

Haier

Haier



Haier Intelligent Buildings

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SUPER AQUA

Air to Water Heat Pump

Haier Brand Story

Established in 1984, Haier Group is a world-leading provider of a better life and digital transformation solutions.

With users at the center of all we do, we have deployed 10 R&D centers, 71 research institutes, 33 industrial parks, 133 manufacturing centers and more than 230,000 sales networks worldwide. We are the world's only IoT ecosystem brand that has been ranked on the list of BrandZ Top 100 Most Valuable Global Brands for four years straight and topped Global Major Appliances Brand Rankings by Euromonitor International for 13 consecutive years. In 2021, our global revenue reached USD 52.2 billion, and our brand value reached USD 74.3 billion.

We own three listed companies. Our subsidiary Haier Smart Home is among the list of Fortune Global 500 and Fortune World's Most Admired Companies. We own seven global high-end brands, namely Haier, Casarte, Leader, GE Appliances, Fisher & Paykel, AQUA and Candy; and the world's first smart home scenario brand - THREE WINGED BIRD. In addition, we have built the world's leading Industrial Internet platform COSMOPlat and the great healthcare brand Yingkang Healthcare. Our entrepreneurship acceleration platform HCH has successfully incubated 7 unicorn companies, 102 gazelle companies, and 80 specialized and sophisticated enterprises.

As a representative of the real economy, we have been constantly focusing on the industry and develop businesses in smart home and living, Industrial Internet, and great healthcare sectors; and have been building high-end, scenario and ecosystem brands. Through technological innovation, we aim to customize a personalized smart living experience for global users, help corporate clients with digital transformation, and promote high-quality and sustainable economic and social development.

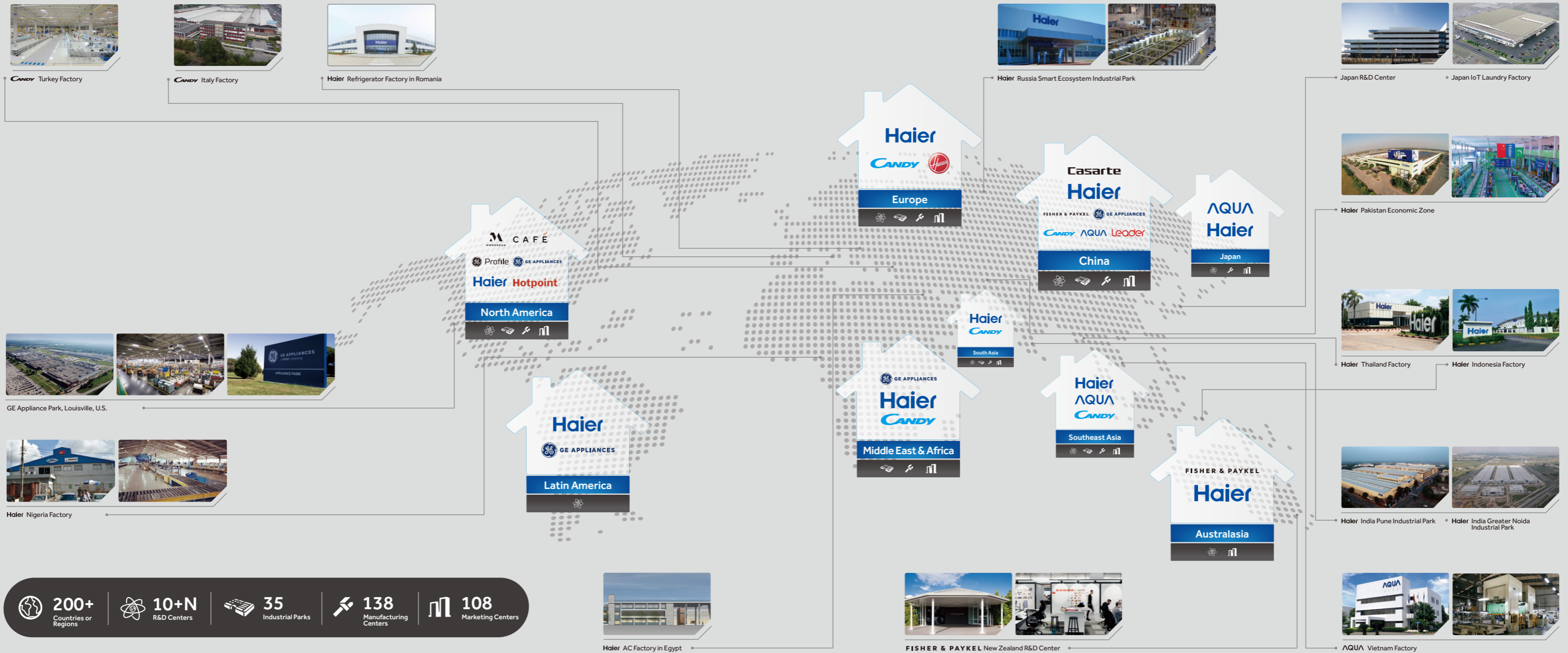


Haier

Haier Global Network

Haier has owned 10+N R&D centers, 35 industrial park, 138 factories, 108 marketing centers across the world, and the sales network over 200 countries or regions.

Haier has seven major household appliance brands across the world: Haier, Casarte, Leader, AQUA, Fisher & Paykel, GE Appliances (GEA) and CANDY. All these brands together have constituted Haier' s global brand cluster, which can fully meet the best experience of different consumer groups in different regions all across the world.



200+ Countries or Regions
10+N R&D Centers
35 Industrial Parks
138 Manufacturing Centers
108 Marketing Centers

Haier Global Manufacturing Capacity

In China, Haier owns 8 air conditioner factories, 1 of which is MHAQ, a JV between Haier and Mitsubishi Heavy. Besides China, Haier runs another 8 overseas air conditioner factories. These factories have a total production capacity of over 27.2 million units per year.



The First Batch of Chinese Local Enterprise Selected as
"Lighthouse Factory"
 in the world



Haier R&D Center

Haier Air Conditioning R&D Center, located in Qingdao, China, completed in December 2013, covers 20,000 square meters. It has more than 120 laboratories, including testing laboratories, key part research laboratories and all-weather user experience simulation laboratories. The R&D center also has the world tallest "drop tower" for testing long refrigerant piping tests(106 meters tall).



Haier & Mitsubishi
Joint Laboratory



Haier & HIGHLY
Joint Laboratory

In April 2014, Haier established joint laboratories with Highly for research in heating & cooling technology and with Mitsubishi Electric for innovative technology for user experience. Research by the user experience center covers the fields of user comfort evaluation, aerodynamics, acoustics, EMC(Electro-Magnetic Compatibility) and mechanics etc. The labs can carry out more than 600 international tests as per ISO, IEC, EN, CISPR and ANSI etc. to meet the requirements of Europe, Asia, America, Australia, Middle East and other 100 countries and regions.

The user experience center gains recognition by domestic well-known certification and testing institutions, also is recognized by international organizations like TUV and Intertek etc. At Haier, we believe that the best air conditioning is one that builds on uncompromising quality control worldwide, developing and manufacturing fine products and delivering them to customers everywhere.

R&D Labs



EMC Test Lab



Water-spray
Test Lab



Psychrometric
Test Lab



Safety Test Lab



Full-anechoic
Test Lab



Centralized Control
Test Lab



Simulated Snow
Test Lab



Simulated
Sunshine Test Lab



Environmental
Evaluation Test Lab



Humidity
Evaluation Test Lab



Double 85
Test Lab



Height Drop
Test Lab

Global Certification



High Efficiency	 Efficiency class	Efficiency class at 35°C leaving water temperature/ efficiency class at 55°C leaving water temperature.
	 Full DC inverter technology	Full DC inverter compressor and DC brushless fan are adopted.
	 DHW efficiency	Domestic hot water efficiency class .
Ultimate Comfort	 2 zone control	Control two different water temperatures for zone1 and zone2.
	 Max LWT	Maximum leaving water temperature.
	 Fast DHW	Start the electrical heater in the DHW tank to heat the domestic hot water in the shortest time.
	 Quiet mode	Lower the operating sound level by reducing the working speed of the compressor and fan motor in the preset periods.
	 Turbo mode	Increase the working speed of the compressor and fan motor to realize setting temperature in shorter time.
	 Climate curve	Through climate curve function, Zone1 and Zone2 temperatures can be automatically controlled based on the outdoor ambient temperature.
	 Sterilization	Control the electric heater in the DHW tank, heating the water of the tank to kill this bacteria.
	 Auto mode	Enable the unit to operate either heat or cool mode automatically according to the ambient temperature.
	Intelligence	 Smart grid
 Modbus		Integrate the Modbus communication protocol, no additional Modbus gateway needed.
 Energy monitoring		View and explore real-time power and daily energy consumption in kWh.
 WiFi		Remote control for easy operation.

Intelligence	 Holiday mode	In this mode, the heat pump will work according to the minimum requirement.
	 Scheduling programs	Users can create schedule programs, including naming the programs, timer on/off operation, mode selection, leaving temperature setting and the frequency etc. Once the schedule program is set, the system will run according to the pre-set program automatically.
	 DHW tank solar thermal control	Control the solar thermal function of the tank for heating domestic hot water.
	 Auxiliary heating source	Allow the system to be combined with a third-party boiler and control the boiler.
	 Pool heating	Provide the control for heating the pool water.
	 Bivalence control	When the system is combined with a boiler, the 'bivalent connection' can be set by the controller. when outdoor ambient temperature drops to a certain level, boiler is turned on and the heat pump is turned off.
	 Cascade control	Max 8 units can be combined in one system.
High Reliability	 Floor drying	Preheat the floor to remove the water from the floor.
	 Anti-freezing	The corresponding control logic is used to protect the water system against freezing.
	 Anti-rust and corrosion of water pump	The corresponding control logic is used to protect the water pump against rust and corrosion.
Super Convenience	 Error history	Check the historical error record via the controller, which is convenient for fast troubleshooting.
	 Parameters check	Many important parameters about the system can be check through the "System Status" function, including the system parameters, heat pump unit parameters. These parameters are helpful for service man to diagnose the system.

What is Haier SUPER AQUA Air to Water Heat Pump?

Haier Super Aqua air to water heat pump uses free energy from outside air as main energy source for space cooling, space heating and domestic hot water heating.



Space cooling

Space heating

Domestic hot water heating

Heat pump system

In order to get 5kW of heat for your home, the heat pump system only needs 1kW of electricity, and 4kW of energy is from the outdoor air. It is very energy saving and reduce the operating cost and CO₂ emissions in heating compared to conventional boiler.



Type	Monobloc		Split	Hydro split	Hydro all in one
Description	Monobloc type heat pumps are packaged equipment, which includes all hydraulic components. It consists of only one outdoor unit. The advantage of the monobloc system is easy installation and no additional refrigerant piping requirement.		Split type heat pumps consist of one outdoor unit and one indoor unit. The heat exchange between the refrigerant and water is finished in the heat exchanger of indoor unit. The advantage of the split system is better anti-freeze effect. Because there are no water pipes exposed outside.	Hydro split type heat pumps consist of one outdoor unit and one indoor unit. The heat exchange is in the outdoor unit. The outdoor unit and indoor unit are connected through water pipes. The advantage of this system is that it can prevent dangerous types of refrigerant from entering the room, ensuring indoor safety.	The operating principle of the Hydro all in one system is similar to the Hydro split. The system integrates a domestic water tank. The advantage of this system is good integration, without the need to purchase a separate water tank.
Series	EN series 55/60	HE series 60	HE series 60	GT series 80	GT series 80
Efficiency class	A+++ 35°C water 5kw A++ 35°C water 11/14/16kw	A+++ 35°C water	A+++ 35°C water	A+++ 35°C water	A+++ 35°C water

Benefits

Full DC inverter technology	●	●	●	●	●
2 zone control		●	●	●	●
Maximum leaving water temperature		●	●	●	●
Fast DHW		●	●	●	●
Quiet mode		●	●	●	●
Turbo mode	●	●	●	●	●
Climate curve		●	●	●	●
Sterilization		●	●	●	●
Auto mode		●	●	●	●
Smart grid		●	●	●	●
Modbus	●	●	●	●	●
Holiday mode		●	●	●	●
Scheduling Programs		●	●	●	●
DHW tank solar thermal control		●	●	●	●
Auxiliary heating source	●	●	●	●	●
Pool heating		●	●	●	●
Bivalence control		●	●	●	●
Cascade control		●	●	●	●
Floor drying	●	●	●	●	●
Anti-freezing	●	●	●	●	●
Anti-rust and corrosion of water pump		●	●	●	●
Error history		●	●	●	●
Parameters check		●	●	●	●

Models Line-up

Series	4 kW	5/6 kW	7/8 kW		9/10 kW	11/12 kW	14 kW	15/16 kW
R290 Monobloc GT 1Phase 3Phase	 AW042MUGHA	 AW062MUGHA	 AW082MUGHA		 AW102(N)MUGHA	 AW122(N)MXGHA	 AW142(N)MXGHA	 AW162(N)MXGHA
R32 Monobloc HE 1Phase 3Phase		 AW052MUCHA	 AW072MUCHA		 AW092MUCHA	 AW112(N)MXCHA	 AW142(N)MXCHA	 AW162(N)MXCHA
R32 Monobloc EN 1Phase		 AU052FYCRAI(HW)	 AU082FYCRAI(HW)			 AU112FYCRAI(HW)		 AU162FYCRAI(HW)
R32 Split HE 1Phase	 AW042SSCHA	 AW062SSCHA	 AW082SNCHA		 AW102SNCHA			
	 HU062WAMNA	 HU062WAMNA1	 HU102WAMNA		 HU102WAMNA			
R290 Hydro Split GT 1Phase 3Phase	 AW042HUGHA	 AW062HUGHA	 AW082HUGHA		 AW102HUGHA	 AW122(N)HVGHA	 AW142(N)HVGHA	 AW162(N)HVGHA
	 HU102WAHYA	 HU102WAHYA	 HU102WAHYA		 HU102WAHYA HU10NWAHYAE3	 HU162WAHYA HU16NWAHYAE3	 HU162WAHYA HU16NWAHYAE3	 HU162WAHYA HU16NWAHYAE3
R290 Hydro All in one GT 1Phase 3Phase	 AW042HUGHA	 AW062HUGHA	 AW082HUGHA		 AW102HUGHA	 AW122(N)HVGHA	 AW142(N)HVGHA	 AW162(N)HVGHA
	 HU102F20AHYA	 HU102F20AHYA	 HU102F20AHYA		 HU102F20AHYA HU102F20AHYAE3	 HU162F20AHYA HU162F20AHYAE3	 HU162F20AHYA HU162F20AHYAE3	 HU162F20AHYA HU162F20AHYAE3

Why Choose Haier SUPER AQUA GT series?

R290

Environmentally-friendly

Natural refrigerant R290

Thanks to the excellent thermodynamic performance of R290 and advanced heat pump technology, it helps to reduce carbon emissions and achieve carbon neutrality goals.

Based on this, Haier has developed the R290 Super Aqua GT series.



High-efficiency

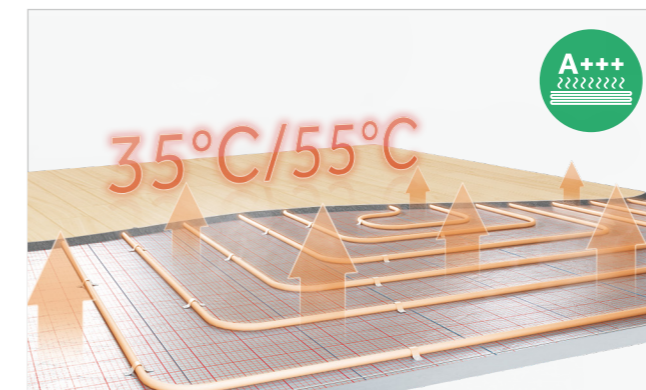
Max cop up to 5.50

The GT series has excellent performance. Higher compression ratio and lower oil compressors and the efficient internal thread regenerator is used in the appliance to increase the suction temperature and improve the energy efficiency of the unit. The maximum value of COP can reach 5.50.



SCOP A+++/A+++ (35°C/55°C)

The SCOP at 35°C and 55°C water temperature both reach the top class A+++.



Hot water ERP class A+

DHW efficiency level reach the top class A+.



Ultimate Comfort

High leaving water temperature

The max leaving water temperature can reach 80°C, leading in the industry. It is the best solution to replace the boiler heating.



Low sound level

With excellent design, the Haier Super Aqua GT series sound pressure Level as low as 35dB (A) at 3 meters.



Super Convenience

Compact design

All in one indoor unit covers an area of only 590*590mm, the smallest area in the industry, suitable for hidden installation of apartments.



Easy installation and easy maintenance

From the convenience of installation and maintenance, the internal structure is optimized, the layout is more reasonable, and the components can be removed and assembled without interfering with each other.



High Reliability

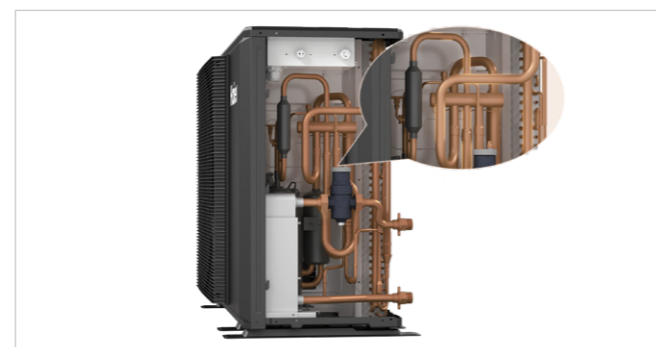
Wide operating range

The GT series can operate normally at minus 28°C, and the heating capacity does not decay at minus 10°C, providing a guarantee for users to warm in cold weather.



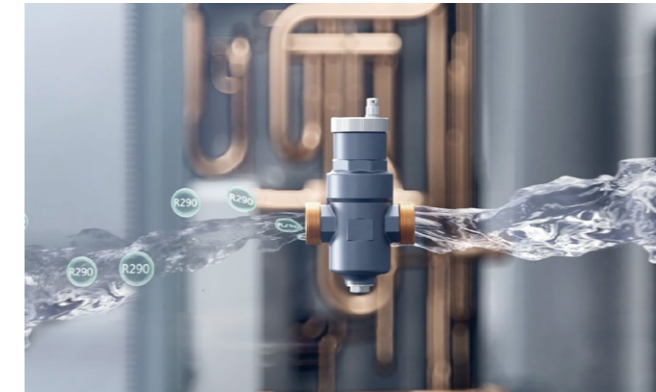
Silver brazing technology

To deal with the R290 refrigerant which is combustible, optimize the system design by reducing welding joints and adopting silver brazing welding technology to ensure stronger welding and avoid leakage.



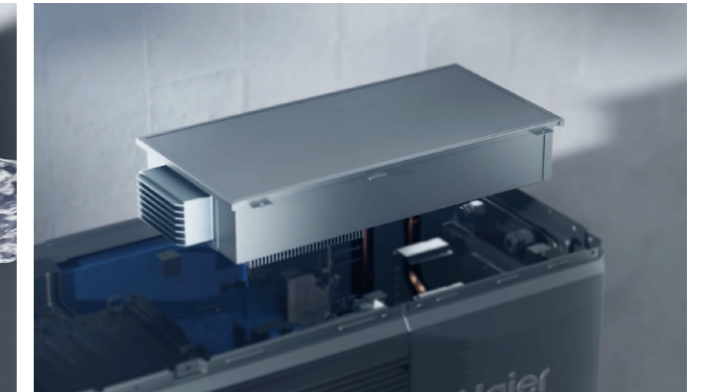
Refrigerant separator

Refrigerant separator can quickly discharge the refrigerant from the water system in case of leakage and prevent it from entering the water system and indoor space.



Sealed electric control box

Explosion-proof electric control design, more safety for R290 product, is used to avoid potential fire hazards and provide strong protection for user safety.



Intelligence

Smart control

With Haier Wi-Fi control you can check the running state of heat and allows you to have flexibility and control of your heat pump. It delivers a simple life for you.



Selection software

The system is built on the Cloud and authorized users to operate by browser. Users can visit the system by mobile terminals and computers; it can support all the ATW heat pumps models to select and design. The system can finally output the corresponding selected results and the overall project plan report.



Why Choose Haier SUPER AQUA EN series?

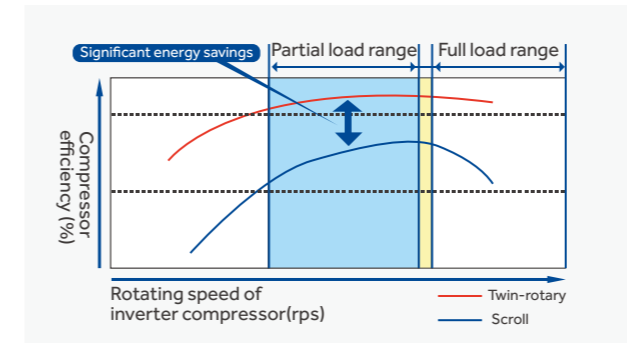


High-efficiency

The EN series efficiency class is up to the highest class A+++ at 35°C leaving water temperature and A++ at 55°C leaving water temperature for space heating.

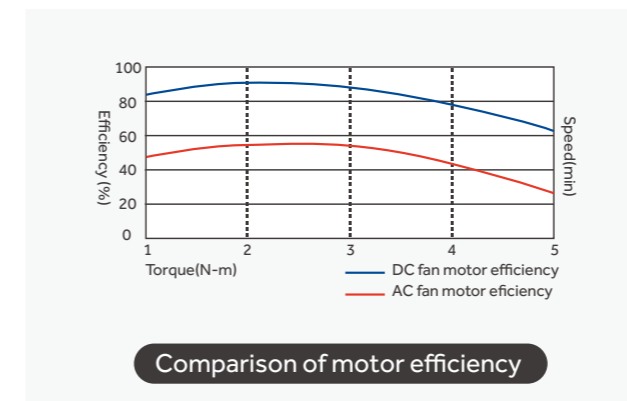
Full DC inverter technology

All the heat pumps adopt full DC inverter twin-rotary compressor which has smaller size and higher efficiency compared with scroll compressor. Because the smaller friction of the compressor, the running vibration is lower, realizing the high efficiency and low noise of the compressor.



Stepless adjustment technology

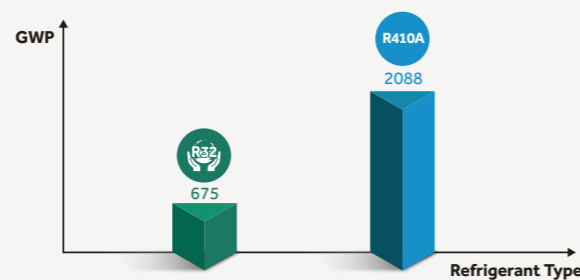
The high-efficiency DC motor is used for stepless adjustment. The operating power of the unit is adjusted with the change of water temperature and load to improve heat exchange efficiency and reduce the power and noise of the unit.



Environmentally-friendly

Eco-friendly R32

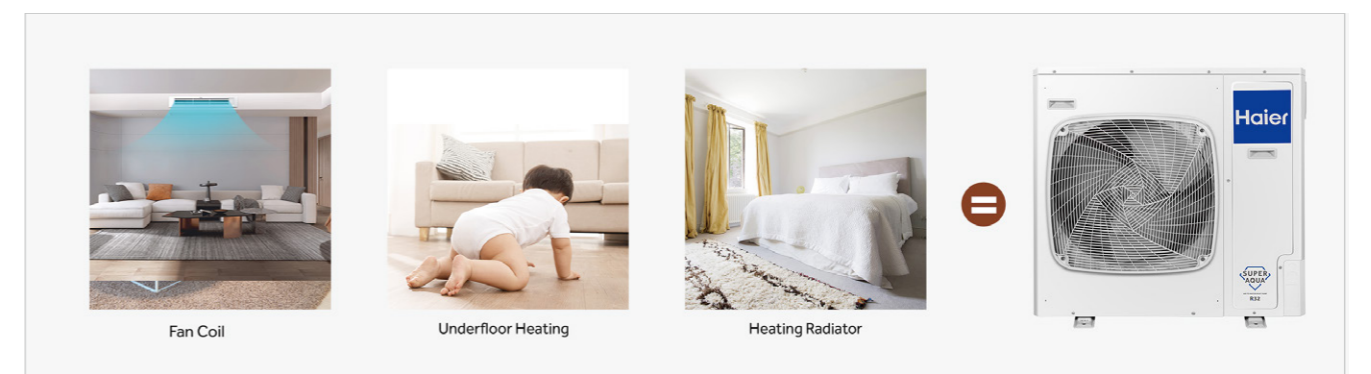
All Super Aqua products use the future refrigerant: R32, which has been shown to have a remarkably reduced environmental impact compared to other refrigerants such as R410A.



Ultimate Comfort

60°C hot water

Haier Super Aqua offers an integrated solution to guarantee the total comfort in your home. Leaving water temperature ranges from 5°C to 60°C, which provides comfortable cooling and heating for users. In addition, production of domestic hot water is guaranteed all year. The air-side equipments can be fan coil, underfloor heating or radiator, which can meet different installation scenarios.



Low sound level

Multiple noise reduction measures ensure a low sound level.

Compressor

Covered by the soundproof material, blocking noise reduction from the compressor; Mounted on the rubber anti-vibration mounts for quite operation and low vibration.

Axial fan

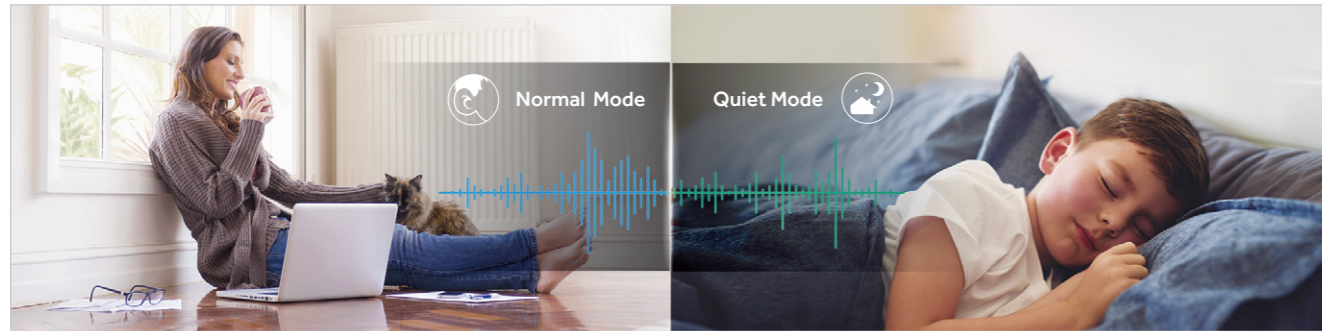
Brushless DC fan motor and aerodynamically optimized impeller for noise and vibration reduction.

Pipeline design

New structure and optimized design of pipeline effectively avoid pipeline noise and vibration.

Quiet mode

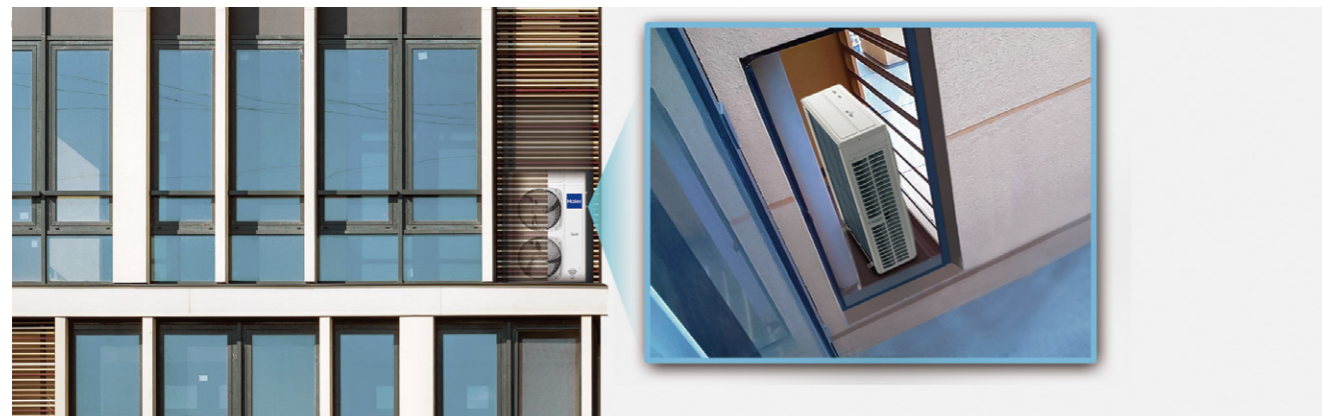
In addition, quiet mode is available for quiet operation at night.



Super Convenience

Easy installation

Compact design allows the unit to be installed even when the space is limited.



High Reliability

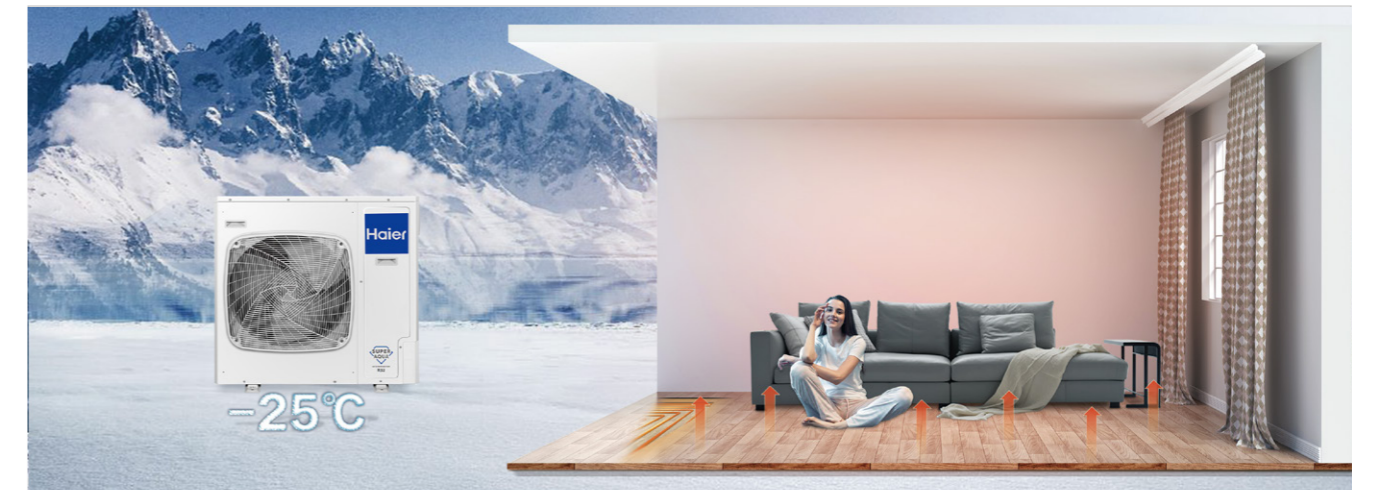
Intelligent anti-freezing technology

The anti-freeze program protects hydraulic parts from damage.



Wide operation range

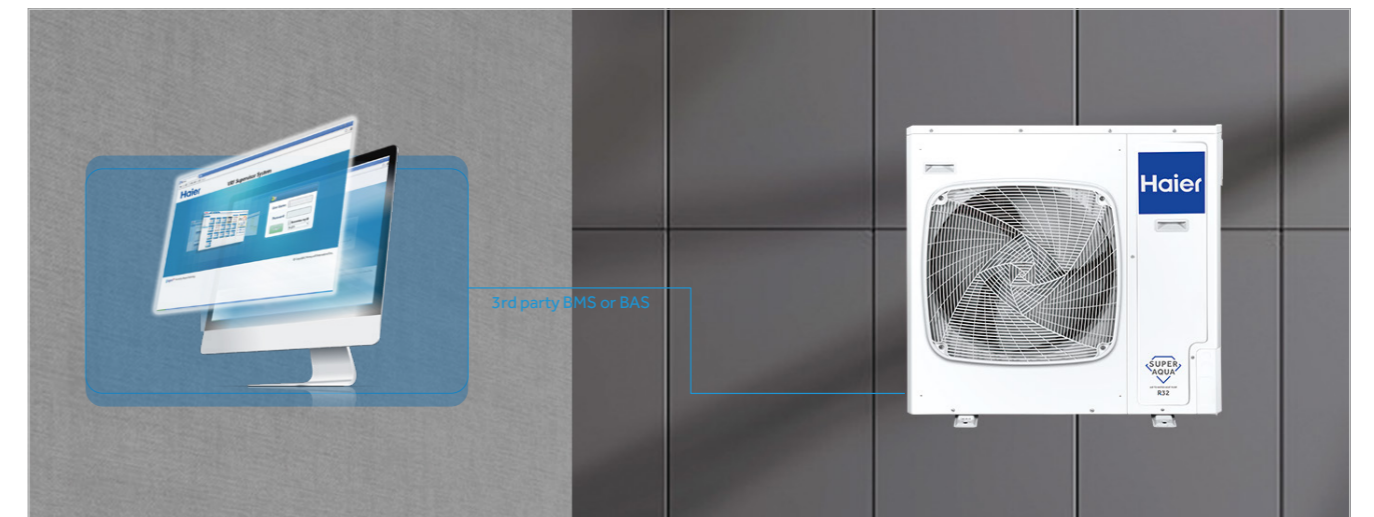
The operating outdoor ambient temperature of the heating mode is as low as -25°C .



Intelligence

Easy 3rd party BMS solution

The unit integrates the MODBUS RTU communication protocol, can be connected to 3rd party BMS or BAS directly, no additional Modbus gateway needed.



Wide Application

Capacity range from 4kW to 19kW, Haier Super Aqua is suitable for both residences and small-sized commercial application scenarios. Small-capacity units are applied mainly in newly built residential buildings with their improved insulation materials whilst. Medium-capacity products are mainly used for refurbishments. Big-capacity products can be installed in small-sized commercial applications, such as Café, restaurant, hair salons and so on.



SUPER AQUA Monobloc EN

R32 Reversible Air-to-water heat pump

The EN series of reversible air-to-water monobloc provides heating, cooling and domestic hot water for home. It provides customers with a more economical solution, to help customers save the cost.



*Locally purchased
** For domestic hot water heating function

Features



- Eco-friendly R32
- Full DC inverter technology
- 5kW unit COP at 35°C leaving water temperature reaches 5.05
- Max 60°C hot water (5kW)
- Wide heating operation range (5kW: ambient temperature: -25~35°C)
- Built-in flow switch, safety valve for easy installation

Monobloc EN Specification



Model		AU052FYCRA(HW)	AU082FYCRA(HW)
Heating (LWT 35°C / OAT 7°C)	Capacity	kW	5.00
	Power input	kW	0.99
	COP	-	5.05
Heating (LWT 55°C / OAT 7°C)	Capacity	kW	5.00
	Power input	kW	1.64
	COP	-	3.05
Space heating average climate water outlet 35°C	SCOP	-	4.59
	ηs	%	180
	Energy class	-	A+++
Space heating average climate water outlet 55°C	SCOP	-	3.32
	ηs	%	130
	Energy class	-	A++
Cooling (LWT 18°C / OAT 35°C)	Capacity	kW	5.00
	Power input	kW	1.00
	EER	-	5.00
Cooling (LWT 7°C / OAT 35°C)	Capacity	kW	5.00
	Power input	kW	1.56
	EER	-	3.20
Outdoor operating temperature range	Heating	°C	-25~35
	Cooling	°C	10~46
Leaving water temperature range	Heating	°C	25~60
	Cooling	°C	5~20
Water flow rate	L/min	14.3	23.0
Water piping connection	Inlet/Outlet	inch	RC 3/4"
Compressor	Quantity	-	1
	Type	-	DC inverter twin rotary
Refrigerant	Type	-	R32
	Charge/CO ₂ Eq.	kg/T	1.00 / 0.675
Net dimension	(H×W×D)	mm	765×920×372
Packing dimension	(H×W×D)	mm	875×1045×488
Net/Gross weight	kg	69/80	87/97
Sound power level	dB(A)	61	64
Power supply	-V/Hz	1, 220-240, 50/60	1, 220-240, 50/60
Max running current	A	13.5	21.3
Recommended circuit breaker	A	30	32
Accessory	Wired controller	/	YR-E27A (Standard)
	DHW PCB	/	ATW-A01(Optional)
	Filter	/	Standard

- ### Key Features
- R32
 - Turbo mode
 - BMS Modbus
 - Auxiliary heating source
 - Anti-freezing

Note: 1. According to EN14511, EN14825 (EU) and No 811/2013(EU).
2. LWT: Leaving water temperature; OAT: Outdoor air temperature.
3. Sound level values are measured at a semi-anechoic room. And the sound power level values are based on measurement of EN2102-1 under conditions of EN14825.
4. The above data may be changed without notice for future improvement on quality and performance.

Monobloc EN Specification



AU112FYCRA(HW)
AU162FYCRA(HW)



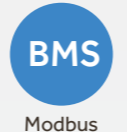
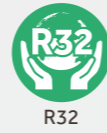
YR-E27(Standard)



ATW-A01(Optional)

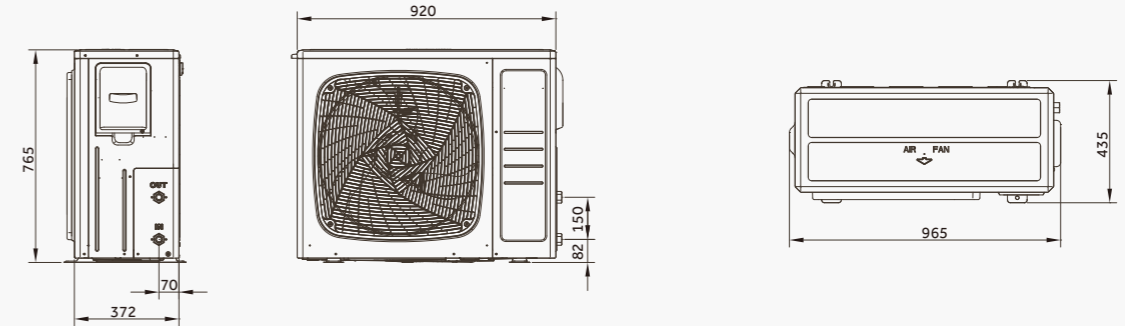
Model		AU112FYCRA(HW)	AU162FYCRA(HW)	
Heating (LWT 35°C / OAT 7°C)	Capacity	kW	11.00	16.00
	Power input	kW	2.61	3.86
	COP	-	4.22	4.15
Heating (LWT 55°C / OAT 7°C)	Capacity	kW	9.99	14.01
	Power input	kW	4.40	5.63
	COP	-	2.27	2.49
Space heating average climate water outlet 35°C	SCOP	-	4.35	4.00
	ηs	%	171	157
	Energy class	-	A++	A++
Space heating average climate water outlet 55°C	SCOP	-	3.20	3.09
	ηs	%	125	121
	Energy class	-	A++	A+
Cooling (LWT 18°C / OAT 35°C)	Capacity	kW	13.50	16.00
	Power input	kW	2.94	3.64
	EER	-	4.60	4.40
Cooling (LWT 7°C / OAT 35°C)	Capacity	kW	11.50	14.50
	Power input	kW	3.83	4.92
	EER	-	3.00	2.95
Outdoor operating temperature range	Heating	°C	-20-35	-20-35
	Cooling	°C	10-46	10-46
Leaving water temperature range	Heating	°C	25-55	25-55
	Cooling	°C	5-20	5-20
Water flow rate	L/min	31.5	45.8	
Water piping connection	Inlet/Outlet	inch	RC 1"	RC 1"
Compressor	Quantity	-	1	
	Type	-	DC inverter twin rotary	
Refrigerant	Type	-	R32	
	Charge/CO ₂ Eq.	kg/T	2.40 / 1.620	2.60 / 1.755
Net dimension	(H×W×D)	mm	1500×950×370	1500×950×370
Packing dimension	(H×W×D)	mm	1638×1010×480	1638×1010×480
Net/Gross weight	kg		145/157	145/157
Sound power level	dB(A)		67	68
Power supply	-/V/Hz		1, 220-240, 50/60	1, 220-240, 50/60
Max running current	A		24.3	31.7
Recommended circuit breaker	A		32	40
Accessory	Wired controller	/	YR-E27 (Standard)	
	DHW PCB	/	ATW-A01(Optional)	
	Filter	/	Standard	

Key Features

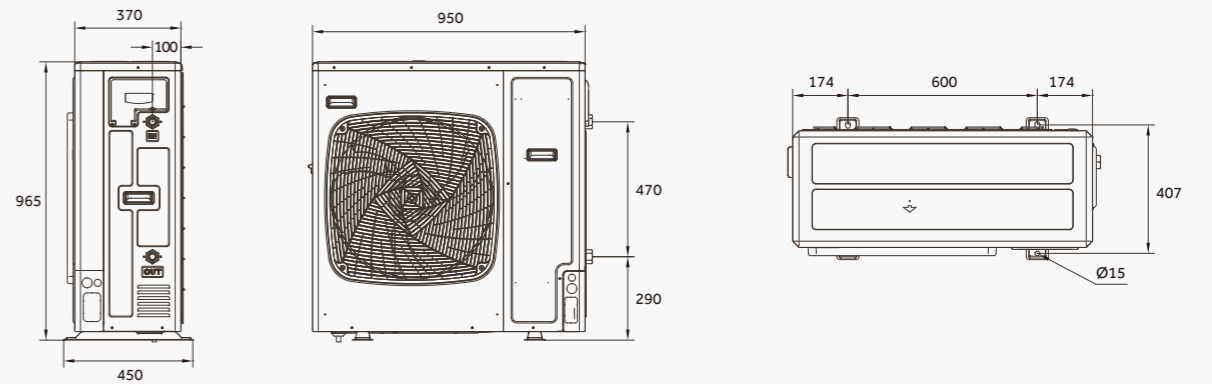


Outline Dimension

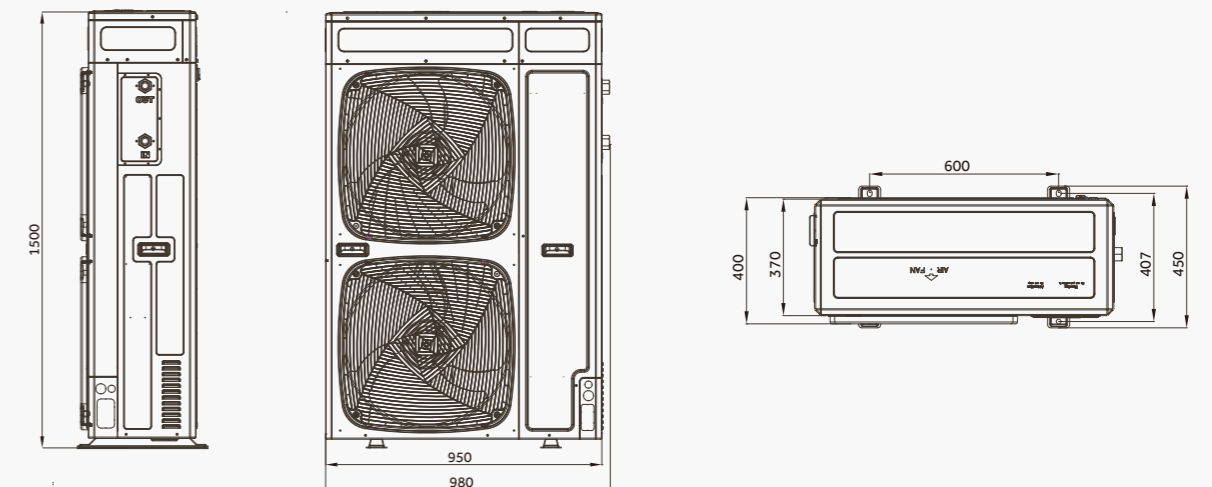
AU052FYCRA(HW)



AU082FYCRA(HW)



AU112FYCRA(HW)/AU162FYCRA(HW)



Note: 1. According to EN14511, EN14825 (EU) and No 811/2013 (EU).
2. LWT: Leaving water temperature; OAT: Outdoor air temperature.
3. Sound level values are measured at a semi-anechoic room. And the sound power level values are based on measurement of EN2102-1 under conditions of EN14825.
4. The above data may be changed without notice for future improvement on quality and performance.

Why Choose Haier SUPER AQUA HE series?



Ultimate Comfort

High leaving water temperature

High leaving water temperature of 60°C is guaranteed without using a backup heater when the outdoor temperature is higher than -15°C.



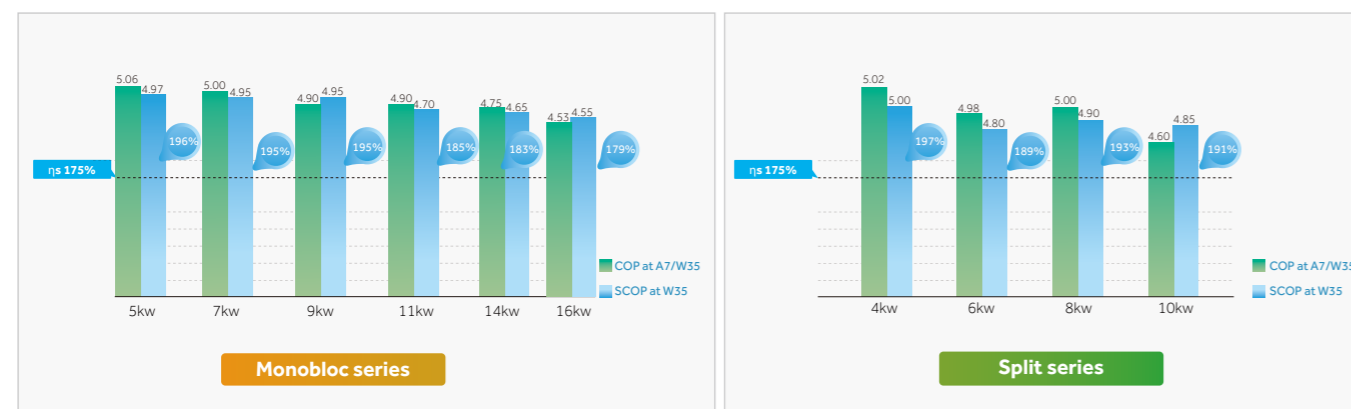
2 zone control

When there are different room temperature requirements, two zone temperature control through separate heating or cooling circuits is possible. Adjust and maintain two different water temperatures to achieve intelligent control and saving energy.

High-efficiency

High efficiency

The HE series heat pumps have the top efficiency class A+++. The SCOP at 35°C leaving water temperature can reach 5.00 and the COP at 35°C leaving water temperature is up to 5.02.



Fast DHW

The HE series products have fast DHW function. When Fast DHW is activated, the electrical heater in the domestic water tank will be activated at the same time together heat pump in order to reach DHW setting point as soon as possible, which will not be affected by outdoor ambient temperature and compressor running time.

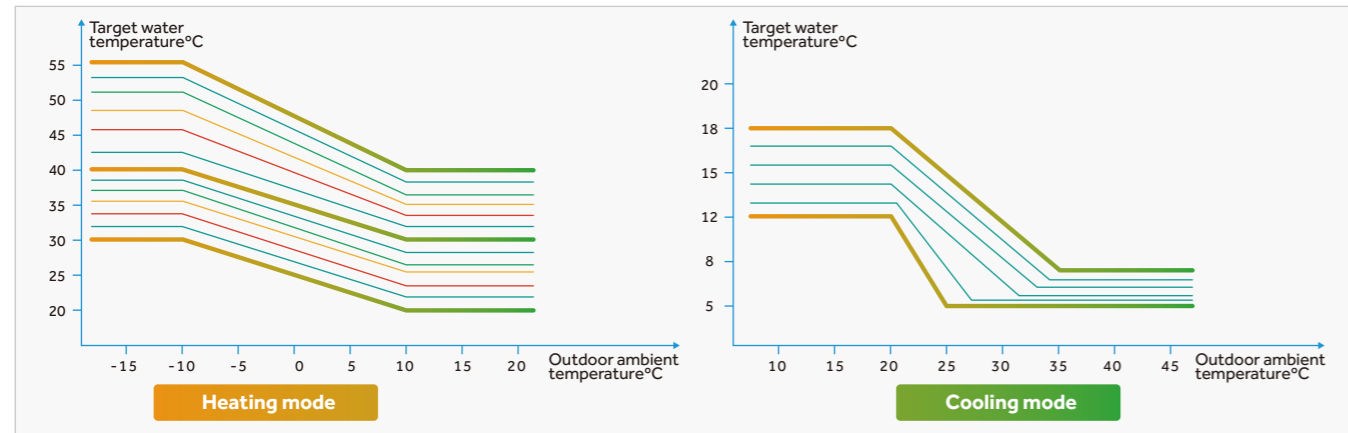
Note:
Only valid when DHW mode is selected.



Super Convenience

Climate curves

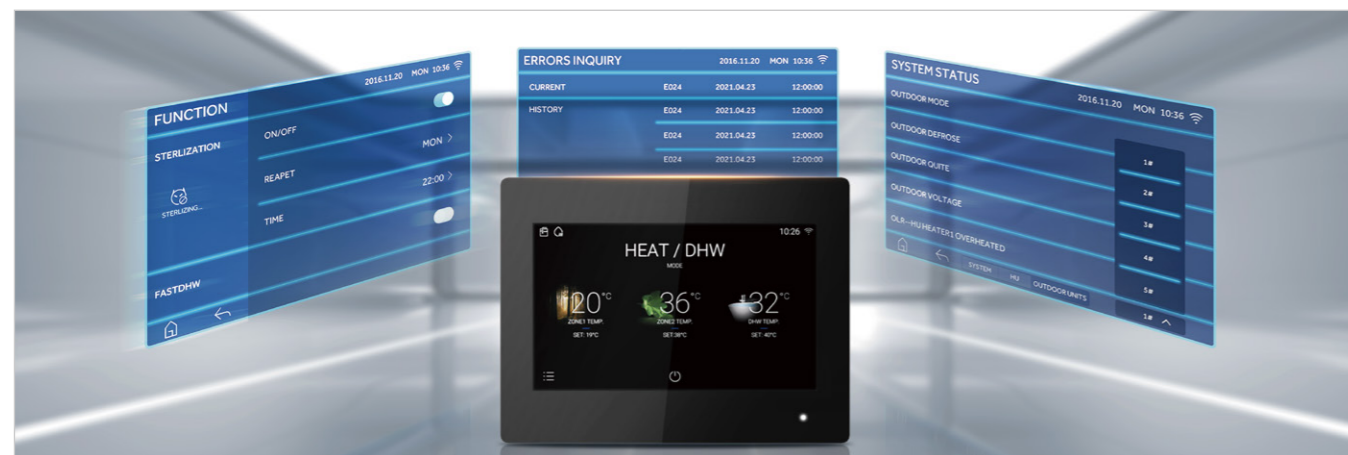
Through climate curve function, Zone1 and Zone2 temperatures can be automatically controlled based on the outdoor ambient temperature. A personalized climate curve can be designed through setting the outdoor ambient temperature and leaving water temperature. It will be more comfortable and energy-saving.



Sterilization

Users can directly turn on the sterilization function, and set the date and time on the controller. The water of the domestic water tank can be automatically heated to 75°C to kill the legionella at fixed periods. During the process of sterilization, the controller screen will display the icon to remind users that the system is conducting sterilization.

Note: Only when the electric heater in the domestic water tank is allowed to be controlled by Haier unit.



Check error information

When error occurs, the service man can not only check the current errors, but also the historical error records, which is convenient for fast troubleshooting.

Check system parameters

Many important parameters about the system can be check through the 'System Status' function, including the system parameters, indoor unit parameters and outdoor units parameters. These parameters are helpful for service man to diagnose the system.

Auto mode

Under Auto mode, the cool mode and heat mode can be automatically converted according to the outdoor ambient temperature. There is no need to manually set the heat pump operating mode, which is very convenient for the users.

Easy control

There is a 5-inch colorful controller. for HE series It can be easily operated through the touch screen and intuitive icons.



Cascade control

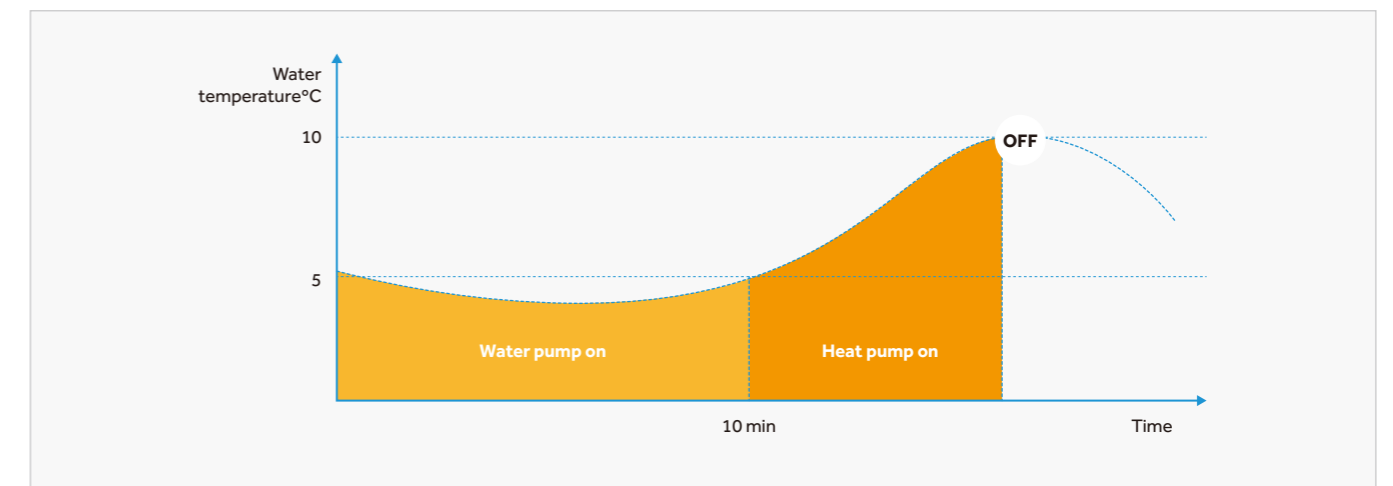
Max 8 units can be combined in one system to suitable for larger capacity demands.



High Reliability

Intelligent anti-freezing technology

The HE series adopts the anti-freezing logic: Water pump will turn on when water temperature below 5°C, And when the water temperature is below 5°C for more than 10 minutes, the heat pump is turned on.



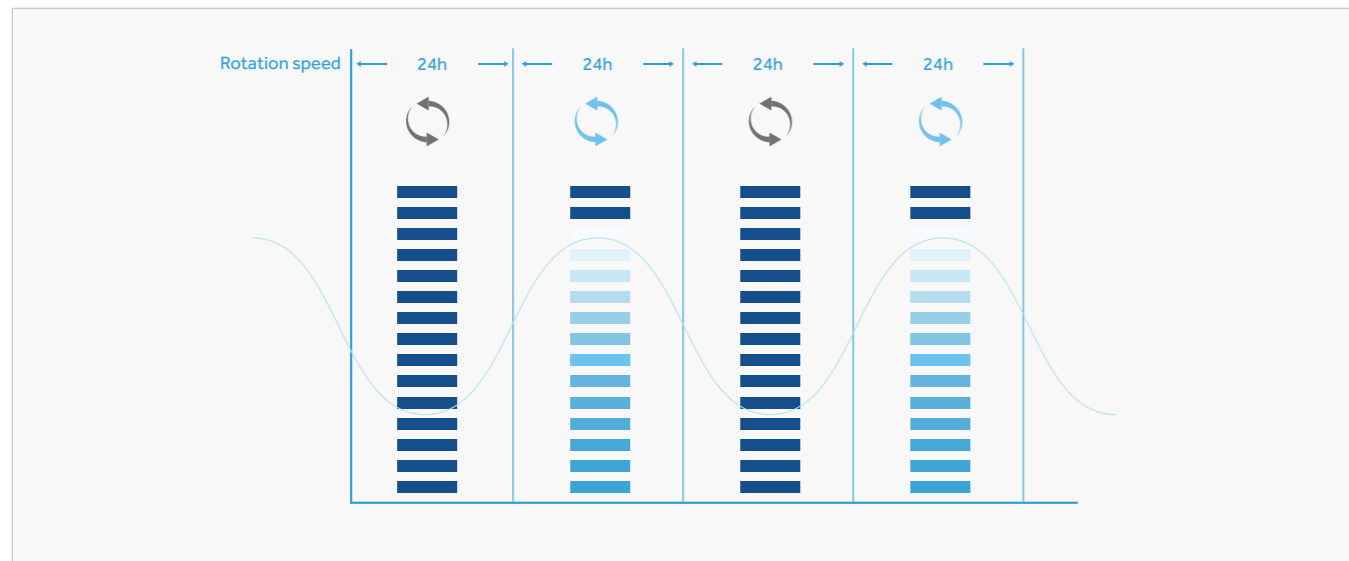
Floor drying

Before floor heating, if a large amount of water remains on the floor, the floor may be warped or even ruptured during floor heating operation, in order to protect the floor, floor drying is necessary, during which the temperature of the floor should be increased gradually.



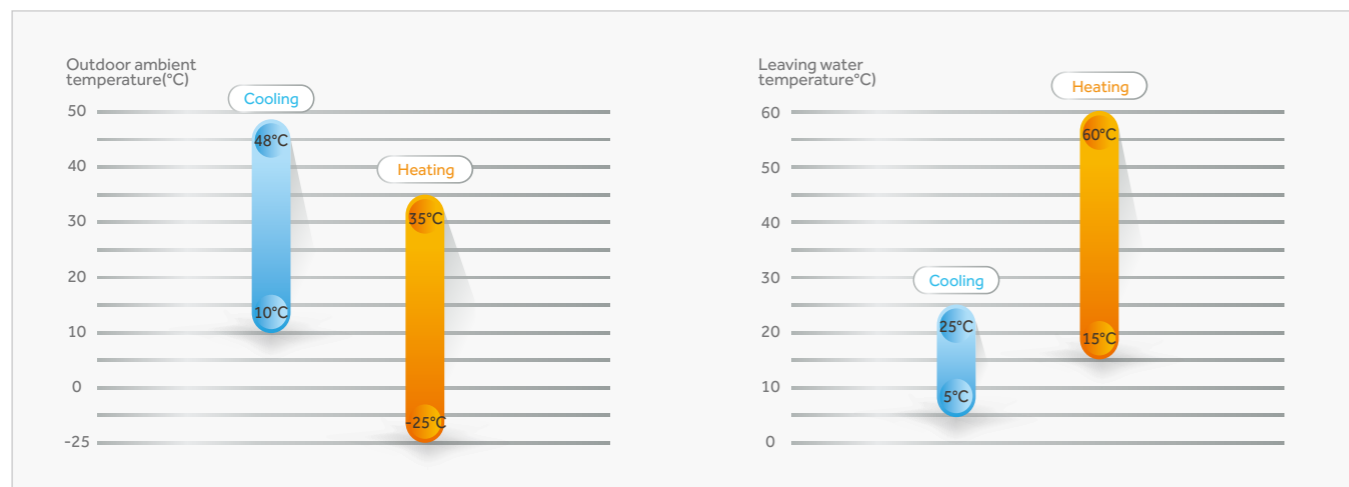
Anti-rust and corrosion of water pump

The HE and EN series heat pump has water pump anti-corrosion function. The water pump will automatically run 60s without any working within 24h, as the following curve shows and conduct one circulation per 24h.



Wide operation range

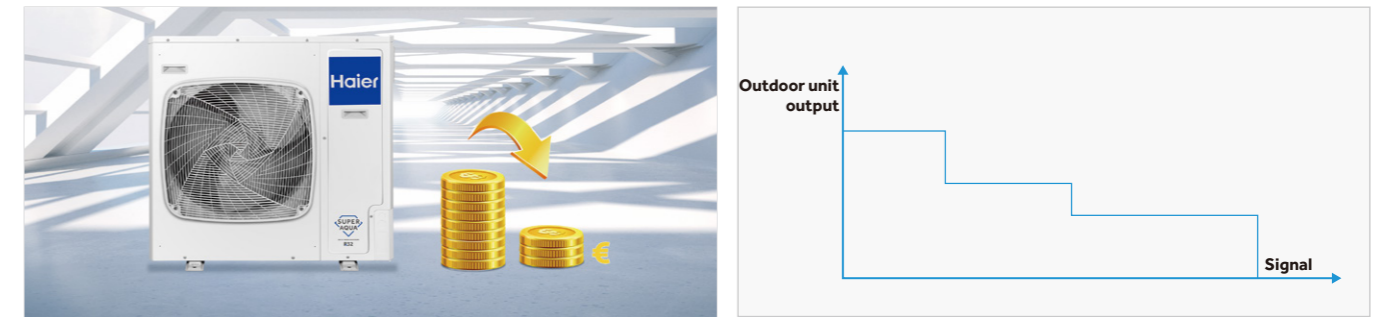
The operating outdoor ambient temperature of the heating mode is as low as -25°C.



Intelligence

Smart grid

Based on the signal from power grid company, the outdoor unit will adjust the capacity output.



Scheduling programs

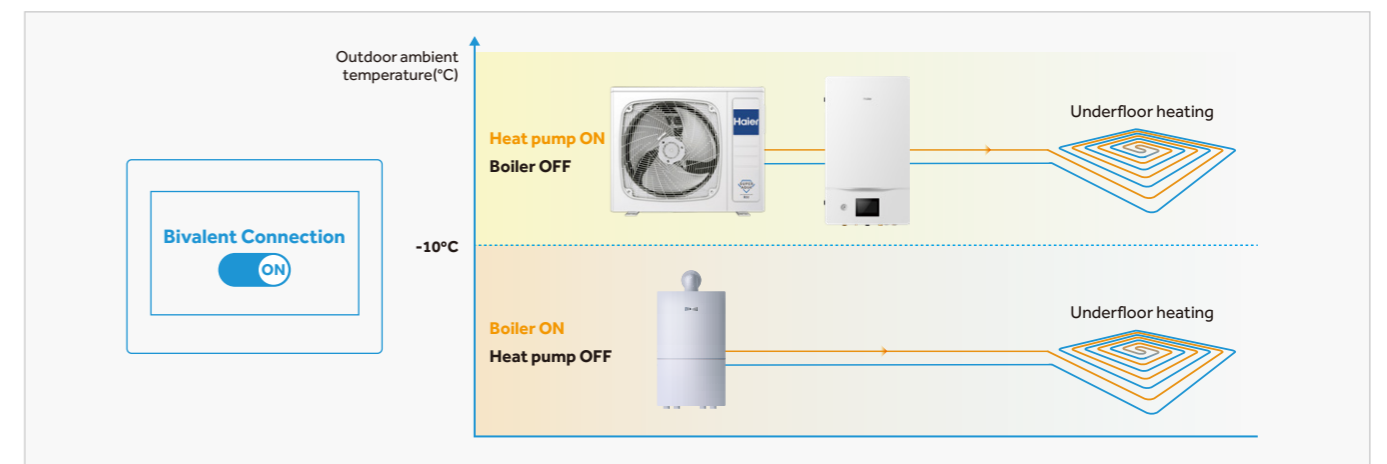
Users can create schedule programs, including naming the programs, timer on/off operation, mode selection, leaving temperature setting and the frequency etc. Once the schedule program is set, the system will run according the pre-set program automatically.

Scheduling Programs				
	0:00	8:00	17:30	24:00
Mon	ON	OFF	ON	
Tues	ON	OFF	ON	
Wed	ON	OFF	ON	
Thur	ON	OFF	ON	
Fri	ON	OFF	ON	
Sat		ON		
Sun		ON		

Bivalent connection

When the system is combined with a boiler, the 'bivalent connection' can be set by the controller. When bivalent connection is turned on, the heat pump will have full control of all aspects of the system and will run the boiler when required, depending on system design and settings.

When bivalent connection is turned off, both boiler and heat pump conduct automatic control.



SUPER AQUA Monobloc HE

R32 Reversible Air-to-water heat pump

The new generation reversible air-to-water monobloc series provides heating, cooling and domestic hot water for home. It has higher efficiency and can help users save the operating costs.



*Locally purchased
** For pool heating and solar thermal control of domestic hot water tank

Features



- SCOP at 35°C leaving water temperature up to 4.97
- COP at 35°C leaving water temperature up to 5.06
- 60°C hot water is guaranteed (outdoor temperature > -15°C)
- Wide heating operation range (ambient temperature: -25-35°C)
- Built-in expansion vessel, flow switch, safety valve for easy installation
- 5-inch colorful controller with full touch screen
- Refrigerant cooling for compressor driver module
- Double EEV design for better heating under low outdoor temperature
- Max. 8 units connectable into one system for larger capacity demands

Monobloc HE Specification



Model		AW052MUCHA	AW072MUCHA	AW092MUCHA	AW112MXCHA	Key Features	
Heating (LWT 35°C / OAT 7°C)	Capacity	kW	5.00	7.00	9.00	11.00	R32 A+++ A+++/A++ ±60°C Max. 60°C hot water Climate curve 2 zone control Auto mode Smart grid BMS Modbus DHW tank solar control Pool heating Anti-freezing
	Power input	kW	0.99	1.40	1.84	2.24	
	COP	W/W	5.06	5.00	4.90	4.90	
Heating (LWT 55°C / OAT 7°C)	Capacity	kW	5.00	7.00	8.50	10.50	
	Power input	kW	1.69	2.41	3.09	3.50	
	COP	W/W	2.95	2.90	2.75	3.00	
Space heating average climate water outlet 35°C	SCOP	-	4.97	4.95	4.95	4.70	
	ηs	%	196	195	195	185	
	Energy class	-	A+++	A+++	A+++	A+++	
Space heating average climate water outlet 55°C	SCOP	-	3.52	3.38	3.34	3.40	
	ηs	%	138	132	131	133	
	Energy class	-	A++	A++	A++	A++	
Cooling (LWT 18°C / OAT 35°C)	Capacity	kW	5.00	7.00	8.00	10.00	
	Power input	kW	1.02	1.44	1.86	2.27	
	EER	-	4.90	4.85	4.30	4.40	
Cooling (LWT 7°C / OAT 35°C)	Capacity	kW	5.00	7.00	8.00	10.00	
	Power input	kW	1.56	2.19	2.76	3.23	
	EER	-	3.20	3.20	2.90	3.10	
Outdoor operating temperature range	Heating	°C	-25 - 35				
	Cooling	°C	10-48				
Leaving water temperature range	Heating	°C	25 - 60				
	Cooling	°C	5-25				
Water flow rate	L/min	14.3	20.1	25.8	31.5		
Water piping connection	Inlet/Outlet	inch	R 1	R 1	R 1	R 1	
Compressor	Quantity	-	1				
	Type	-	DC inverter twin rotar				
Refrigerant	Type	-	R32				
	Charge/CO2 Eq.kg/T		1.3/0.88	1.3/0.88	1.4/0.95	1.8/1.22	
Net dimension	H×W×D	mm	790×1250×380			880×1380×460	
Packing dimension	H×W×D	mm	1022x1395x550			1112x1526x630	
Net/Gross weight	kg		81/109	81/109	85/113	108/148	
Sound power level	dB(A)		60	61	62	63	
Power supply	V/-/Hz		220-240/1/50				
Max. running current	A		12	12	16	20	
Recommended circuit breaker	A		16	16	20	25	
Accessory	Wired controller /						
	PCB box /		ATW-A02 (Optional)				
	Filter /		Standard				

Note: 1. According to EN14511, EN14825 (EU) and No 811/2013(EU).
 2. LWT: Leaving water temperature; OAT: Outdoor air temperature.
 3. Sound level values are measured at a semi-anechoic room. And the sound power level values are based on measurement of EN2102-1 under conditions of EN14825.
 4. PCB box is needed when using solar thermal function and pool heating function.
 5. The above data may be changed without notice for future improvement on quality and performance.

Monobloc HE Specification



AW142(N)MXCHA
AW162(N)MXCHA



HW-WA101DBT(standard)



ATW-A02(Optional)

Model		AW142MXCHA	AW162MXCHA	AW11NMXCHA	AW14NMXCHA	AW16NMXCHA	
Heating (LWT 35°C / OAT 7°C)	Capacity	kW	14.00	16.00	11.00	14.00	16.00
	Power input	kW	2.95	3.53	2.24	2.95	3.53
	COP	W/W	4.75	4.53	4.90	4.75	4.53
Heating (LWT 55°C / OAT 7°C)	Capacity	kW	13.50	15.20	10.50	13.50	15.20
	Power input	kW	4.82	5.53	3.33	4.82	5.53
	COP	W/W	2.80	2.75	3.00	2.80	2.75
Space heating average climate water outlet 35°C	SCOP	-	4.65	4.55	4.70	4.65	4.55
	ηs	%	183	179	185	183	179
	Energy class	-	A+++	A+++	A+++	A+++	A+++
Space heating average climate water outlet 55°C	SCOP	-	3.45	3.40	3.40	3.45	3.40
	ηs	%	135	133	133	135	133
	Energy class	-	A++	A++	A++	A++	A++
Cooling (LWT 18°C / OAT 35°C)	Capacity	kW	13.50	15.20	10.00	13.50	15.20
	Power input	kW	3.14	3.80	2.27	3.14	3.80
	EER	-	4.30	4.00	4.40	4.30	4.00
Cooling (LWT 7°C / OAT 35°C)	Capacity	kW	12.00	14.00	10.00	12.00	14.00
	Power input	kW	4.21	5.28	3.23	4.21	5.28
	EER	-	2.85	2.65	3.10	2.85	2.65
Outdoor operating temperature range	Heating	°C	-25 - 35				
	Cooling	°C	10-48				
Leaving water temperature range	Heating	°C	25 - 60				
	Cooling	°C	5-25				
Water flow rate	L/min	40.1	45.9	31.5	40.1	45.9	
Water piping connection	Inlet/Outlet	inch	R 1	R 1	R 1	R 1	R 1
Compressor	Quantity	-	1				
	Type	-	DC inverter twin rotar				
Refrigerant	Type	-	R32				
	Charge/CO2 Eq.kg/T		2.5/1.69	2.5/1.69	1.8/1.22	2.5/1.69	2.5/1.69
Net dimension	H×W×D	mm	880×1380×460				
Packing dimension	H×W×D	mm	1112×1526×630				
Net/Gross weight	kg		117/157	117/157	108/148	117/157	117/157
Sound power level	dB(A)		65	65	63	65	65
Power supply	V/-/Hz		220-240/1/50		380-415/3/50		
Max. running current	A		32	32	10	12	12
Recommended circuit breaker	A		40	40	16	16	16
Accessory	Wired controller /						
	PCB box /		ATW-A02 (Optional)				
	Filter /		Standard				

Key Features



R32



A+++/A++



Max. 60°C hot water



Climate curve



2 zone control



Auto mode



Smart grid



Modbus



DHW tank solar control



Pool heating

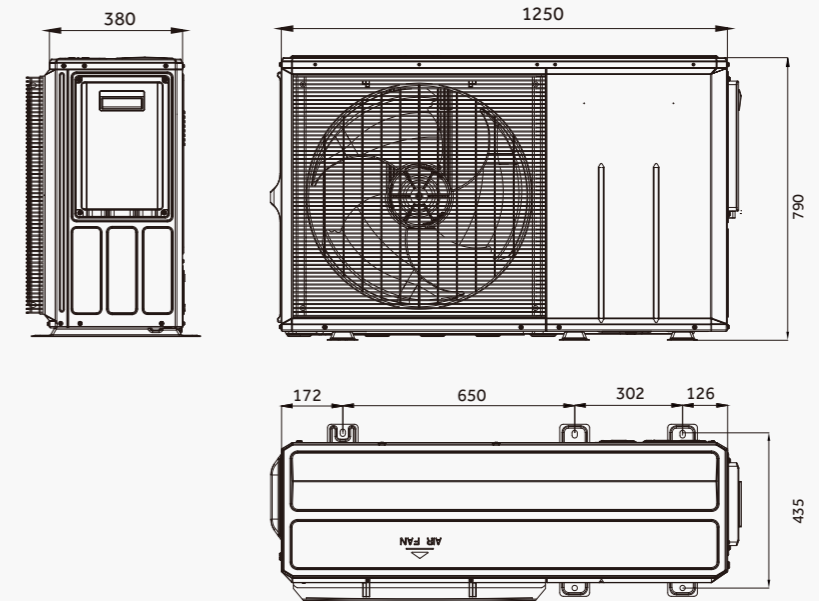


Anti-freezing

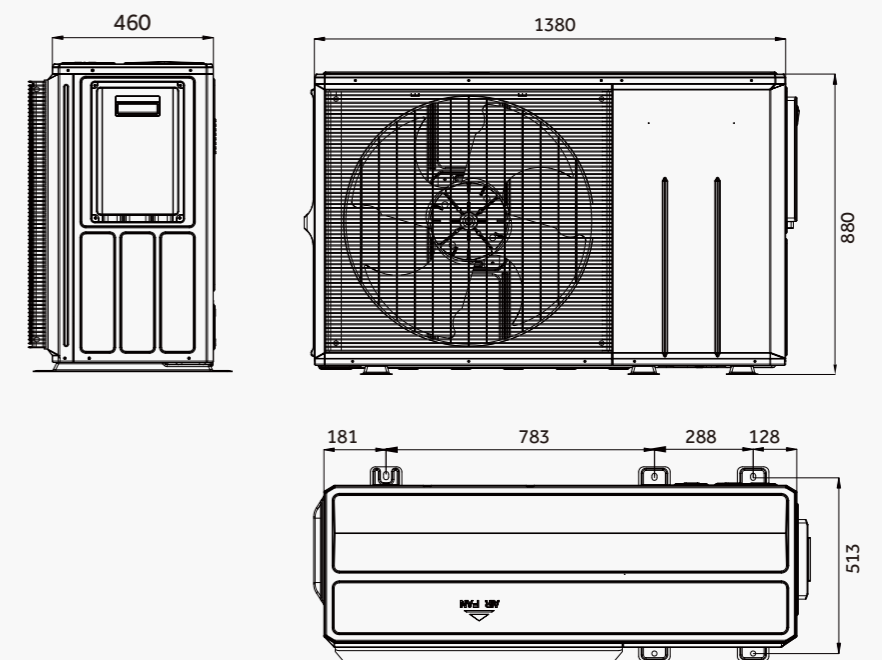
Note: 1. According to EN14511, EN14825 (EU) and No 811/2013 (EU).
2. LWT: Leaving water temperature; OAT: Outdoor air temperature.
3. Sound level values are measured at a semi-anechoic room. And the sound power level values are based on measurement of EN2102-1 under conditions of EN14825.
4. PCB box is needed when using solar thermal function and pool heating function.
5. The above data may be changed without notice for future improvement on quality and performance.

Outline Dimension

AW052MUCHA
AW072MUCHA
AW092MUCHA



AW112(N)MXCHA
AW142(N)MXCHA
AW162(N)MXCHA



SUPER AQUA Split HE

R32 Reversible Air-to-water heat pump

The HE series of reversible air-to-water split provides heating, cooling and domestic hot water for home. It has higher efficiency and can help users save the operating costs.



*Locally purchased
** For pool heating and solar thermal control of domestic hot water tank

Features



- SCOP at 35°C leaving water temperature up to 5.00
- COP at 35°C leaving water temperature up to 5.02
- 60°C hot water is guaranteed (outdoor temperature > -15°C)
- Wide heating operation range (ambient temperature: -25~35°C)
- Built-in expansion vessel, flow switch, safety valve for easy installation
- Backup heaters of 1kW and 3kW
- 5-inch colorful controller on the front panel and an optional wired controller
- Max. 8 units connectable into one system for larger capacity demands

Split HE Specification



Efficiency Data		Super Aqua HE S 4	Super Aqua HE S 6	
Heating (LWT 35°C / OAT 7°C)	Capacity	kW	4.00	6.00
	Power input	kW	0.80	1.20
	COP	W/W	5.02	4.98
Heating (LWT 55°C / OAT 7°C)	Capacity	kW	4.00	6.00
	Power input	kW	1.49	2.18
	COP	W/W	2.69	2.75
Space heating average climate water outlet 35°C	SCOP (A+++ to D)	-	5.00	4.80
	ηs	%	197	189
	Energy Class	-	A+++	A+++
Space heating average climate water outlet 55°C	SCOP (A+++ to D)	-	3.45	3.38
	ηs	%	135	132
	Energy Class	-	A++	A++
Cooling (LWT 18°C / OAT 35°C)	Capacity	kW	4.00	6.00
	Power input	kW	0.85	1.26
	EER	W/W	4.70	4.75
Cooling (LWT 7°C / OAT 35°C)	Capacity	kW	4.00	6.00
	Power input	kW	1.29	1.97
	EER	W/W	3.10	3.05
Indoor Unit			HU062WAMNA	HU062WAMNA
Leaving water temperature range	Heating	°C	15-60	15-60
	Cooling	°C	5-25	5-25
Sound power level		dB(A)	42	42
Backup electric heater	Capacity	kW	1+3	1+3
	Steps	-	3	3
Expansion vessel capacity		L	5	5
Pump	Type	-	Variable speed	Variable speed
	Power input	W	75	75
Water flow rate		L/min	11.5	17
Water pipe connection	Inlet/Outlet	inch	R 1	R 1
Pipe diameter	Liquid	mm(inch)	6.35 (1/4)	6.35 (1/4)
	Gas	mm(inch)	15.88 (5/8)	15.88 (5/8)
Net dimension	H×W×D	mm	850×480×310	850×480×310
Packing dimension	H×W×D	mm	1020×580×460	1020×580×460
Net/Gross weight		kg	41 / 53	41 / 53
Power supply		-/V/Hz	1/220-240/50	1/220-240/50
Max running current		A	20	20
Built-in circuit breaker		A	63	63
Outdoor Unit			AW042SSCHA	AW062SSCHA
Outdoor operating temperature range	Cooling	°C	10-48	10-48
	Heating	°C	-25-35	-25-35
Compressor	Quantity	-	1	
	Type	-	DC inverter twin rotary	
Refrigerant	Type	-	R32	
	Charge/CO ₂ Eq.	kg/T	1.2 / 0.81	1.2 / 0.81
Pipe diameter	Liquid	mm(inch)	6.35 (1/4)	6.35 (1/4)
	Gas	mm(inch)	15.88 (5/8)	15.88 (5/8)
Max refrigerant pipe length		m	30	30
Max height difference between ODU&IDU		m	20	20
Pipe length without additional charge		m	10	10
Additional charging volume		g/m	20	20
Sound pressure level	H×W×D	dB(A)	44	45
Sound power level	H×W×D	dB(A)	58	61
Net dimension		mm	765×920×372	765×920×372
Packing dimension		mm	980×1050×500	980×1050×500
Net / Gross weight		kg	55 / 67	55 / 67
Power supply		-/V/Hz	1/220-240/50	1/220-240/50
Max running current		A	12.5	13
Recommended circuit breaker		A	16	16
External wired controller			HW-WA101DBT (Optional)	

Note: 1. According to EN14511, EN14825 (EU) and No 811/2013(EU).
2. LWT: Leaving water temperature; OAT: Outdoor air temperature.
3. Sound level values are measured at a semi-anechoic room. And the sound power level values are based on measurement of EN2102-1 under conditions of EN14825.
4. The above data may be changed without notice for future improvement on quality and performance.

Key Features



R32



A+++/A++



Max. 60°C hot water



Climate curve



2 zone control



Turbo mode



Smart grid



BMS



Modbus



DHW tank solar control



Pool heating



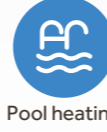
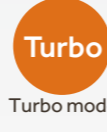
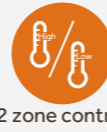
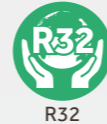
Anti-freezing

Split HE Specification



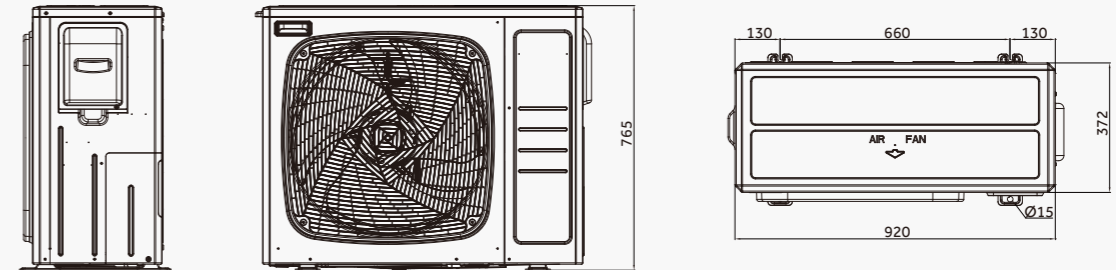
Efficiency Data		Super Aqua HE S 8	Super Aqua HE S 10	
Heating (LWT 35°C / OAT 7°C)	Capacity	kW	8.00	10.00
	Power input	kW	1.60	2.17
	COP	W/W	5.00	4.60
Heating (LWT 55°C / OAT 7°C)	Capacity	kW	8.00	10.00
	Power input	kW	2.82	3.66
	COP	W/W	2.84	2.73
Space heating average climate water outlet 35°C	SCOP (A+++ to D)	-	4.90	4.85
	η_s	%	193	191
	Energy Class	-	A+++	A+++
Space heating average climate water outlet 55°C	SCOP (A+++ to D)	-	3.32	3.30
	η_s	%	130	129
	Energy Class	-	A++	A++
Cooling (LWT 18°C / OAT 35°C)	Capacity	kW	8.00	10.00
	Power input	kW	1.9	2.50
	EER	W/W	4.20	4.00
Cooling (LWT 7°C / OAT 35°C)	Capacity	kW	8.00	9.00
	Power input	kW	2.63	3.00
	EER	W/W	3.04	3.00
Indoor Unit		HU102WAMNA	HU102WAMNA	
Leaving water temperature range	Heating	°C	15-60	15-60
	Cooling	°C	5-25	5-25
Sound power level		dB(A)	42	42
Backup electric heater	Capacity	kW	1+3	1+3
	Steps	-	3	3
Expansion vessel capacity		L	5	5
Pump	Type	-	Variable speed	Variable speed
	Power input	W	75	75
Water flow rate		L/min	23	28.7
Water pipe connection	Inlet/Outlet	inch	R 1	R 1
Pipe diameter	Liquid	mm(inch)	9.52 (3/8)	9.52 (3/8)
	Gas	mm(inch)	15.88 (5/8)	15.88 (5/8)
Net dimension	H×W×D	mm	850×480×310	850×480×310
Packing dimension	H×W×D	mm	1020×580×460	1020×580×460
Net/Gross weight		kg	43 / 55	43 / 55
Power supply		~V/Hz	1/220-240/50	1/220-240/50
Max running current		A	20	20
Built-in circuit breaker		A	63	63
Outdoor Unit		AW082SNCHA	AW102SNCHA	
Outdoor operating temperature range	Cooling	°C	10-48	10-48
	Heating	°C	-25-35	-25-35
Compressor	Quantity	-	1	1
	Type	-	DC inverter twin rotary	DC inverter twin rotary
Refrigerant	Type	-	R32	R32
	Charge/CO ₂ Eq.	kg/T	1.6 / 1.08	1.6 / 1.08
Pipe diameter	Liquid	mm(inch)	9.52 (3/8)	9.52 (3/8)
	Gas	mm(inch)	15.88 (5/8)	15.88 (5/8)
Max refrigerant pipe length		m	50	50
Max height difference between ODU&IDU		m	30	30
Pipe length without additional charge		m	10	10
Additional charging volume		g/m	38	38
Sound pressure level	H×W×D	dB(A)	49	53
Sound power level	H×W×D	dB(A)	65	68
Net dimension		mm	965×950×370	965×950×370
Packing dimension		mm	1090×1030×480	1090×1030×480
Net / Gross weight		kg	76 / 86	76 / 86
Power supply		~V/Hz	1/220-240/50	1/220-240/50
Max running current		A	19	22
Recommended circuit breaker		A	25	32
External wired controller			HW-WA101DBT (Optional)	

Key Features

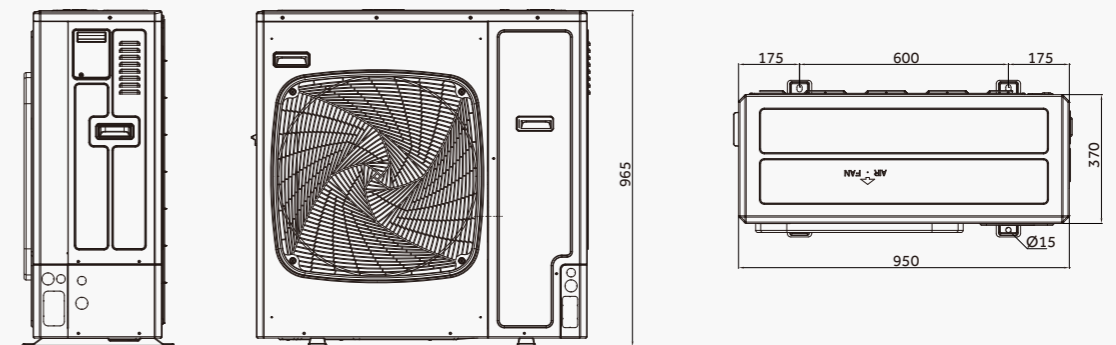


Outline Dimension

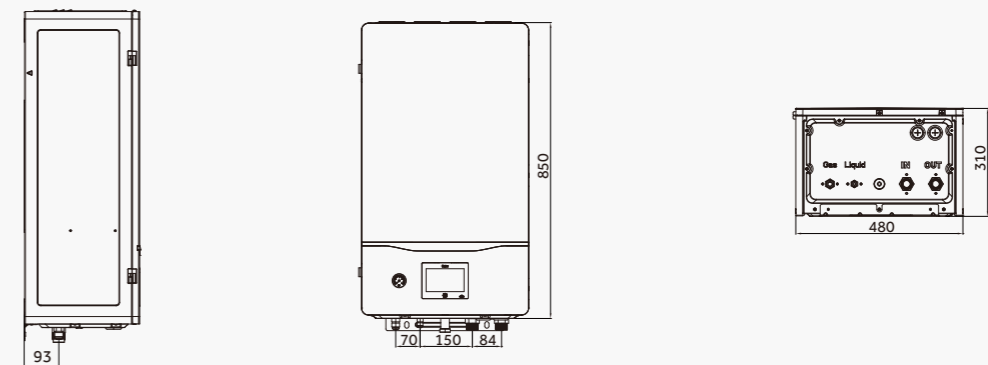
AW042/062SSCHA



AW082/102SNCHA



HU062/102WAMNA



Note: 1. According to EN14511, EN14825 (EU) and No 811/2013(EU).
 2. LWT: Leaving water temperature; OAT: Outdoor air temperature.
 3. Sound level values are measured at a semi-anechoic room. And the sound power level values are based on measurement of EN2102-1 under conditions of EN14825.
 4. The above data may be changed without notice for future improvement on quality and performance.

Date / /

