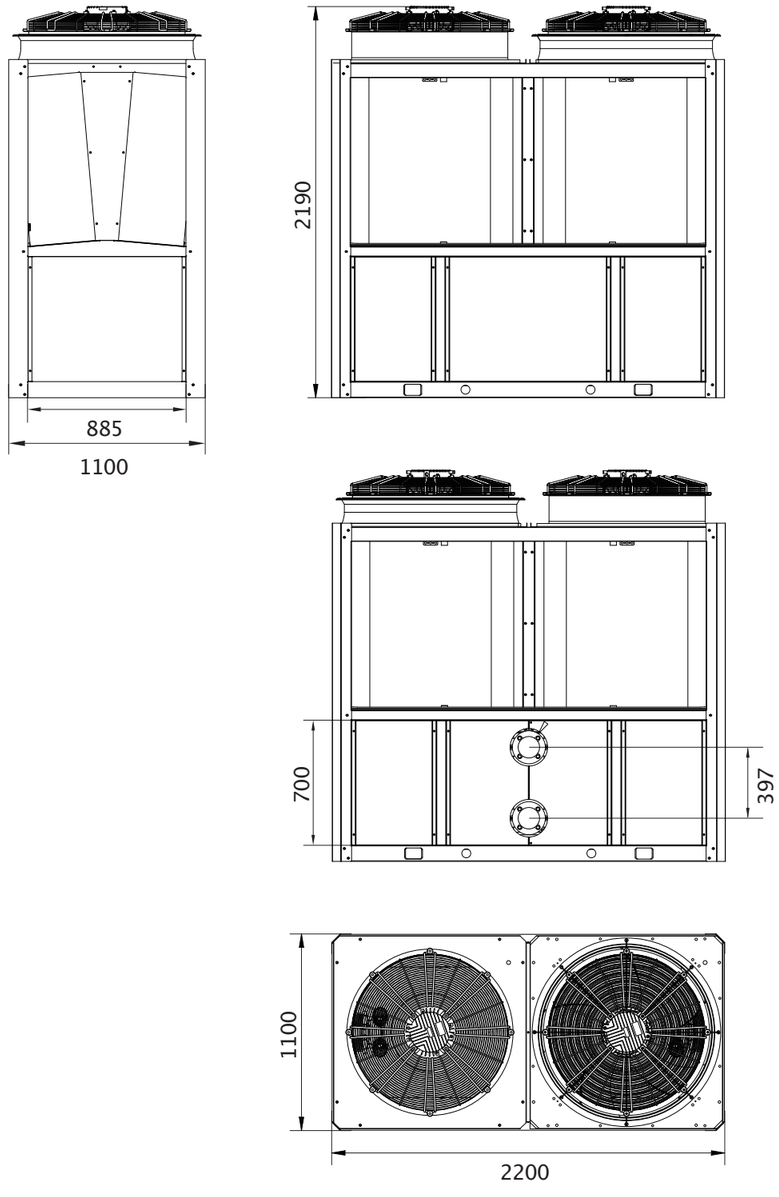
Heating Performance



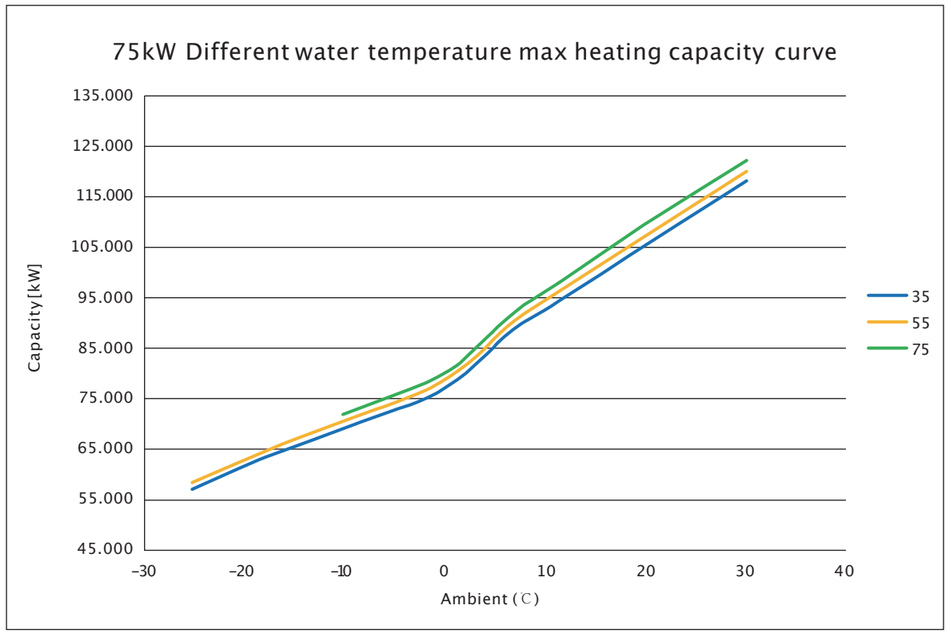


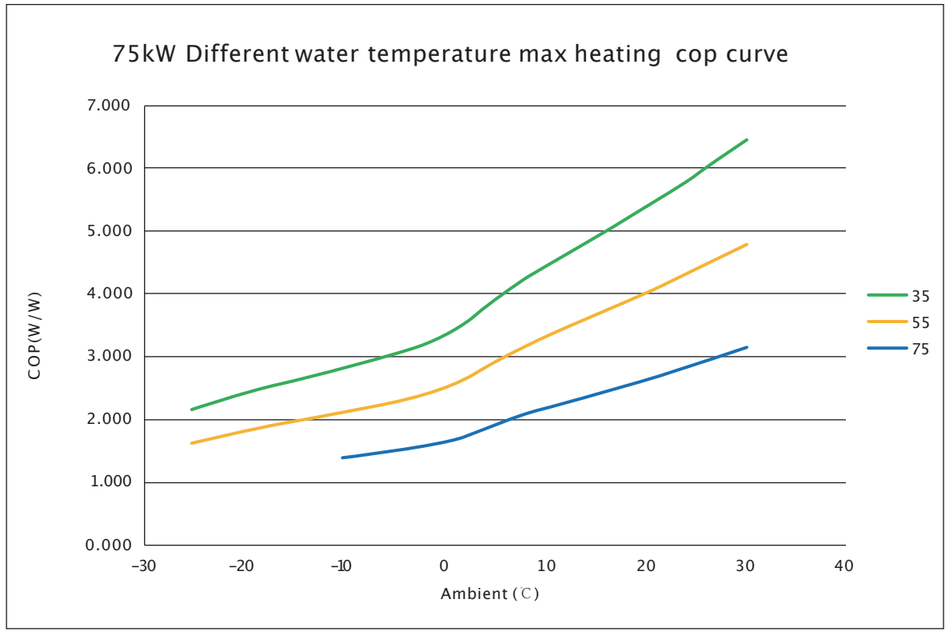
Equipment Dimensions

75kW Commercial Heating Heat Pump



Heating Performance





TE CHN ICAL DATA R290 DATA

Model			BLN-050TC3
Power Supply		V/Ph/Hz	380~415/3/50
Nominal Heating (Max) (A7/6℃,W30/35℃)	Heating Capacity	kW	17.56~50
	Power Input	kW	2.61~12.88
	Current Input	A	5.46~18.8
	COP	/	3.88~6.73
Nominal Heating (Max) (A7/6℃,W47/55℃)	Heating Capacity	kW	17.95~49
	Power Input	kW	3.48~17.2
	Current Input	A	7.78~26.8
	COP	/	2.85~5.16
Nominal Cooling (Max) (A35/24℃,W12/7℃)	Cooling Capacity	kW	10~35
	Power Input	kW	3.84~14.50
	Current Input	A	6.42~20.56
	COP	/	2.41~2.60
ERP Level（Outlet water temperature at 35°C）		/	A++
MAX. input power		kW	19.84
MAX. input current		A	30.30
Refrigerant/GWP			R290/3
Rated water flow		m^3/h	8.60
Fan quantity		/	1
Fan motor type		/	DC inverter
Compressor		/	DC inverter
IP Class		/	IPX4
Sound pressure at 1mdistance		dB(A)	65
Max outlet water temperature		°C	75
Water piping connections		/	DN 40 (G 1-1/2")
Water Pressure drop(max)		kPa	65
Min/Max Water Pressure		MPa	0.1/0.3
Operating temperature range (Heating mode)		°C	-25~45
Operating temperature range (Cooing mode)		°C	16~45
Unpacked Dimensions(L×D×H)		mm	1155x990x1880
Packed Dimensions (L×D×H)		mm	1238x1058x2033
Net Weight		kg	500
Packed Weight		kg	540
Container Loading quantity(20GP/40GP/40HQ)		/	10/22/22

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

TE CHN ICAL R290

Model			BLN-075TC3
Power Supply		V/Ph/Hz	380~415/3/50
Nominal Heating (Max) (A7/6℃,W30/35℃)	Heating Capacity	kW	19.98~88.78
	Power Input	kW	3.65~21.49
	Current Input	A	7.17~33.55
	COP	/	4.05~5.35
Nominal Heating (Max) (A7/6℃,W47/55℃)	Heating Capacity	kW	19.42~90.42
	Power Input	kW	5.64~29.35
	Current Input	A	10.94~45.37
	COP	/	3.02~3.26
Nominal Cooling (Max) (A35/24℃,W12/7℃)	Cooling Capacity	kW	10.85~62.75
	Power Input	kW	3.04~21.98
	Current Input	A	6.06~34.31
	COP	/	2.80~3.50
ERP Level（Outlet water temperature at 35°C）		/	A+++
MAX. input power		kW	45.84
MAX. input current		A	70.6
Refrigerant/GWP			R290/3
Rated water flow		m^3/h	12.9
Fan quantity		/	2
Fan motor type		/	DC inverter
Compressor		/	Hitachi DC inverter
IP Class		/	IPX4
Sound pressure at 1mdistance		dB(A)	65
Max outlet water temperature		°C	75
Water piping connections		/	DN65
Water Pressure drop(max)		kPa	23
Min/Max Water Pressure		MPa	0.1/0.3
Operating temperature range (Heating mode)		°C	-25~45
Operating temperature range (Cooing mode)		°C	16~45
Unpacked Dimensions(L×D×H)		mm	2200*1100*2190
Packed Dimensions (L×D×H)		mm	/
Net Weight		kg	770
Packed Weight		kg	/
Container Loading quantity(20GP/40GP/40HQ)		/	10

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