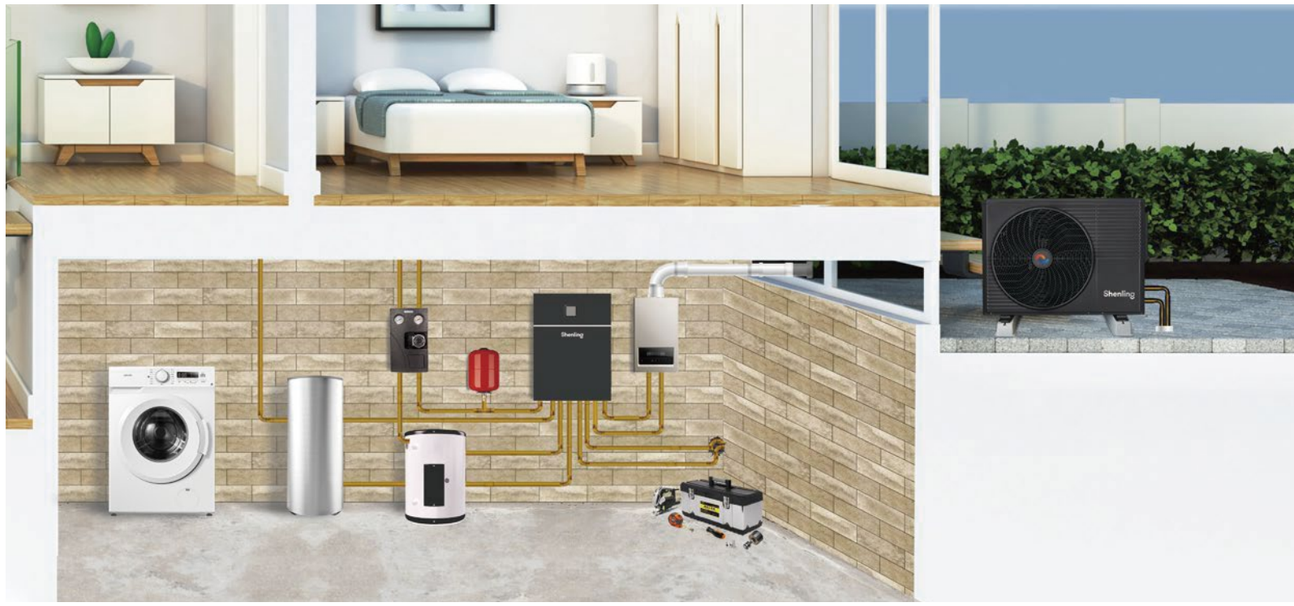
Shenling

Green the Comfort



GD Shenling Thermal Tech Co., Ltd

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R290

ThermaX R290
Air-to-Water Heat Pump

Climate control expert for all professional fields

$ 595 mil.
Sales revenue

420,888 m²
Production area

4000+
Staff

30+
laboratories

1000+
Engineers

1200+
Patents

2500+
Key projects

Stock Code: 301018

Shenling Group

10 functional departmments

Research Institute	Marketing	BP/IT	Finance	Operation
Procurement	QC	HR	Sales management	Securities & Legal

7 business units

ETS Co Ecological Thermal System	**ISA BU** Industrial & Specialized Airconditioning	**ICT BU** Information & Comunication Technology	**IE BU** Integrated Engineering
CAC Co Commercial Airconditioning	**IOT BU** IOT & Control	**Service BU** Maintenances & Service	

5 sales organizations

GMS Global Marketing & Sales	**ICT** Information & Communications Technology	**CIM** China Industrial Marketing & Sales	**CDC** China Distribution Channel	**IES** Integrated Engineering Sales

Milestones

1988

Shenling brand created

Keep serving for industries with unitary AC chillers products

2000

Shenling corporation founded

2002

Three Gorges Hydropower Project

2003

Shenling Research Institute established

Guangdong Provincial Engineering Research Center

Shenling Postdoctoral Programme established

2005

Strategic cooperation with ThyssenKrupp

2007

Joint-lab with Siemens Beijing Capital International Airport

2012

New headquarter launched

ICT/IDC solutian launched

National Enterprise Technology Center

Strategic cooperation whit Huawei

2014

Production base II launched

2016

National Technological Invention Award

2017

China Patent Excellent Enterprise Award

Beijing Daxing International Airport

2018

National Technology Innovation Model Enterprise Award

2019

National Intellectual Property Model Enterprise Award

2021

I.P.O. in Shenzhen Stock Exchange

Production base III launched

2022

Zero emission building launched

2023

Production base Ⅳ (Tianjin) launched

2024

Production base II reconstructed & launched

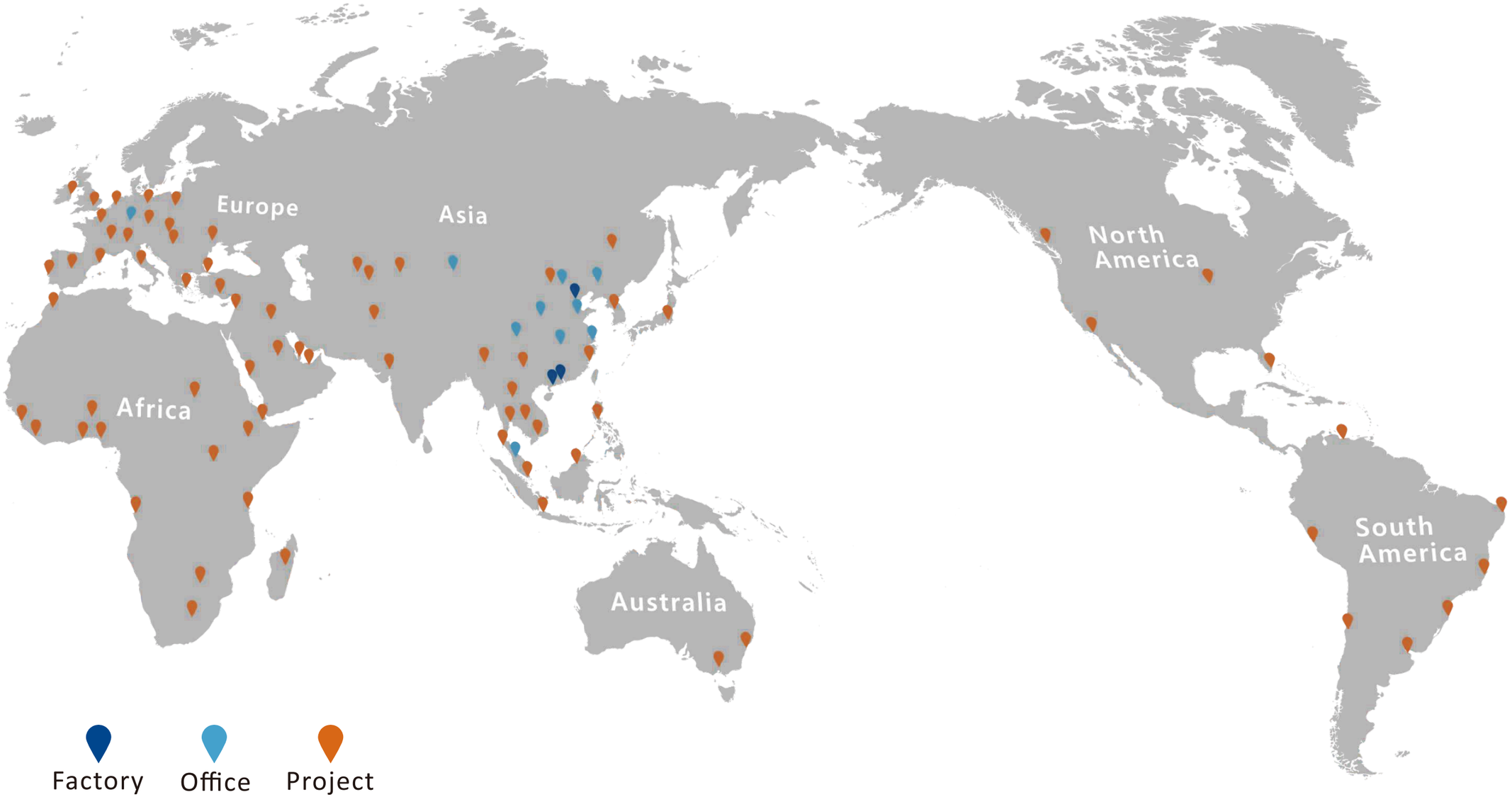
Production base V (Gaozhou) construction started

Shenling Germany (Frankfurt) launched

2025

Net zero emission factory to be launched

Global layout



Application fields

ICT/IDC fields

- Cloud data center
- Supercomputing center
- Intelligent computing center
- Communication infrastructure
- Computer technology services
- Service room
- UPS & battery room

Industrial fields

- Automobile factory
- Battery manufacturing
- Pharmaceutical
- Precision electronic instrument
- Food industry
- Cement
- Metallurgy

Specialized fields

- PV/Wind power plant
- Hydro/thermal power plant
- Power grid converter station
- Energy storage cooling
- Nuclear power plant
- Aerospace
- Railway station
- Subway station
- Airport
- Hospital
- VOCs

Commercial fields

- Shopping mall
- Hotel
- Stadium
- Library
- Theater
- Aichives
- Exhbition hall
- University
- Office building

Heat pump

- Residential heating
- Commercial heating
- Disrict heating
- Energy management system

Climate control expert for all professional fields

Science & technology achievements

Know How, Know Why

With robust technical strength of research and innovation as well as application experience, Shenling drafted over 30 standards of professional and special air conditioning, and joined in compilation of almost all national and industry standards related to industrial and commercial centraair-conditioning products, acting as a technical benchmark to promote standardized development and advocate low carbon and environmental protection.

National Standards drafted by Shenling

No.	Standard No.	Name
1	GB/T 19411-2003	Dehumidifier
2	GB/T19569-2004	Air conditioning unit for clean operating room
3	GB19576-2004	Energy efficiency limits and energy efficiency grades of unit AC
4	GB19577-2004	Chiller energy efficiency limit value and energy efficiency grade
5	JB/T 10538-2005	Explosion-proof dehumidifier and air conditioner
6	GB/T20109-2006	Full fresh air dehumidifier
7	GB/T 20108-2006	Low temperature unit air conditioner
8	GB/T 20738-2006	Rooftop air conditioning unit
9	GB/T18430.1-2007	Vapor compression cycle cooling (heat pump) unit
10	GB/T 21363-2008	Volumetric refrigeration compression condensing unit
11	GB/T 19413-2010	Unit AC for computer and data processing rooms
12	**MH/T6109-2014**	**Aircraft ground air conditioning unit**
	... ...	**... ...**

Shenling innovation system

Level 1

Exploratory study on cross categories of foundational technology

Include:
Shenling R&D Academy
1 state-level postdoctoral research station
1 state-certified technical center
20+ cooperative research institutes

Level 2

Application of universal technology

Energy mangement system, AIOT platform,
PCB & software R&D, renewable energy study & application
Include:
2 province-level technical centers

Level 3

Exclusive technology for specific product

Include:
8 research institutes
13 state-level laboratories

Level 4

Individual product development

Include:
10 product development teams

***6* Core Technology Systems**

01 Ultra-high energy efficiency

- Flow field optimization & heattransfer enhancement
- Free cooling technology
- Variable flow control technology
- Comprehensive utilization technology of natural cold and heat sources
- Condensation heat recovery technology

02 VOCs treatmentt echnology

- -80°C ultra-low temperature cascade refrigeration
- Oil and gas chemical process treatment
- Safety technology of stainless steel pressure vesse
- Multistage condensation+adsorption+thermal oxidation technology

03 Smart control

- High precision temperature and humidity contro
- Multi-mode automatic conversion technology
- Remote monitoring technology

04 Extreme environment application

- 65°C high temperature refrigeration
- -40°C ultra-low temperature refrigeration

05 Explosion proof & anti-corrosion

- Class C5 anti-corrosion design
- Class II B explosion-proof design
- Salt spray environment design of offshore platform

06 Shock resistance

- Collision avoidance
- Anti-seismic(Protection) technology

Certificate & honor

ESG

Environmental
Social
Governance

As a company, we recognise that our activities have an effect on the world we live in. For this reason, we have adopted a sustainable approach, focusing on three key areas in our activities: ***environment, society and governance.***

Shenling

Shenling

NZE 1.0

Zero emission building

Shenling Production Base III, launched in may 2022

Green power generated
7,302,900 kW·h

Co_2 emission reduced
2,966 tons

Energy saved
611,700 kW·h

Energy cost saved
€ 144,828

*The above data represents annual benefits

▸ LEED Platinum Certification

▸ Zero emission building authentication (Design+Operation)

NZE 2.0

Zero emission factory

Shenling Production Base II, launched in may 2025

Green power generated
3,000,000 kW·h

Co_2 emission reduced
1,884 tons

Energy saved
303,965 kW·h

Energy cost saved
€ 79,266

*The above data represents annual benefits

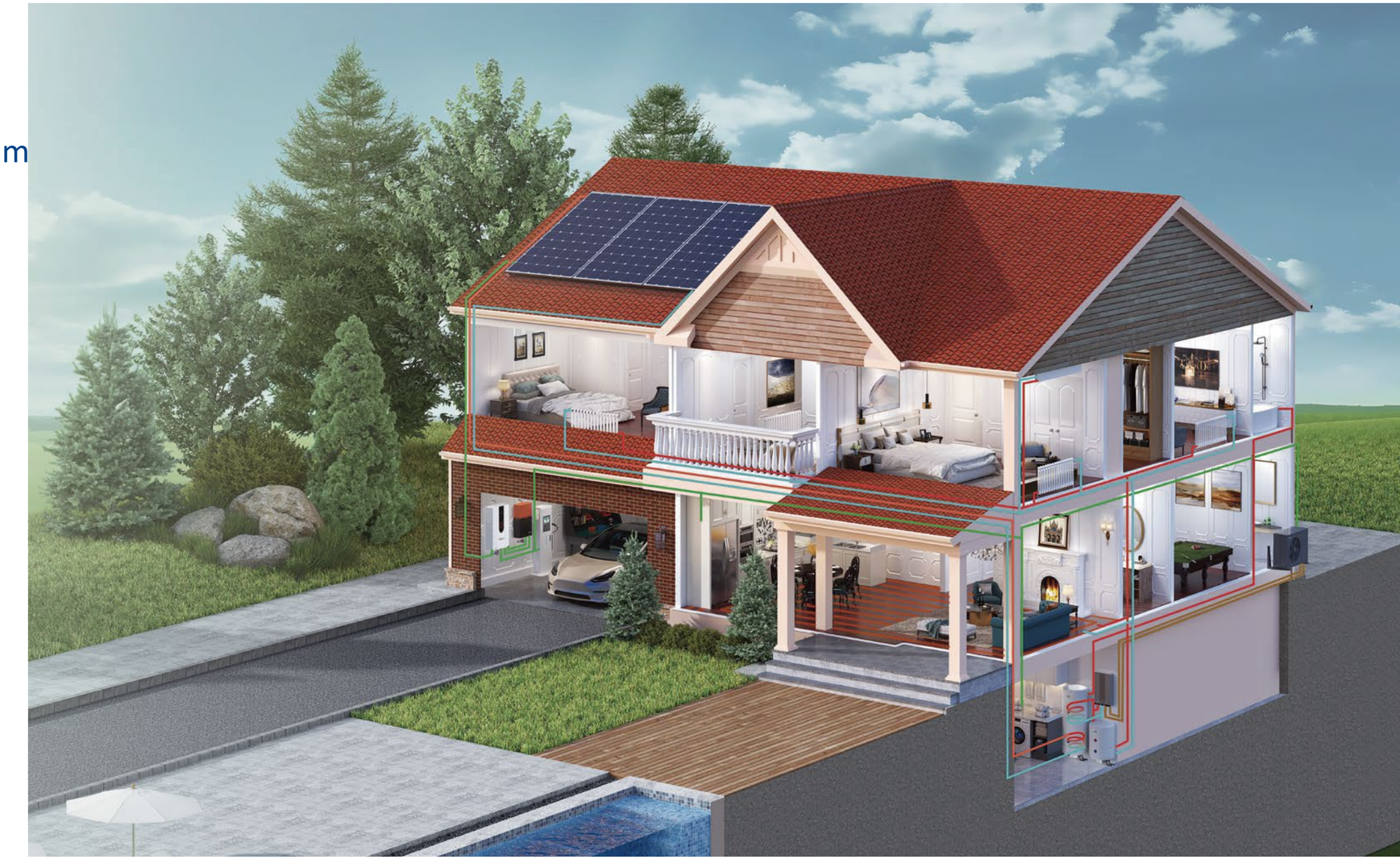
One-stop solution

Heating, cooling and DHW in one system

ThermaX provides one-stop solution for space heating, cooling and sanitary hot water for households, through integrating underfloor heating, FCUs, radiators and water tanks.

ThermaX offers a versatile year-round solution, through linking with solar panels, gas boilers and other heat sources, allowing user to create a hybrid and tailored system.

Meanwhile, ThermaX is compatible with your smart home system.



ThermaX R290

Full-DC Inverter Air Source Heat Pump

HyQube series	Capacity(kW)	9	12	15
	220-240V/1N/50Hz	√		
	380-415V/3N/50Hz		√	√

Mono series	Capacity(kW)	6	9	12	15	18	22
	220-240V/1N/50Hz	√	√	√	√		
	380-415V/3N/50Hz			√	√	√	√

Bundesamt für Wirtschaft und Ausfuhrkontrolle

Certified by intertek | DIN CERTCO

Certified by SG Ready | TÜVRheinland

PV READY

MCS Certified by intertek | DIN CERTCO

CE

ERP by intertek
LVD & RED by SGS | TÜV

RoHS Compliant

REACH

ErP

- **Aesthetic industrial design**

Easy to integrate with the architectures
Lower noise
Optimisation of air duct
Reduction of screw

- **Mould shaped plate casing and structure**

Higher processing precision;
Higher reliability and consistency;
Higher production efficiency and guaranteed delivery date

- **Single fan & compact design**

Smaller floor area
Higher installation freedom
Larger container loading quantity

Overview

Energy class: A+++
R290 refrigerant
Space heating+cooling+DHW
Min operation ambient temp. -25℃
R290 max leaving water temp. 75℃
Full colour LCD display controller
Wi-Fi smart control
Smart grid
Disinfection
Power consumption counting

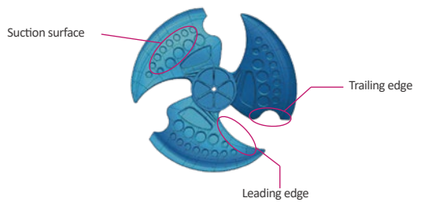
Space heating | DHW mode | Cooling mode | Space heating & DHW mode | Cooing & DHW Mode | Auto mode

Ultra-Silence

ThermaX produces as low as 39dB(A) sound pressure level at 3 meters.

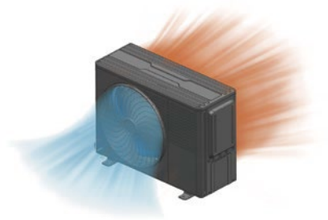
Biomimetic fan design

- Concave design of suction surface
- Thickening design of leading edge
- Notch design of trailing edge

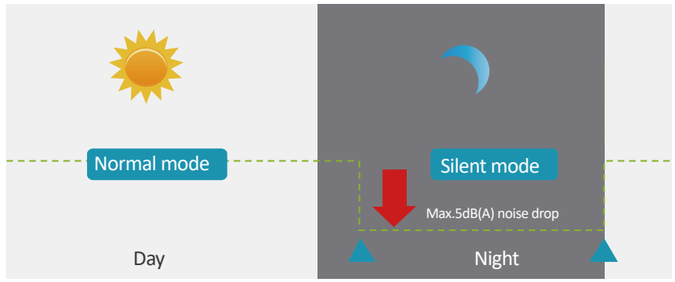


ODU sound proof design

- Full set of plate and plastic mould
- Simulation at different frequencies
- 3 layers of sound insulation



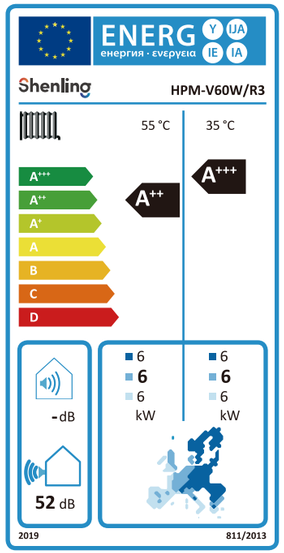
Silence mode



5dB(A) noise decrease

In silent mode, ThermaX will decrease the frequency of compressor and fan motor to effectively lower down the operating sound, while output capacity affected slightly.

High Efficency



ErP Directive

Seasonal space heating energy efficiency

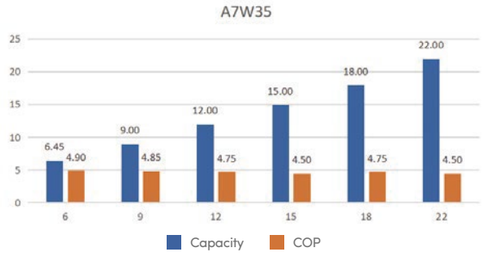
ηS. average up to A+++ at 35℃

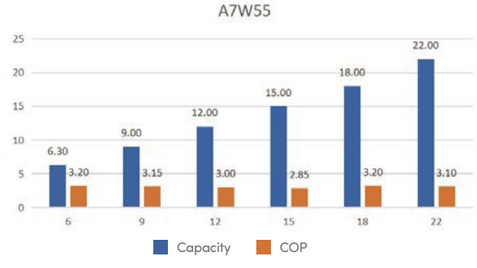
ηS. average up to A++ at 55℃

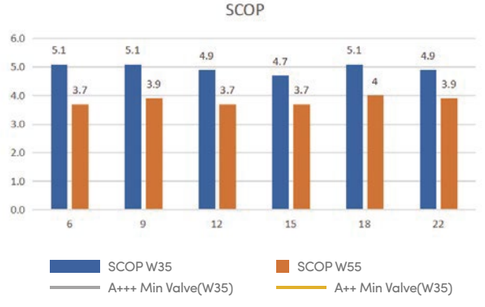
It represents the highest level of ThermaX product.
Please refer to the product for specific grade of different models.

Note: 18/22kW is up to A+++ at 55℃

Spectification-R290



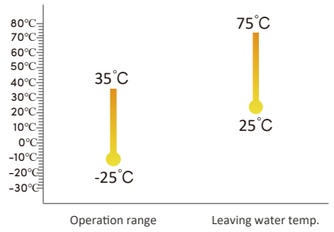




Wide operation range

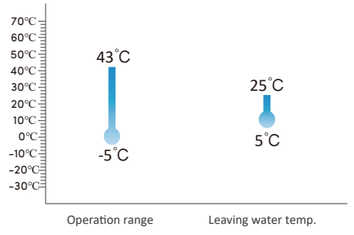
Space heating

- Min ambient temp. for space heating is -25℃.
- Outlet water can reach 70℃ at -15℃ ambient temp.
- Outlet water can reach 75℃.



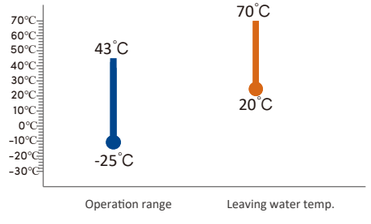
Space cooling

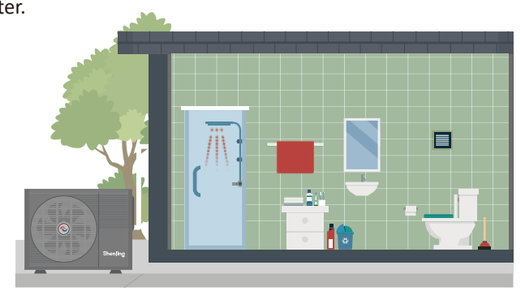
- Start cooling at -5℃ ambient temp.



DHW

- Min ambient temp. for DHW is -25℃.
- Max DHW temp. is 70℃.
- Outlet water can reach 80℃ with electric booster heater.



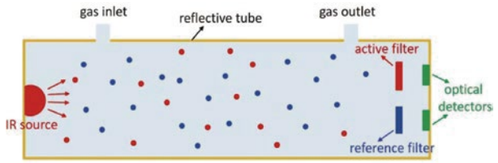


Ultra-Reliability

Refrigerant leak detection

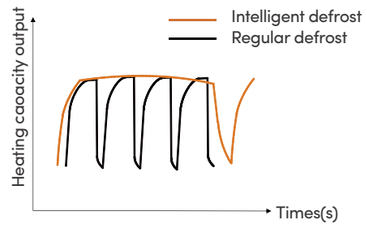
ThermaX is equipped with refrigerant leak sensor. Should any leakage happen in the system, the unit will shut down to make sure end user's safety.

- Smart NDIR gas module
- High sensitivity
- Temperature compensation
- High resolution & fast response
- Excellent linear output
- Anti-vapor interference



Intelligent defrosting

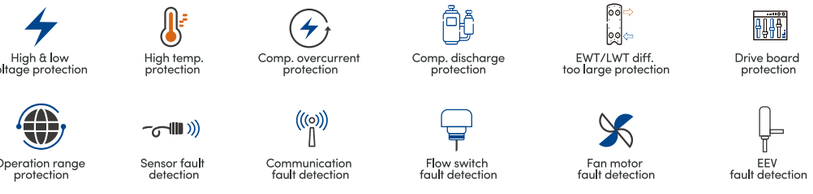
ThermaX uses smart defrosting technology to figure out the exact defrosting time and start intelligent defrosting according to the real frosting condition, which reduces energy consumption under low temperature environment and prevents defrosting errors.



Anti-freeze protection

ThermaX adopts 3 layers of anti-freeze protections.
When low ambient temp. and water temperature detected, water pump started first. When situation remain unimproved, electric booster heater will be started (if equipped). If still unimproved, heat pump will be started.

Multiple system protection



Quality parts

Multi-Functions

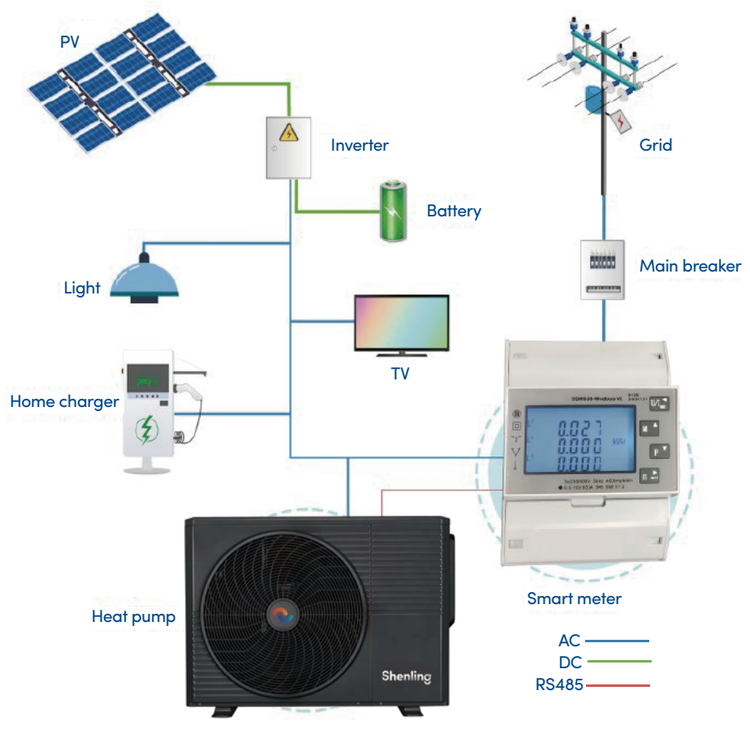
Smart grid

ThermaX heat pump system can be connected to the smart grid and adjust its operating status according to the load of the grid. When the power is sufficient, the unit operates efficiently, and when the power is insufficient, the unit is allowed to operate at low frequency.

Energy States	Description	
	Smart Grid(contact)	
	Operation Mode	Power Suppy Status
SG1	Operation OFF	
SG2	Normal	
SG3	On Recommend	
SG4	On Command	

PV ready (Smart meter function)

PV ready is smart design to better utilize PV power and the smart meter connecting with heat pump is also available from Shenling. When the local PV power generation on is detected sufficient enough, smart meter will adjust the power sold into the grid and supply to heat pump in priority, so as to maximize the local consumption to lower down the overall energy cost.



Multi-Functions

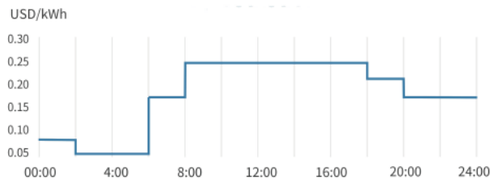
Power limitation

In the case of insufficient power supply or weak power cords, especially when using multiple electrical devices, users can select a predefined configuration (8 different levels) on the wired controller to limit the output of the heat pump and reduce the load on the power supply equipment.

Spot time control

According to the spot price of the local power grid, a day can be roughly divided into 8 time periods. The user can set the mode, target temperature, maximum frequency limit and timer based on the spot price of the power grid.

Spot price:

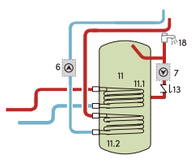


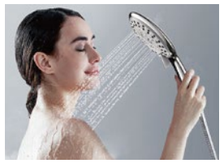
Smart weather adaptation

ThermaX will detect the outdoor ambient temperature and vary the outlet water temp. based on the set temp. automatically, so as to realize the best way for energy saving and comfort. When outdoor ambient temp. increases/decreases, the heating load will decrease/increase accordingly.

Quick hot water supply

In this function, ThermaX will circulate and heat the cold water in the pipeline in advance, allowing user to use hot water instantly without waiting for cold water released and wasted. To realize this function, a DHW circulating pump(code 7) should be installed in the water system.



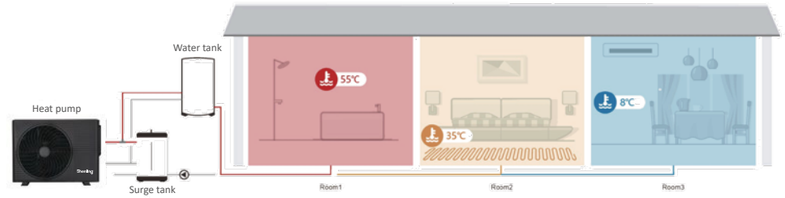


Power consumption counting

ThermaX has preserved a statistical counting function for the power consumption of the unit itself. The user needs only connect an electricity meter to read and collect the statistics.
This function may have difference with the other measurement and is for reference only.

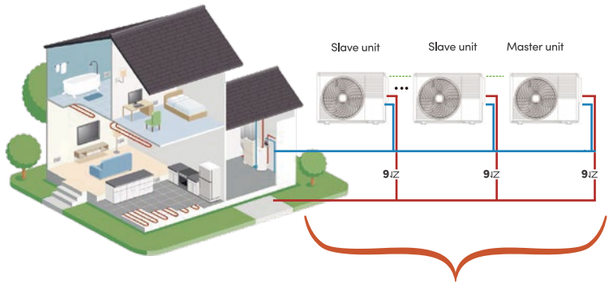
Dual temperature zone control

ThermaX provides the option to simultaneously control dual temperature zones by supplying different water temperatures for floor heating and radiators, ensuring optimal comfort. Users can easily make their selection with a touch on the wired controller, and ThermaX will automatically operate in the chosen mode. Users can also set their preferred temperatures for each zone accordingly. This versatile function includes options for floor heating only, radiator only, and a combination of floor heating and radiators, among others.



Cascade system

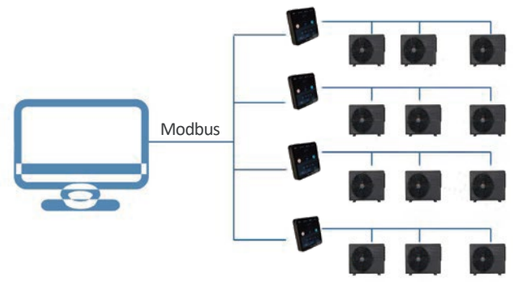
The design of modular combination is for capacity extension in certain case when large cooling/heating capacity is required. In modular combination, max 8 units can be cascaded into one system and controlled through 1 controller.



one controller can control up to 8 units in group

Modbus function

ThermaX provides a free Modbus port, allowing users to connect it with third-party Building Management Systems (BMS). BMS can monitor maximum 16 systems by setting the modbus address from wire controller.



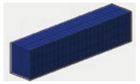
Easy Installation

Compact design

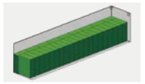
Thanks for the completely new structure platform, ThermaX has realized compact design of the whole series, which will be much easier for transportation and ideal for small spaces.


Easy for transportation


Ideal for small house

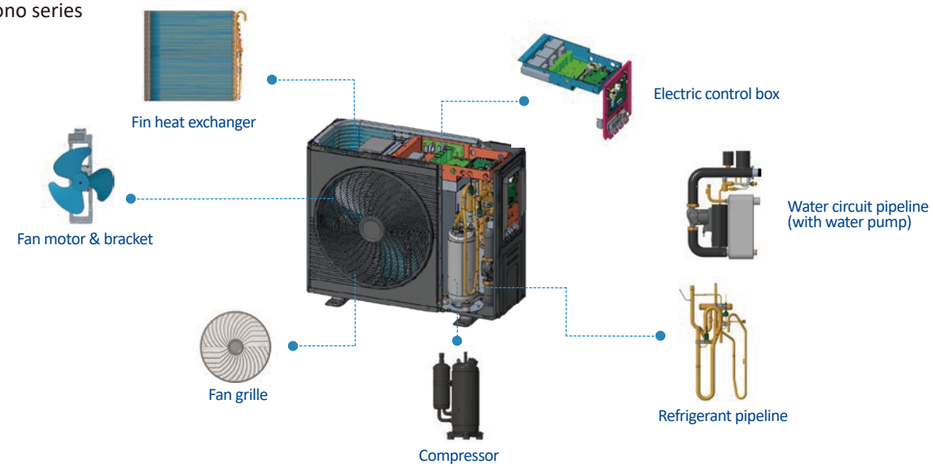

R290 6kW 40HQ: 150 uints


R290 9/12/15kW 40HQ: 82uints

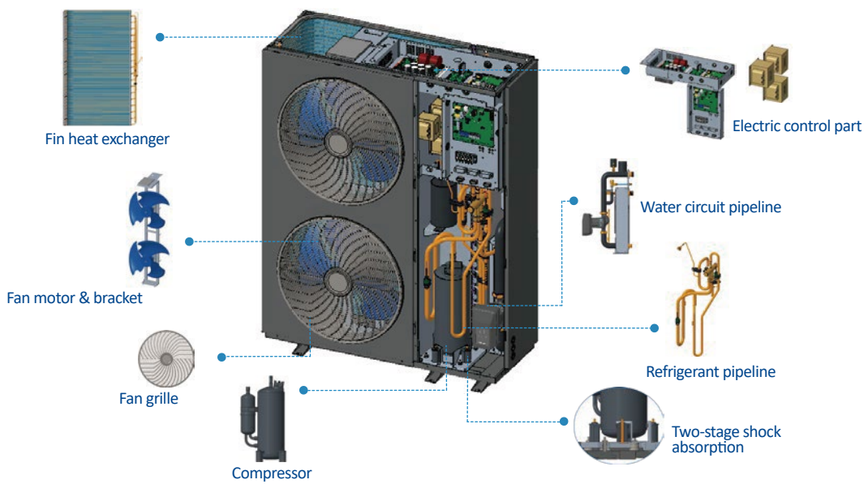

R290 18/22kW 40HQ: 29units

Internal structure

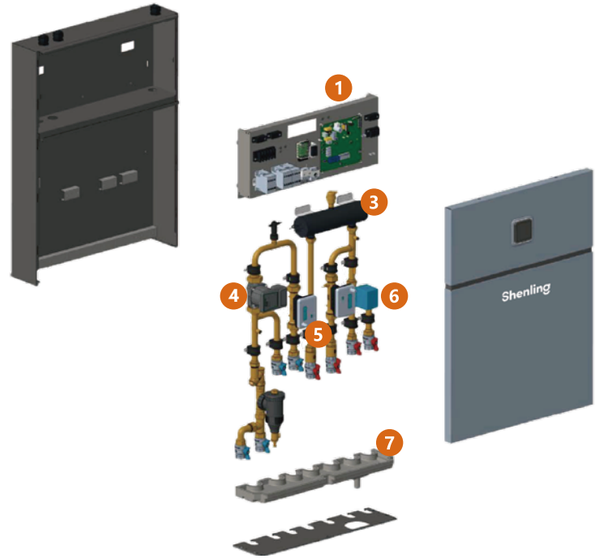
● Mono series



● Double fan series

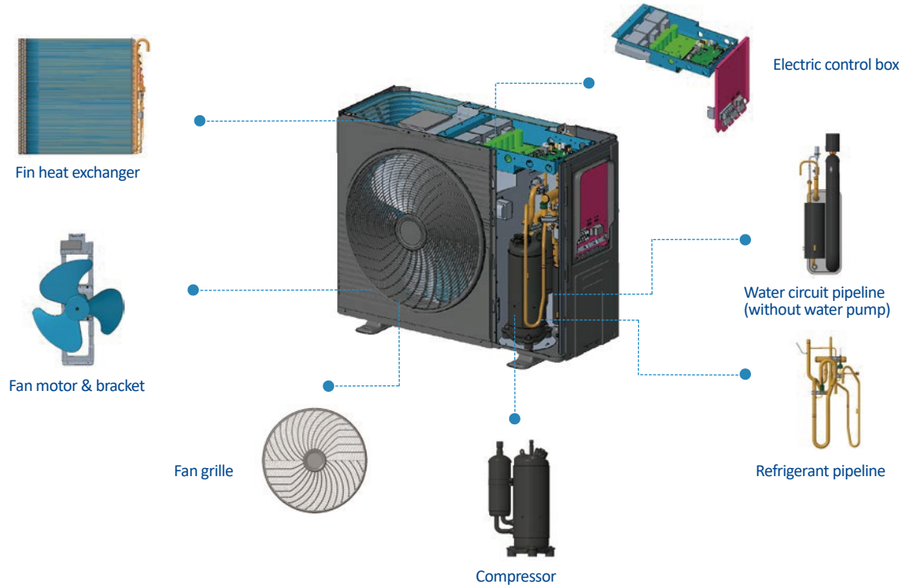


● Hydro box



1. Electric control box
2. Safety group
3. Electric heater 3/6/9kW
4. DC water pump
5. Heat meter
6. 3 way valve
7. Drain pan

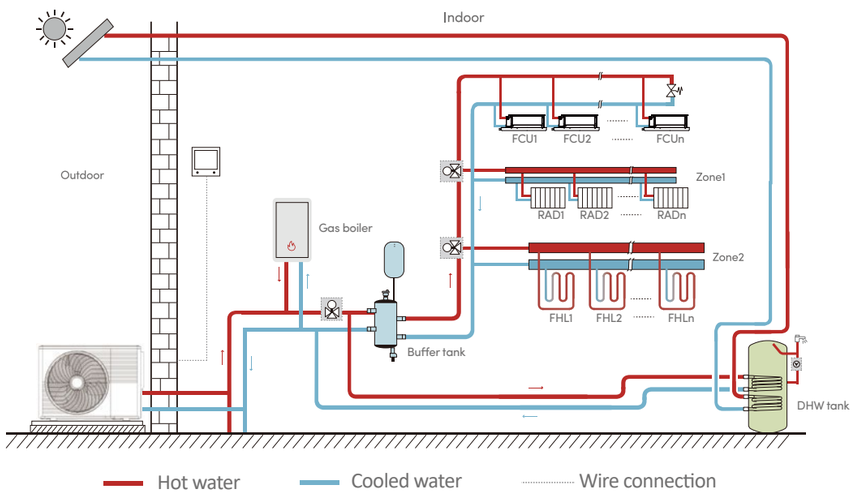
● HyQube series



Easy Installation

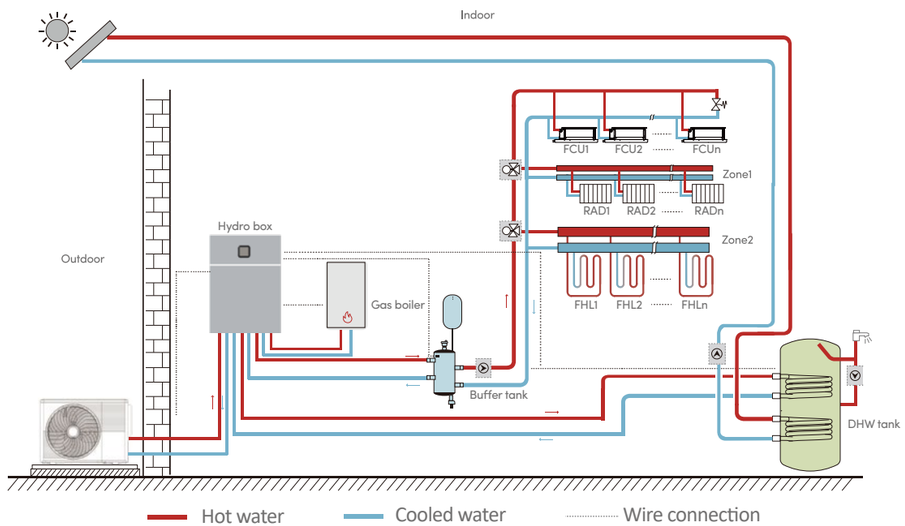
Traditional installation

ThermaX Mono series is equipped with built-in water pump. Buffer tank, DHW tank and external fittings such as 3-way valve, Y type filter, check valve, shut off valve should be installed by installer. Should there be existing gas boiler already, it can be connected to the water circuit to build up a hybrid system.



Installtion with HyQube

ThermaX HyQube series integrates water pump, valves, safety components, electric electric heater and other components. During installation, HyQube outdoor unit, gas boiler and water tank can be connected to the hydro box directly, which is very easy to access, even for those without much experience in installtion.



Easy Installation

What is special in HyQube hydro box?

- Heat meter

Two heat meters record the heat produced by heat pump and gas boiler separately. It's convenient for user's energy management.

- 3 steps 3/6/9kW electric heating

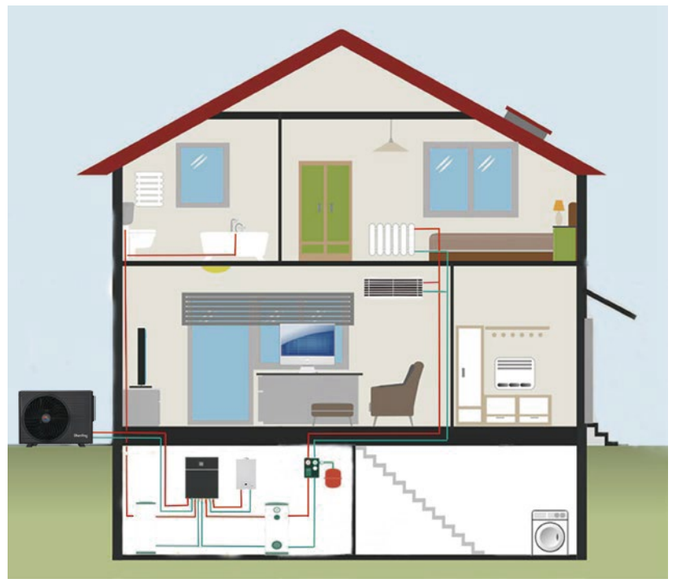
Built-in 3 steps electric heating is used when the heating capacity is insufficient or for the anti freezing process of water circuit. Improve the user experience when outside temperature is low.

- Magnetic filter

The magnetic filter is installed on the total water return pipe to avoid the dirty entering into the heat pump or gas boiler to protect the system.

Installation scenario

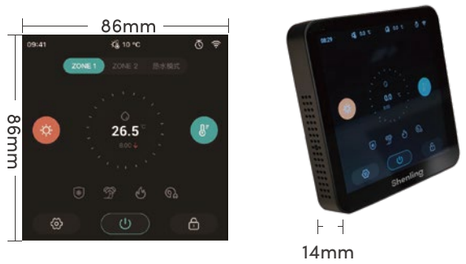
The hydro box is usually installed together with the buffer tank, DHW tank, gas boiler in the basement. Hydro box can not only reduce the complexity of water pipe connection but also wire connection like the buffer tank and DHW tank sensor. There is no need to connect the outdoor unit with a long sensor cable.



Smart Control

Wire controller

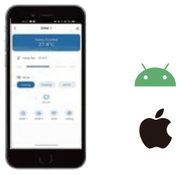
The wired controller offers standard Wi-Fi for remote control, easy SD card upgrades, an elegant obsidian black design, and versatile installation options.



IOT function

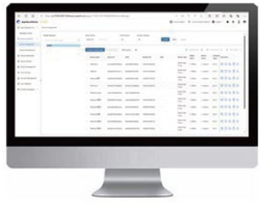
1) Mobile app

- Easy to read and set
- Dual temperature zone control
- Schedule function and weekly/daily timer
- Silent mode/holiday
- Remote monitor
- Fault alarm
- Multi language control
- Android&IOS version



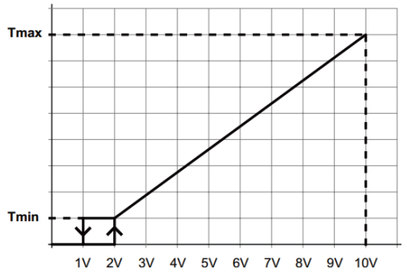
2) Web platform (for service and admin)

- User management
- Remote monitor
- Historical data curve
- Real-time data curve
- Faulty alarm
- OTA remote upgrade



0-10V control

ThermaX provides the 0-10V DC voltage output port that can connect the gas boiler, ThermaX can control the gas boiler outlet water temperature by different voltage signal.



Dry contact control

ThermaX provides multiple dry contact ports. The dry contact port gives an on/off signal to the heat pump or auxillary heater to control their running, which is more easy to access and control.

1) Thermostat of terminal units like FCU, underfloor heating can connect with the heat pump by dry contact port to achieve the linkage control.

2) The heat pump also can connect with the auxillary heat source like gas boiler and solar panel by dry contact port.

Specification

Mono series

Model			HPM-V60W/R3	HPM-V90W/R3	HPM-V120W/R3	HPM-V150W/R3	HPM-V120W/SR3	HPM-V150W/SR3	HPM-V180W/SR3	HPM-V220W/SR3
Power Supply		V/Ph/Hz	220-240/1/50				380-415/3/50			
Heating[1]	Capacity	kW	6.45	9.00	12.00	15.00	12.00	15.00	18.00	22.00
	Rated Input	kW	1.32	1.86	2.53	3.33	2.53	3.33	3.83	4.94
	COP	/	4.90	4.85	4.75	4.50	4.75	4.50	4.70	4.45
Heating[2]	Capacity	kW	6.65	9.00	12.00	15.00	12.00	15.00	18.00	22.00
	Rated Input	kW	1.73	2.43	3.33	4.29	3.33	4.29	4.80	6.20
	COP	/	3.85	3.70	3.60	3.50	3.60	3.50	3.75	3.55
Heating[3]	Capacity	kW	6.30	9.00	12.00	15.00	12.00	15.00	18.00	22.00
	Rated Input	kW	1.97	2.86	4.00	5.26	4.00	5.26	5.71	7.21
	COP	/	3.20	3.15	3.00	2.85	3.00	2.85	3.15	3.05
Cooling[4]	Capacity	kW	6.50	9.00	12.00	15.00	12.00	15.00	18.00	20.00
	Rated Input	kW	1.31	1.91	2.61	3.57	2.61	3.57	3.88	4.59
	EER	/	4.95	4.70	4.60	4.20	4.60	4.20	4.64	4.36
Cooling[5]	Capacity	kW	6.00	9.00	12.00	14.00	12.00	14.00	18.00	20.00
	Rated Input	kW	1.90	2.95	4.00	4.91	4.00	4.91	5.81	7.02
	EER	/	3.15	3.05	3.00	2.85	3.00	2.85	3.10	2.85
Seasonal space heating energy efficiency class6	Outlet water temp. at 35℃	/	A+++						A+++	
	Outlet water temp. at 55℃	/	A++						A+++	
Refrigerant	Type(GWP)	/	R290(3)							
	Charged volume	kg	0.7	0.92	1.4				2.17	
Sound power Level[7] ERP		dB	52	55	56	57	56	57	55	56
Sound pressure Level[7](1m) ERP		dB(A)	39	42	43	44	43	44	42	43
Sound power Level[7] Day		dB	64	67	69	71	69	71	69	71
Sound pressure Level[7](1m) Day		dB(A)	50	53	55	57	55	57	55	56
Net dimension(W×D×H)		mm	1000*450*725	1080*520*857					1218*497*1568	
Packaged dimension(W×D×H)		mm	1110*475*870	1180*560*1005					1330*590*1721	
Net weight/Gross weight		kg	75/89	100/117	117/134		125/142		185/210	
Water piping connection		mm	R1"		R1-1/4"					
Ambient temp. range	Cooling	℃	-5～43							
	Heating	℃	-25～35							
	Domestic hot water	℃	-25～43							
Outlet water temp. setting range	Cooling	℃	5～25							
	Heating	℃	25～75							
	Domestic hot water	℃	20～70							
Backup electric heater[8]	Optional installation	kW	3/9	3/9	3/9	3/9	3/9	3/9	3/9	3/9
	Capacity steps	/	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3
	Power Supply 3kW	V/Ph/Hz	220-240/1/50							
	Power Supply 9kW	V/Ph/Hz	380-415/3/50							

Note

1.Outdoor air temperature7℃ DB, 6℃ WB; Water inlet 30℃, Water outlet35℃;
2.Outdoor air temperature7℃ DB, 6℃ WB; Water inlet 40℃, Water outlet45℃;
3.Outdoor air temperature7℃ DB, 6℃ WB; Water inlet 47℃, Water outlet55℃;
4.Outdoor air temperature35℃ DB; Water inlet 23℃, Water outlet18℃;
5.Outdoor air temperature35℃ DB; Water inlet12℃, Water outlet7℃;
6.Seasonal space heating energy efficiency class testes in average climate general conditions.
7.Testing standard: EN12102-1.
8.Backup electric heater is external installation.
9.Relevant EU standards and legislation: EN14511; EN14825; EN50564; EN12102; (EU) No 811/2013; (EU) No 813/2013; OJ 2014/C 207/02:2014.

Specification

Hydro Box

Model		HM90/DM
Power Supply	V/Ph/Hz	380~415/3/50
Space Heating water temp.Range	℃	25~75
Space Cooling water temp.Range	℃	5~25
Operation Ambient temp.Range	℃	-25~43
Water Connection	inch	1
Water Pressure (Max)	bar	3
Water Pump Type	/	Shimge/DC Inverter/9m Head
Water Flow	L/min	6
Electric heater	kW	3/6/9kW 3 steps
3 way valve	inch	1
Sound Pressure Level at 1 meter	dB(A)	28
Net Dimension(L×W×H)	mm	1200*620*200
Gross Dimensions(L×W×H)	mm	1275*710*255
Net weight/Gross weight	kg	41/52

HyQube series

Model			HPM-V90W/R3-B	HPM-V120W/SR3-B	HPM-V150W/SR3-B
Power Supply		V/Ph/Hz	220-240/1/50	380-415/3/50	
Heating[1]	Capacity	kW	9.00	12.00	15.00
	Rated Input	kW	1.86	2.53	3.33
	COP	/	4.85	4.75	4.50
Heating[2]	Capacity	kW	9.00	12.00	15.00
	Rated Input	kW	2.43	3.33	4.29
	COP	/	3.70	3.60	3.50
Heating[3]	Capacity	kW	9.00	12.00	15.00
	Rated Input	kW	2.86	4.00	5.26
	COP	/	3.15	3.00	2.85
Cooling[4]	Capacity	kW	9.00	12.00	15.00
	Rated Input	kW	1.91	2.61	3.57
	EER	/	4.70	4.60	4.20
Cooling[5]	Capacity	kW	9.00	12.00	14.00
	Rated Input	kW	2.95	4.00	4.91
	EER	/	3.05	3.00	2.85
Seasonal space heating energy efficiency class[6]	Outlet water temp. at 35℃	/	A+++		
	Outlet water temp. at 55℃	/	A++		
Refrigerant	Type(GWP)	/	R290(3)		
	Charged volume	kg	0.92	1.4	
Sound power Level[7] Erp		dB	55	56	57
Sound pressure Level[7](1m) Erp		dB(A)	42	43	44
Sound power Level[7] Day		dB	67	69	71
Sound pressure Level[7](1m) Day		dB(A)	53	55	57
Net dimension(W×D×H)		mm	1080*520*857		
Packaged dimension(W×D×H)		mm	1180*560*1005		
Net weight/Gross weight		kg	100/117	125/142	
Water piping connection		mm	R1"	R1-1/4"	
Ambient temp. range	Cooling	℃	-5～43		
	Heating	℃	-25～35		
	Domestic hot water	℃	-25～43		
Outlet water temp. setting range	Cooling	℃	5～25		
	Heating	℃	25～75		
	Domestic hot water	℃	20～70		

Note

1.Outdoor air temperature 7℃ DB, 6℃ WB; Water inlet 30℃, Water outlet 35℃;
2.Outdoor air temperature 7℃ DB, 6℃ WB; Water inlet 40℃, Water outlet 45℃;
3.Outdoor air temperature 7℃ DB, 6℃ WB; Water inlet 47℃, Water outlet 55℃;
4.Outdoor air temperature 35℃ DB; Water inlet 23℃, Water outlet 18℃;
5.Outdoor air temperature 35℃ DB; Water inlet 12℃, Water outlet 7℃;
6.Seasonal space heating energy efficiency class testes in average climate general conditions.
7.Testing standard: EN12102-1.
8.Backup electric heater is external installation.
9.Relevant EU standards and legislation: EN14511; EN14825; EN50564; EN12102; (EU) No 811/2013; (EU) No 813/2013; OJ 2014/C 207/02:2014.

Specification

Electric booster heater

The heater heats up water in case the outdoor temperature decreases and heat pump capacity is insufficient.

Hydro box Series: (Built-in)

9-15kW unit- 9kW heater

Mono Series: (Optional):

6-15kW unit(1 phase)-3kW heater
12-22kW unit(3Phase)-9kW heater

ThermorE

ThermorE model		EBH-30	EBH-90
Power supply	V/Ph/Hz	220-240/1/50	380-415/3/50
Capacity (max)	kW	3	9
Capacity steps	/	1	3
Input	kW	3	3/6/9
Net weight/Gross weight	kg	13/15	15/17
Net dimension(WxDxH)	mm	278*215*504	
Package dimension(WxDxH)	mm	379*279*665	
Water connection diameter	inch	R1"	

Note

1.Outdoor air temperature 7℃ DB, 6℃ WB; Water inlet 30℃, Water outlet 35℃;

2.Outdoor air temperature 7℃ DB, 6℃ WB; Water inlet 40℃, Water outlet 45℃;

3.Outdoor air temperature 7℃ DB, 6℃ WB; Water inlet 47℃, Water outlet 55℃;

4.Outdoor air temperature 35℃ DB; Water inlet 23℃, Water outlet 18℃;

5.Outdoor air temperature 35℃ DB; Water inlet 12℃, Water outlet 7℃;

6.Seasonal space heating energy efficiency class testes in average climate general conditions.

7.Testing standard: EN12102-1.

8.Backup electric heater is external installation.

9.Relevant EU standards and legislation: EN14511; EN14825; EN50564; EN12102; (EU) No 811/2013; (EU) No 813/2013; OJ 2014/C 207/02:2014.

Heat pump
One-stop solution H&C&DHW

ThermaX provides one-stop solution for space heating, cooling and sanitary hot water for households, through integrating underfloor heating, FCUs, radiators and water tanks.

ThermaX offers a versatile year-round solution, through linking with solar panels, gas boilers and other heat sources, allowing user to create a hybrid and tailored system.

Meanwhile, ThermaX is compatible with your smart home system.

Cottbus, Germany

Budapest, Hungary

Zwickau, Germany

Cottbus, Germany

Sobota, Slovakia

Cottbus, Germany

CTGR 300MW Offshore Wind Farm Project

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