Mode		PASHW030B-GX-BP	PASHW060SB-GX-BP	PASHW100SB-GX-BP
Hot Water Condition 1 - Ambient Temp. (DB/WB): 20/15°C, Water Temp. (Initial/End): 15/55°C				
Rated Hot Water Capacity	kW	5	13	19.5
Power Input Range	kW	1	2.7	4.1
COP	W/W	5.0	4.8	4.8
Hot Water Capacity Range	kW	2.1~8.4	5.45-20.0	9.82-36.0
Max.Hot Water Volume	L/H	180	430	774
Hot Water Condition 2 - Ambient Temp. (DB/WB): 7/6°C, Water Temp. (In/Out): 50/55°C				
Hot Water Capacity Range	kW	1.96~6.55	4.58-11.0	6.7-16.3
Power Input Range	kW	0.94~3.2	1.73-4.15	2.35-5.65
COP	W/W	2.61~3.59	2.71-3.50	2.65-3.50
Max. Power Input	kW	2.96	6.6	10.3
Max. Current Input	A	12.3	10A	15A
Power Supply	V/Ph/Hz	220-240V/50-60Hz	380-415V/3N～/50-60Hz	380-415V/3N～/50-60Hz
Refrigerant	/	R290 380g	R290 900g	/
Noise	dB(A)	39-51dB(A)	39-54dB(A)	42-56dB(A)
Operating Ambient Temperature	°C	-20°-43°	-25°-43°	-25°-43°
Max. Outlet Water Temperature	°C	70	70	70
Condensor Type	/		Double Wall Plate Heat Exchanger	
Fan Motor Quantity	/	1	1	2
Fan Motor Type	/	DC	DC	DC
Water Connection	Inch	G3/4"	G1"	G1-1/4"
Water Presussure (Max)	kPa	37	52	66
Rated Water Flow	m3/h	0.9	1.7	3.4
Circulation Pump Water Head	m	5	7.5	9
Net Weight	kg	51	177	202
Gross Weight	kg	77	182	223
Unit Dimension (L/H/W)	mm	985×418×608	1250×500×930	1350/540/1330
Ship Dimension (L/H/W)	mm	1080×450×745	1420x530x1080	1370/560/1350

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website

LinkedIn

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PHNIX

HeatMaster

8~36kW R290 Inverter DHW Heat Pump

R290
Natural Refrigerant

Refrigerants, essential for heat pump efficiency, pose environmental concerns due to their high global warming potential (GWP). To mitigate these negative impacts, the EU's F-gas Regulation mandates reduced emissions of these gases. The reinforced F-gases Regulation will prevent the emission of around 300 million tones of CO^2 equivalent by 2050. It requires that new heat pumps use the most climate-friendly gases.

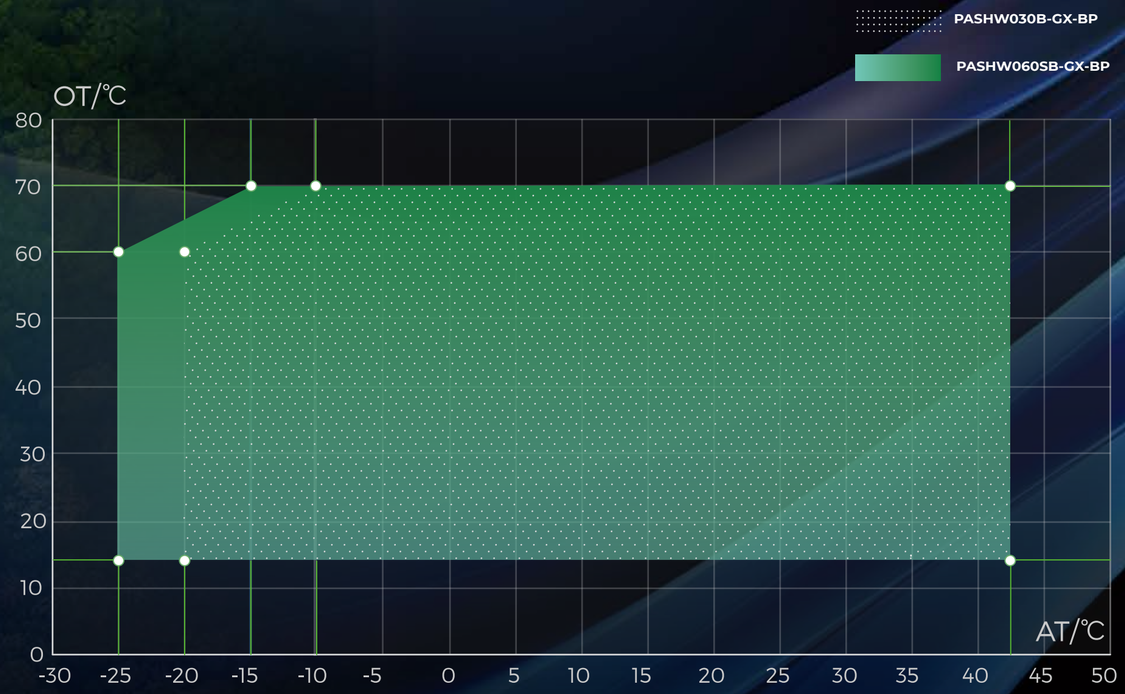
Moreover, BREAM, a leading global environmental assessment for buildings, evaluates and certifies a structure's green performance. Achieving its certification can elevate property values, lease rates, and bolster a company's environmental image.

According to its scoring system, up to 2 credits can be gained in the "Impact of refrigerant" section by using a refrigerant with a GWP under 10.

R290 Refrigerant, with its low carbon emissions and GWP, is deemed the industry's top choice. Its use aligns with carbon neutrality goals.

Refrigerant	R744	R290	R1234yf	R454C	R454B	R513A	R32	R410A
Type	Natural	Natural	HFO	HFO	HFO	HFO	HFO	HFC
Ingredient	CO2	C3H8	CESCF=CH2	21.5%R32+ 78.5%R1234yf	68.9%R134a+ 31%R1235yf	44%R134a+ 56%R1236yf	CH2F2	50%R32+50%R125
ODP	0	0	0	0	0	0	0	0
GWP-AR4	1	3	4	148	467	631	675	2088
Boiling temperature(°C)	-62.89	-42	-29.49	-45.56	-50.49	-29.47	-51.65	-51.44
Critical temperature (°C)	30.98	96.74	94.7	85.67	78.1	94.91	78.11	71.34
Safety category	A1	A3	A2L	A2L	A2L	A1	A2L	A1
Temperature slip	0	0	0.16	3~4	1~1.1	0	0	0

Operation Envelope



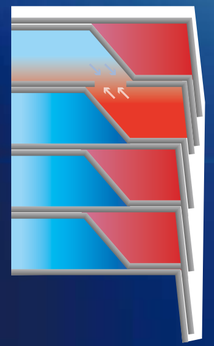
Double-Wall Plate Heat Exchanger

Advantage

The double wall plate heat exchanger is dedicatedly designed to be used as a condenser which enables better intergration of R290 refrigerant in multi-circulated heat pump hot water system. What's more, it can prevent the R290 refrigerant from mixing with water in case of an internal leak.

Double Wall

Regular BPHE



Application

· Oil to Water

· Oil to Process Coolant

· Refrigerant to Domestic Hot Water

Inverter DHW Technology

Revolution

The emergence of PHINX's ultra-lowtemperature heat pump DC technology has driven the widespread application of full interter technology in commercial water heating industry, leading it towards a future of intelligence, efficiency, and environment protectioin.

Benefits

By adopting advanced full inverter technology, the system operates stably, efficiently and quietly with low energy consumption. It can save at least 20% of the operating costs annually, providing excellent comfort and a long service life. At the same time, it has an intelligent defrost function that can defrost quickly.

Application

Low Frequency
Stage for DHW Storage

Medium Frequency
Stage for DHW Supply

High Frequency
Stage for DHW Mass Prodution

Key Components

Full DC Fan Motor

· Large-sized multi-blades can operate steadily and quietly via the high-efficiency full DC fan motor.

Optimized Refrigerant Circuits Evaporator

· Anti-corrosion Golden Hydrophilic Window Aluminium Fin

· High-Efficiency Fine-toothed Internal Thread Copper Pipe

High-Efficiency Water Pump

· The built-in water pump transfers the thermal energy within condenser Double Wall PHE to heat the water up to target temperature to guarantee constant DHW supply.

Full DC Inverter Compressor

· A full DC inverter compressor with an extended operational range can operate quietly after four layers of insulation.

Compressor driving PCB

· Using free cold air to cool down compressor driving PCB enhance the improve efficiency of the heat pump system with stable operation.

Pressure Sensor

· Input refrigerant pressure and temperature table into main PCB to monitor refrigerant system operation all the time.

EEV

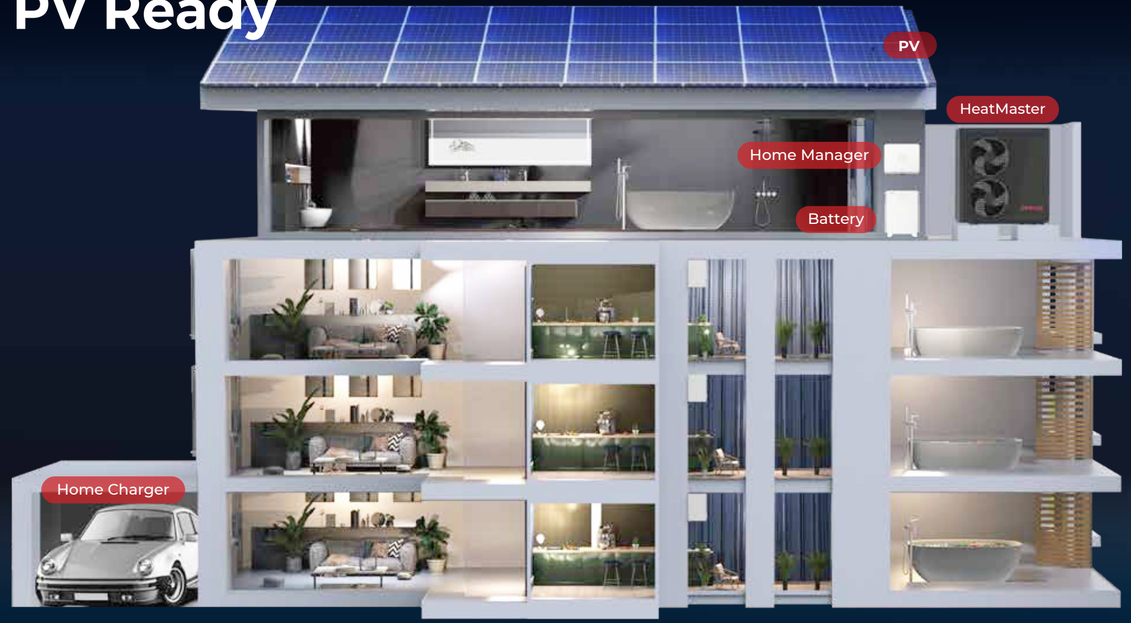
· One EEV is compatible with heating, cooling, and DHW modes.

· Dedicated multi-superheaters prevent liquid hammer even in extreme conditions.

Liquid Refrigerant Receiver

· It can constantly provide liquid refrigerant to the evaporator for complete vaporization under all operating conditions.

PV Ready



Standby Mode

Low-power Mode

Middle-power Mode

High-power Mode

The PV ready technology not only adjusts photovoltaic generation in real-time through smart grid monitoring of data and predictive information to achieve energy supply and demand balance, but also stores excess solar electricity and supplies it to the heat pump system when needed.

Intelligent Control

Smart Sliding Defrosting

Weather Compensation Control

Modbus RTU
Standard RS485

Energy Stage Control

Oil Level Control

Compressor Operation Envelope Protections

Multiple Protections from Main PCB

Multiple Protections from Inverter Compressor Module Driver

4G DTU / WIFI

Cloud Server

4G-DTU/WIFI

Once the module is connected to the network, data transmission will remain stable and unaffected by mobile signal interference.

APP Control

Once the module is connected to the network, data transmission will remain stable and unaffected by mobile signal interference.

Web Platform

Once the module is connected to the network, data transmission will remain stable and unaffected by mobile signal interference.

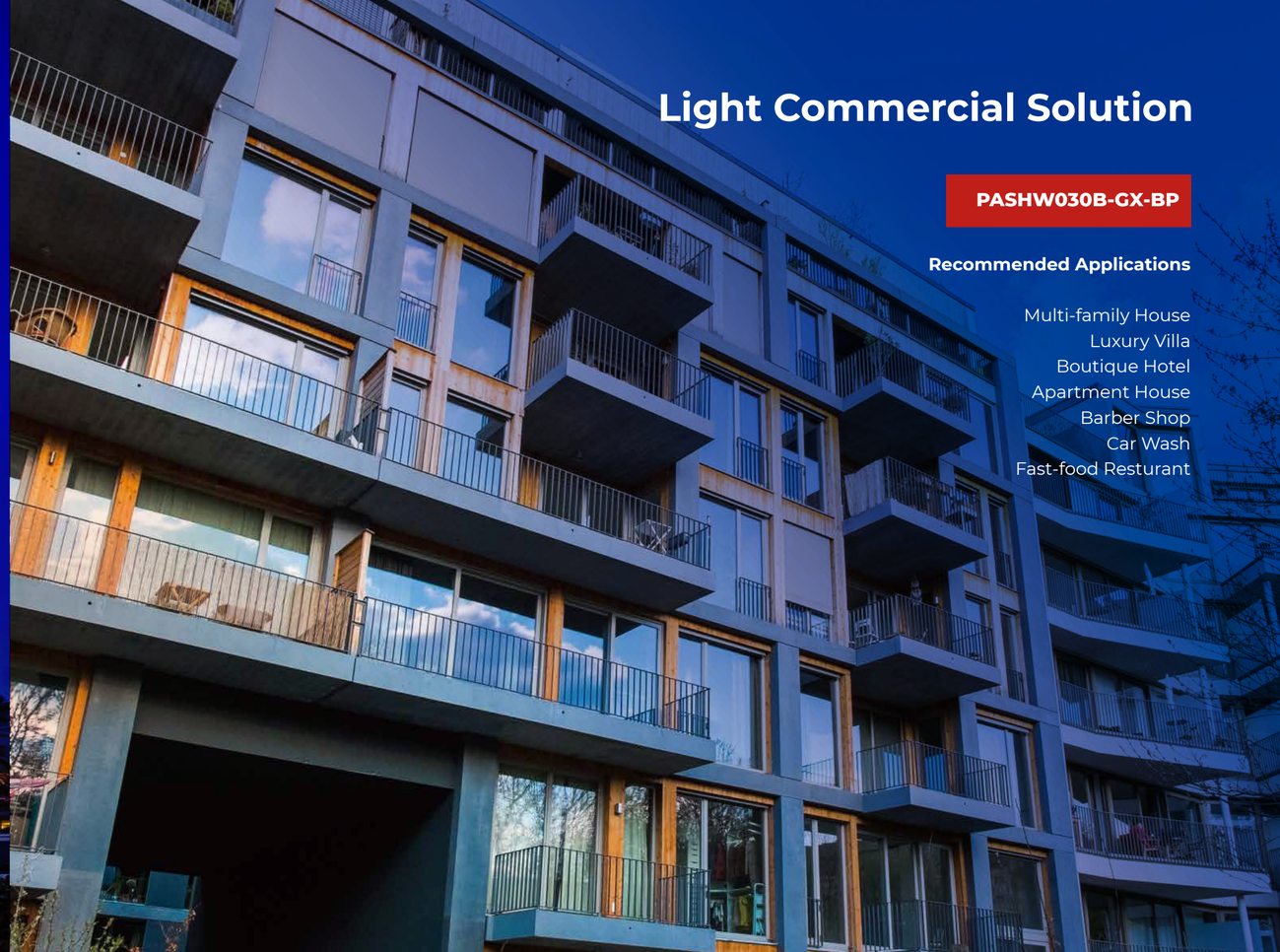
Centralized Control System

Commercial Solution

PASHW060SB-GX-BP / PASHW100SB-GX-BP

Recommended Applications

University
Hospital
Business Hotel
Resort Hotel
Health Spa
Sports Gym
Recreation Club



Light Commercial Solution

PASHW030B-GX-BP

Recommended Applications

Multi-family House
Luxury Villa
Boutique Hotel
Apartment House
Barber Shop
Car Wash
Fast-food Resturant

Project Reference

Denmark


Australia


South Africa


Australia


Israel


Israel


Australia


South Africa


Israel


Israel


Australia


South Africa


Israel


Israel