

Super Aqua A2W Heat Pump Range

Haier
HVAC Solutions

A2W Model Line-up

	Series	
	Super Aqua Monobloc 1 Phase	Super Aqua Split 1 Phase
4 kW		 AW042SSCHA  HU062WAMNA
5 kW	 AU052FYCRA(HW)	
6 kW		 AW062SSCHA  HU062WAMNA
8 kW	 AU082FYCRA(HW)	 AW082SNCHA  HU102WAMNA
10 kW		 AW102SNCHA  HU102WAMNA
11 kW	 AU112FYCRA(HW)	
16 kW	 AU162FYCRA(HW)	

What is a Haier Super Aqua?

The Haier Super Aqua Air to Water Heat Pump uses free renewable energy from the outside air as a heat source for space heating and providing domestic hot water. This energy efficient and environmentally-friendly solution substantially reduces energy consumption, running cost and CO_2 emissions in heating compared to conventional oil and gas boilers.

Hot water supply to support a full range of heat distribution choices

Fan Coil



Radiator



Underfloor Heating



Shower room



DHW Tank



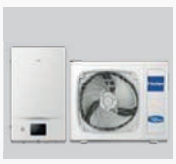




Wired Controller



Super Aqua Monobloc



Super Aqua Split





Super Aqua A2W Heat Pump Monobloc

A2W Heat Pump - Monobloc

Why Choose the Haier Super Aqua Monobloc

The Monobloc range is ideally suited for install by traditional plumbers as the refrigerant circuit is sealed and the pipework from the outdoor to indoor carries only water.

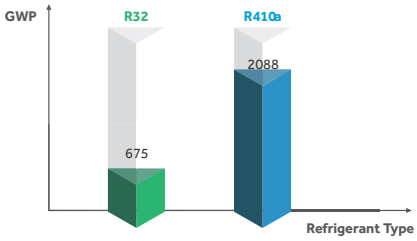
Environmentally-friendly

The Super Aqua air to water heat pump is an environmentally friendly alternative compared to conventional oil and gas boilers. Our A2W solutions uses the outside air to create free renewable energy which is then used as heat source for space heating and hot water. This provides an energy efficient and environmentally-friendly solution which substantially reduces energy consumption, running cost and CO2 emissions in heating.



Why do we use R32

Firstly, the R32 refrigerant gas has a lower global warming potential, aproximately a third of the older gas R410A. Secondly, the solutions using R32 gas have a higher efficiency and can reach higher water outlet temperatures.





Complete Comfort

The Super Aqua Monobloc offers an integrated heating solution that guarantees complete 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 round.

Through the terminal box ATW-A01 the production of domestic hot water can be managed with the 3-way valve installed externally to the unit. It's possible to choose the most suitable type of application for each environment and satisfy every need through the combination of the applications in a system.



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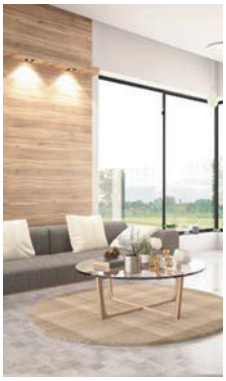
Wide Application

The Super Aqua Monobloc ranges from 4kW to 16kW, and is suitable for both residential and and small to medium sized commercial applications.

Smaller capacity units can be applied to new build residential buildings with their improved insulation whilst the medium-capacity system can be applied to refurbishments.

Super Aqua's high capacity system is suitable for installation in small to medium sized commercial applications, such as Café's, restaurant, dental practices and hair salons.

Home



Café & Restaurant



Hair Salons



Low sound levels

Compressor

Due to the high efficiency Scroll Inverter driven compressor the Super Aqua operates at a low sound level. Additionally anti-vibration mounts are used for quiet operation and low vibration.

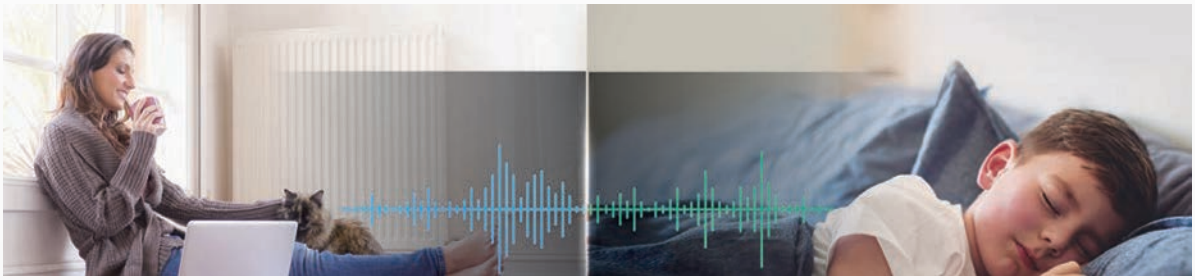
Avial fan

A brushless DC fan motor and aerodynamically optimised impeller are used to reduce noise and vibration reduction.

Pipeline design

The Super Aqua's pipeline is structured and designed effectively to avoid any noise and vibration generation.





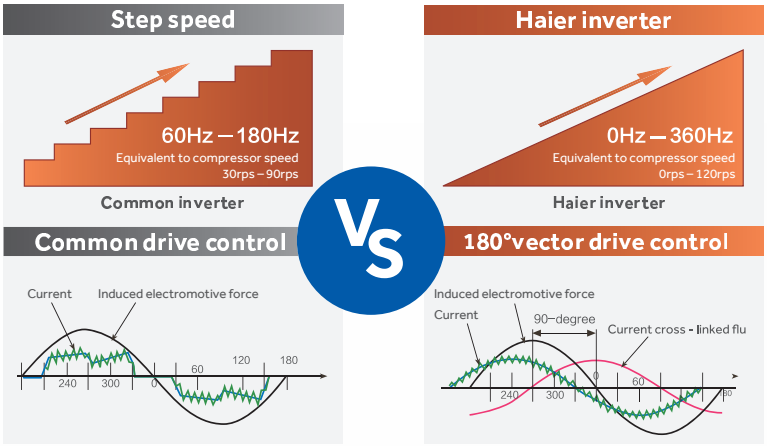
In addition, quiet mode is available for comfortable operation at night.

Energy Saving

Full DC inverter technology

The use of a full DC inverter twin rotary compressor generates energy saving as it has a smaller size and higher efficiency.

The variable frequency stepless speed control motor delivers further energy savings. Additionally the use of a water-cooled canned rotor pump achieves lower sound levels and higher efficiencies.



High Reliability

Intelligent anti-freezing technology

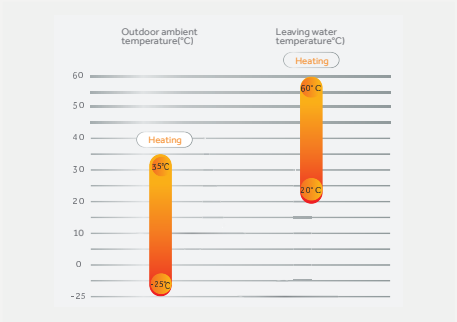
Our multi-sensor protection is designed to avoid freezing of the water system. In winter, when the sensor detects that the water temperature is below 3°C, the pump will turn on to prevent the water system from freezing.

The flow switch monitors the water flow and sounds an alarm when it goes below the minimum flow value, ensuring continuous reliability by avoiding any freezing issues.



Wide operation range

Leaving water temperature ranges from 5°C to 60°C providing comfortable cooling and heating for users. 60°C leaving water temperature can be maintained even when outdoor ambient temperature is down to -25°C(5kW unit).



Convenience

Easy control

The controller comes in a modern white finish with touch screen making the device modern, clean and aesthetically pleasing. The backlight and intuitive icons ensures it is simple and easy to use. The built-in weekly timer allows pre-set automatic control and error codes display in case of a fault, as well as a historic log to ensure easier maintenance.



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Specification & Dimensions

Super Aqua Monobloc



AU052FYCRA(HW)



AU082FYCRA(HW)



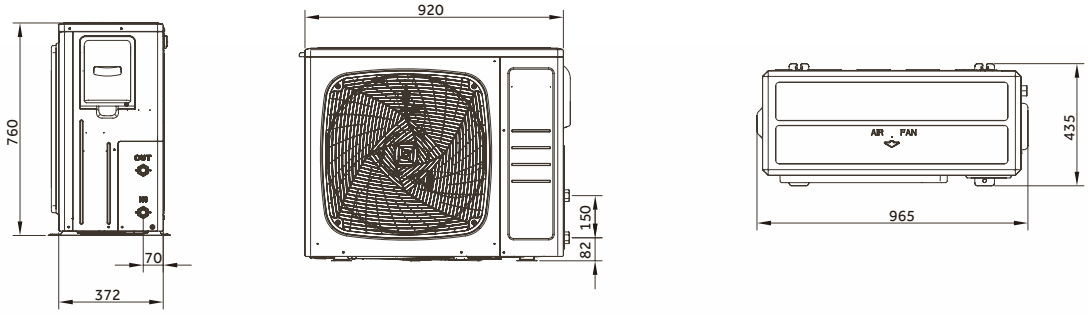
AU112FYCRA(HW)
AU162FYCRA(HW)

Model			AU052FYCRA(HW)	AU082FYCRA(HW)	AU112FYCRA(HW)	AU162FYCRA(HW)
Heating (LWT 35°C / OAT 7°C)	Capacity	kW	5.00	7.80	11.0	16.00
	Power input	kW	0.99	1.77	2.61	3.86
	COP	-	5.05	4.40	4.22	4.15
Heating (LWT 55°C / OAT 7°C)	Capacity	kW	5.00	7.01	9.99	14.01
	Power input	kW	1.64	2.76	4.40	5.63
	COP	-	3.05	2.54	2.27	2.49
Space heating Average climate water outlet 35°C	SCOP	-	4.61	3.87	4.35	4.00
	ns	%	181	152	171	157
	Energy class	-	A+++	A++	A++	A++
Space heating Average climate water outlet 55°C	SCOP	-	3.28	2.90	3.20	3.09
	ns	%	128	113	125	121
	Energy class	-	A++	A+	A++	A+
Cooling (LWT 18°C / OAT 35°C)	Capacity	kW	5.00	7.00	13.50	16.00
	Power input	kW	1.00	2.06	2.94	3.64
	EER	-	5.00	3.40	4.60	4.40
Cooling (LWT 7°C / OAT 35°C)	Capacity	kW	5.00	5.50	11.50	14.50
	Power input	kW	1.56	2.34	3.83	4.92
	EER	-	3.20	2.35	3.00	2.95
Outdoor operating temperature range	Heating	°C	-25 ~ 35	-20 ~ 35	-20 ~ 35	-20 ~ 35
	Cooling	°C	10 ~ 46	10 ~ 46	10 ~ 46	10 ~ 46
Leaving water temperature range	Heating	°C	25 ~ 60	20 ~ 55	20 ~ 55	20 ~ 55
	Cooling	°C	5 ~ 20	5 ~ 20	5 ~ 20	5 ~ 20
Water flow rate		L/min	14.30	23.00	31.05	45.80
Water piping connection	Inlet/Outlet	inch	3/4	1	1	1
Compressor	Quantity	-	1			
	Type	-	DC inverter twin rotary			
Refrigerant	Type	-	R32			
	Charge/CO2 Eq.	kg/T	1.05 / 0.709	1.15 / 0.777	2.40 / 1.620	2.60 / 1.755
Net dimension	(WxHxD)	mm	920 × 760 × 372	950 × 965 × 370	950 × 1490 × 370	950 × 1490 × 370
Packing dimension	(WxHxD)	mm	1045 × 890 × 488	1010 × 990 × 458	1010 × 1520 × 458	1010 × 1520 × 458
Net/Gross weight		kg	69/80	87/97	145/157	145/157
Sound power level		dB(A)	59	64	67	68
Power supply		-/V/Hz	1, 220-240, 50/60	1, 220-240, 50/60	1, 220-240, 50/60	1, 220-240, 50/60
Max. running current		A	13.5	21.3	24.3	31.7
Recommended circuit breaker		A	20	32	32	40
Accessory	Wired controller	/	YR-E27 (Standard)			
	Filter	/	Standard			

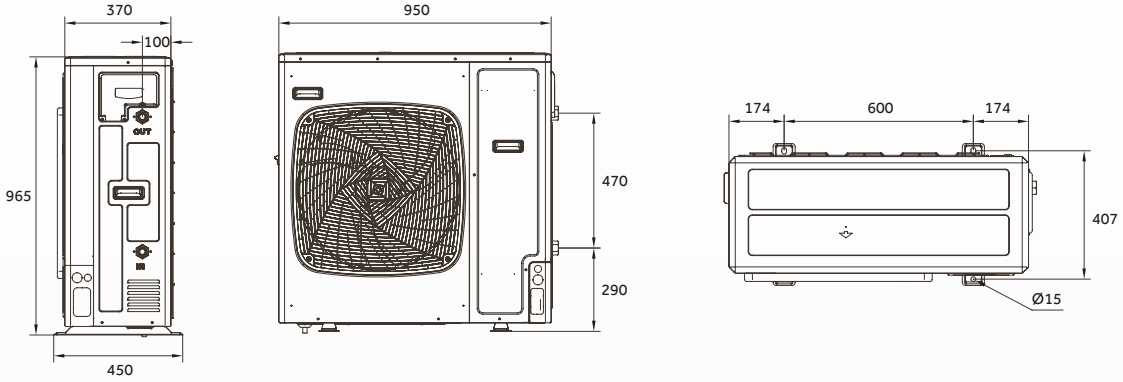
Note:
1. Efficiency data is based on EN14511.
2. LWT: Leaving water temperature; OAT: Outdoor air temperature.
3. Sound level values are measured at a semi-anechoic room. And the sound power level values are based on measurement of EN2012 under conditions of EN14825.
4. The above data may be changed without notice for future improvement on quality and performance.

Outline dimension - Super Aqua Monobloc

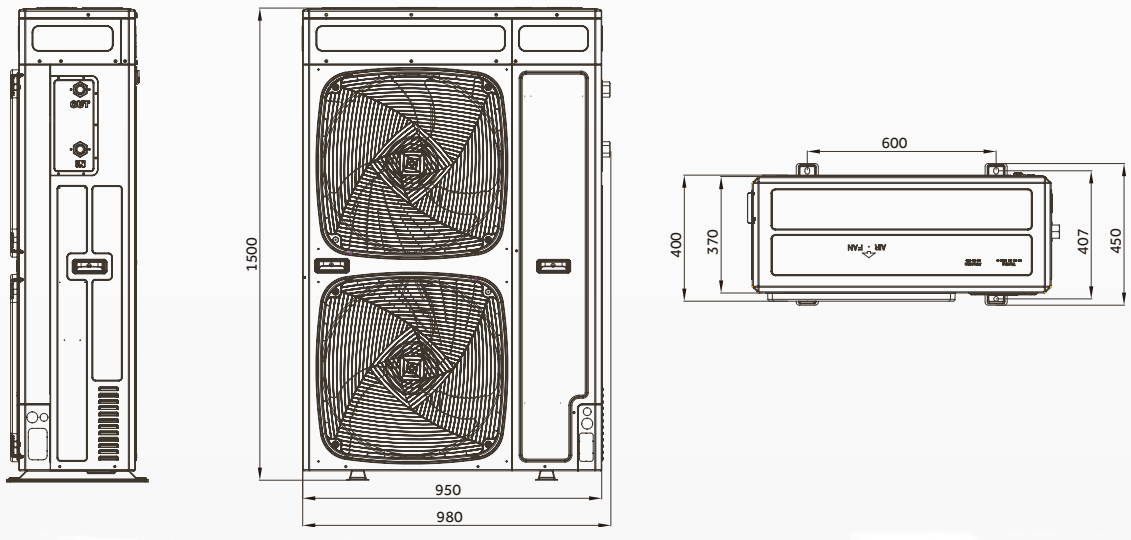
AU052FYCRA(HW)



AU082FYCRA(HW)



AU112FYCRA(HW)/AU162FYCRA(HW)







NEW

Super Aqua A2W Heat Pump Split

NEW

A2W Heat Pump - Split

Why Choose the Haier A2W Split?

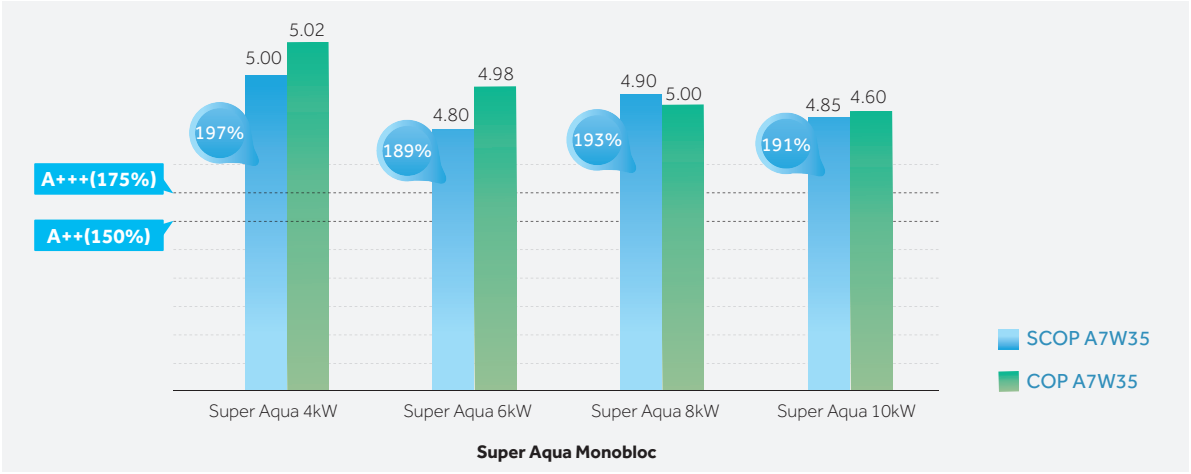
The application of a split system allows greater flexibility in the location of the outdoor unit due to the longer pipe lengths available on the smaller diameter pipes.

An air-to-water heat pump (AWHP) is a cheaper and more sustainable way to heat a living space. With an AWHP, 75% of the total energy comes from a completely renewable source: air. It is powered by electricity which is a more sustainable and cheaper alternative to gas. For each kilowatt of electricity consumed by a heat pump, approximately 4kW of thermal energy is generated, making it considerably more efficient then a condensing gas/oil boiler.

This system is perfect for both space heating and domestic hot water supply.

Wide Application

The seasonal space heating energy efficiency class is up to A+++ at 35°C leaving water temperature and A+++ at 55°C leaving water temperature.



Super Aqua Monobloc

High leaving water temperature

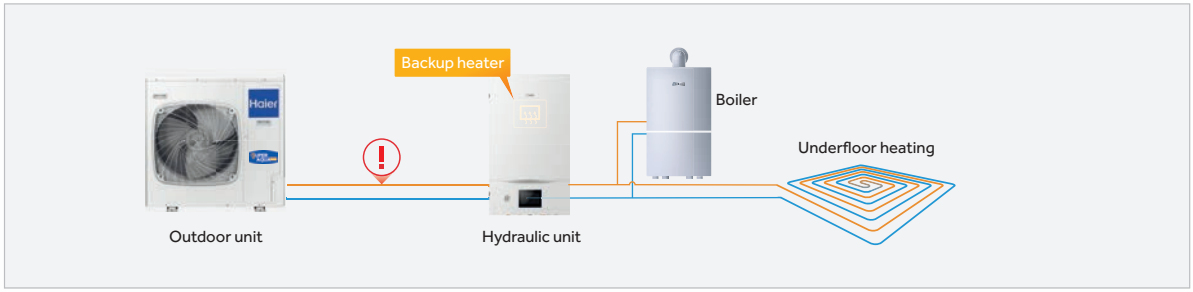
Haier Super Aqua is suitable for both underfloor heating and radiators. High leaving water temperature of 60°C is guaranteed without using backup heaters even when the outdoor temperature is down to -14°C.



Ultimate Comfort

Backup heater

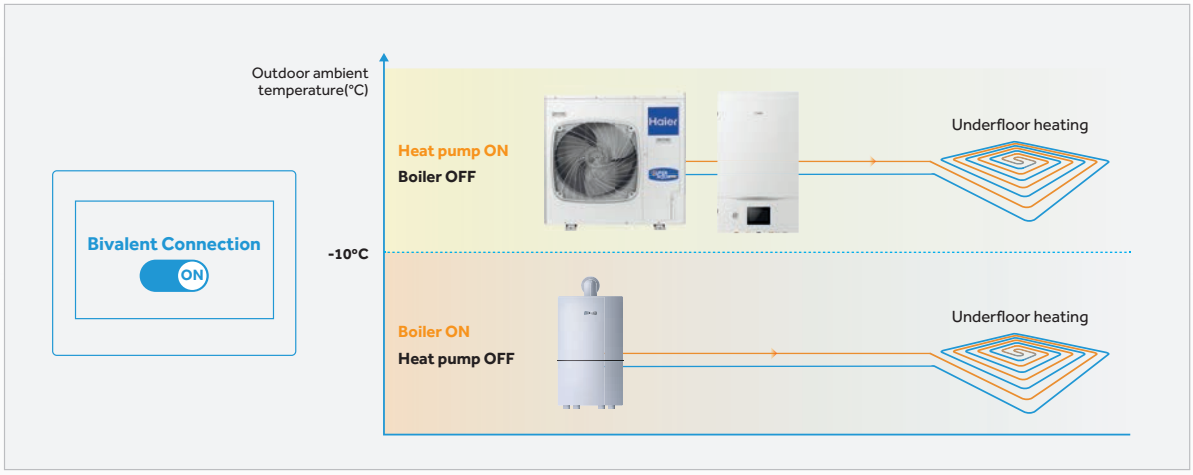
When the outdoor ambient temperature is too low the leaving water temperature cannot meet the set temperature. In this instance the inbuilt electric 'back up heater' is designed to meet the required exit water temperature.



Hybrid connection

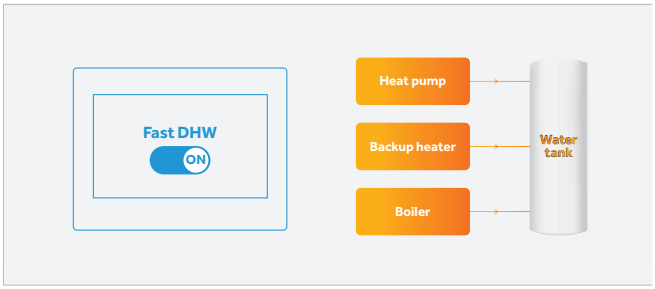
Super Aqua solutions can integrate backup energies like gas boilers or solar thermal and use them in the most efficient way possible. For example, in the bivalent connection mode the system will choose gas boiler under -10° ambient temperature and change over to air-to-water energy when temperature rises above that point, reaching maximum efficiency for your system.

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



Emergency operation

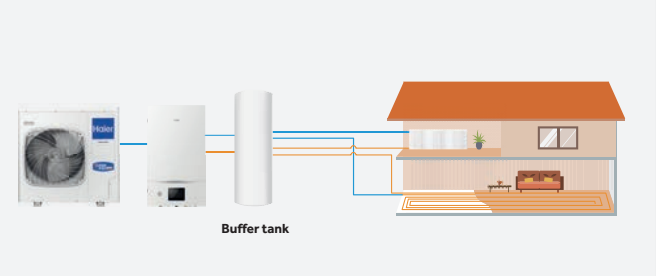
Should the system fail at any point, the electric water heater will guarantee the required water temperature, ensuring uninterupted operation. In adding a hybrid system any other source of heater such as a gas boiler will also start operation.



Fast DHW

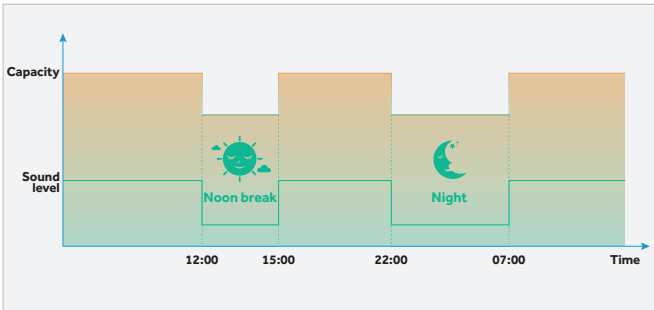
When Fast DHW is activated, the backup heater or auxiliary heating source will be activated at the same time together heat pump in order to reach DHW setting point as soon as possible, which will not affected by outdoor ambient temperature and compressor running time.

Note:
1.Only valid when DHW mode is selected.
2.Backup heater is allowed to be used or boiler is connected.



2 zones 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.



Quiet mode

The Quiet mode can work together with the timer function. To guarantee low sound levels during quiet periods such as night time.

To achieve the perfect confort standard, heat must be correctly managed according to the user's needs. Super Aqua includes functions that ensure that the performance is always the optimal, monitoring system and external conditions and including accurate control systems.

Climate curves

Both heating and cooling water temperatures are optimally configured when considering outdoor temperature, both in comfort and efficiency terms. The climate curve configuration allows the system to adapt to this outdoor temperature fluctuation with different temperature profiles tailored for each user's preferences.

Stable water temperature

Compressor rotation speed is controlled precisely thanks to inverter technology, which maintains the water temperature within a much smaller range compared to non-inverter systems.

Low sound level

The soundproof material that covers the compressor, brushless DC fan motor and shielded low noise water pump, all ensure a silent performance both in indoor and outdoor units.

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Ultimate Control



Easy control

There is a 5-inch colorful controller on the front panel of indoor unit . It can be easily operated through the touch screen and intuitive icons. In addition, an optional wired controller is available that can be installed in the living room or bedroom.

Check error information

If errors occur, the service engineer can not only check the current errors, but also the historical error records, which is convenient for fast troubleshooting.

Easy 3rd party BMS solution

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



Check system parameters

Many important parameters about the system can be checked through the 'System Status' function, including the system parameters, indoor unit parameters and outdoor units parameters. These parameters are helpful to diagnose the system and ensure optimum performance.

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.

Mode selection

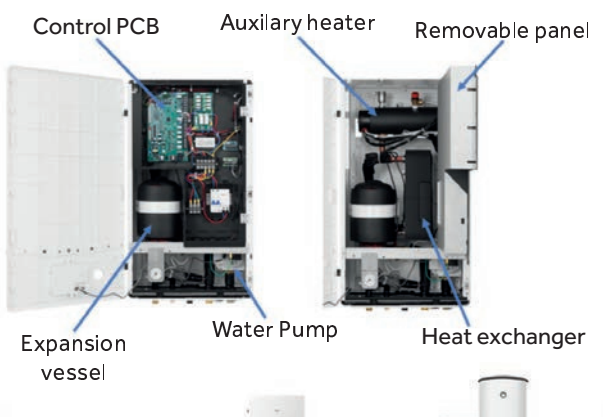
- 5 single operation modes: Cool, Heat, AUTO, DHW, Pool
- 5 combinations: Auto+Heat, Auto+Cool, Cool+DHW, Heat+DHW, Pool+DHW
- Default DHW first Priority

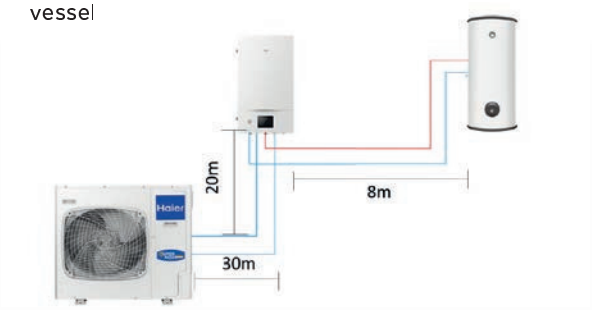
Note:
Cool mode can be disabled during installation. Only when it is activated, cool mode can participate the mode circulation;
Pool mode is involved in the mode loop only when the pool function is available.

High Reliability

Convenient installation and maintenance

Haier's Super Aqua range includes multiple features that will make the installation and maintenance of our solutions easier. From internal components to the equipment design, every single detail is focused upon fast efficient installation providing them with the perfect tool for the job.





Multiple features coordinate to create the perfect easy installation design:

- Working parameter monitoring
- Configurable hot water priority and modes
- Program Schedule
- Easily accessible error log
- Convenient distribution of components
- Long available installation distance both in water and refrigerant sides
- Multiple system configuration
- MODBus-ready for easy BMS configuration.

Safe performance

As Haier Super Aqua Split will be managing your daily hot water needs, it is essential that it is perfectly safe. With systems that ensure that the water is perfectly healthy and features that care about the machine's inner components and your home, the Haier Super Aqua Split solution is a carefree option for your home.

Sterilisation mode

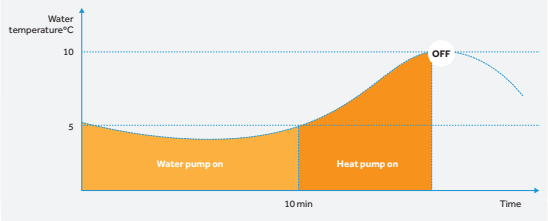
With the sterilisation mode is activated, elimination of harmful bacteria is achieved by heating to 70°C the tank's water. This can be programed weekly or scheduled for set periods.

Anti-rust water pump

The water pump runs for 60 seconds when inactive for more than 24 hours. This ensures that water is not stationary for extended periods of time which reduces the risk of rusting.

Anti-freeze

The anti-freeze program protects hydraulic parts from damage, the water pump will turn on when the water temperature drops below 5°C. When the water temperature is below 5°C for more than 10 minutes, the heat pump is turned on to protect the system.



Smart Grid compatibility

Modern energy companies integrate in their power grids Smart Grid functions. This system sends a signal to all the connected devices that carries information on the energy cost real time. Equipment compatible with this feature can then adjust their behaviour to optimise savings.



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Specification & Dimensions

Super Aqua Split



AW042SSCHA
AW062SSCHA



AW082SNCHA
AW102SNCHA



HU062WAMNA
HU102WAMNA



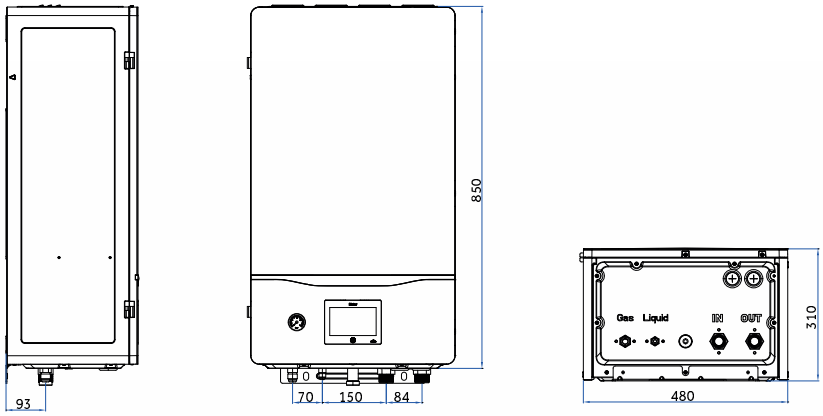
HW-WA101DBT(Optional)

Model			Super Aqua S 4	Super Aqua S 6	Super Aqua S 8	Super Aqua S 10
Heating (LWT 35 °C / OAT 7 °C)	Capacity	kW	4.00	6.00	8.00	10.00
	Power Input	kW	0.80	1.20	1.60	2.17
	COP	W/W	5.02	4.98	5.00	4.60
Heating (LWT 55 °C / OAT 7 °C)	Capacity	kW	4.00	6.00	8.00	10.00
	Power Input	kW	1.40	2.05	2.65	3.45
	COP	W/W	2.86	2.92	3.02	2.90
Space heating Average climate water outlet 35°C	SCOP	-	5.00	4.80	4.90	4.85
	ns	%	197	189	193	191
	Energy class	-	A+++	A+++	A+++	A+++
Space heating Average climate water outlet 55°C	SCOP	-	3.45	3.38	3.32	3.30
	ns	%	135	132	130	129
	Energy class	-	A++	A++	A++	A++
Cooling (LWT 18 °C / OAT 35 °C)	Capacity	kW	4.00	6.00	8.00	10.00
	Power Input	kW	0.85	1.26	1.90	2.50
	EER	W/W	4.70	4.75	4.20	4.00
Cooling (LWT 7 °C / OAT 35 °C)	Capacity	kW	4.00	6.00	8.00	9.00
	Power Input	kW	1.29	1.97	2.63	3.00
	EER	W/W	3.10	3.05	3.04	3.00
Unit interior			**HU062WAMNA**	**HU062WAMNA**	**HU102WAMNA**	**HU102WAMNA**
Leaving water temperature range	Heating	°C	15~60	15~60	15~60	15~60
	Cooling	°C	5~25	5~25	5~25	5~25
Sound power level		dB(A)	42	42	42	42
Backup electric heater capacity	Capacity	kW	1+3	1+3	1+3	1+3
	Levels	-	3	3	3	3
Expansion vessel capacity		L	5	5	5	5
Pump	Type	—	Variable speed	Variable speed	Variable speed	Variable speed
	Power input	W	75	75	75	75
Water flow rate		L/min	11.5	17	23	28.7
Water pipe connection	Inlet/Outlet	inch	R 1	R 1	R 1	R 1
Pipe diameter	Liquid	mm(inch)	6.35 (1/4)	6.35 (1/4)	9.52 (3/8)	9.52 (3/8)
	Gas	mm(inch)	15.88 (5/8)	15.88 (5/8)	15.88 (5/8)	15.88 (5/8)
Net dimension	(WxHxD)	mm	480 × 850 × 310	480 × 850 × 310	480 × 850 × 310	480 × 850 × 310
Packing dimension	(W×H×D)	mm	580 × 1020 × 460	580 × 1020 × 460	580 × 1020 × 460	580 × 1020 × 460
Net / Gross weight		kg	41 / 53	41 / 53	43 / 55	43 / 55
Power supply		-/V/Hz	1/220-240/50/60	1/220-240/50/60	1/220-240/50/60	1/220-240/50/60
Max running current		A	20	20	20	20
Built-in circuit breaker		A	63	63	63	63
Unit exterior			**AW042SSCHA**	**AW062SSCHA**	**AW082SNCHA**	**AW102SNCHA**
Outdoor operating temperature range	Cooling	°C	10~48	10~48	10~48	10~48
	Heating	°C	-25~35	-25~35	-25~35	-25~35
Compressor	Quantity	-	1	1	1	1
	Type	-	DC inverter twin rotary	DC inverter twin rotary	DC inverter twin rotary	DC inverter twin rotary
Refrigerant	Type	-	R32	R32	R32	R32
	Charge/CO2 Eq.	kg/T	1.2 / 0.81	1.2 / 0.81	1.6 / 1.08	1.6 / 1.08
Pipe diameter	Liquid	mm(inch)	6.35 (1/4)	6.35 (1/4)	9.52 (3/8)	9.52 (3/8)
	Gas	mm(inch)	15.88 (5/8)	15.88 (5/8)	15.88 (5/8)	15.88 (5/8)
Max refrigerant pipe length		m	30	30	50	50
Max height difference between ODU&IDU		m	20	20	30	30
Pipe length without additional charge		m	10	10	10	10
Additional charging volume		g/m	20	20	38	38
Sound pressure level		dB(A)	44	45	49	53
Sound power level		dB(A)	58	61	65	68
Net dimension	(W×H×D)	mm	920 × 760 × 372	920 × 760 × 372	950 × 965 × 370	950 × 965 × 370
Packing dimension	(W×H×D)	mm	1050 × 980 × 500	1050 × 980 × 500	1030 × 1090 × 480	1030 × 1090 × 480
Net / Gross weight		kg	55 / 67	55 / 67	76 / 86	76 / 86
Power supply		-/V/Hz	1/220-240/50	1/220-240/50	1/220-240/50	1/220-240/50
Max running current		A	12.5	13	14.5	16
Recommended circuit breaker		A	20	20	25	25
External wired cntroller			HW-WA101DBT (Optional)			

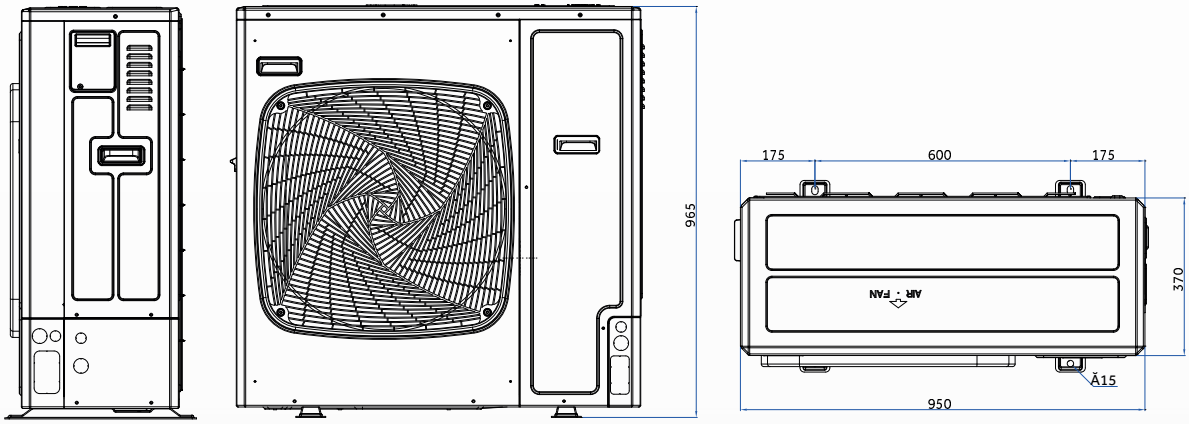
"Note:
1.Accordng to EN14511, EN14825 (EU) and No 811/2013(EU).
2. LWT: Leaving water temperature; OAT: Outdoor air temperature.
3. Sound level values are measured at a semi-anechoic room. And the sound power level values are based on measurement of EN2102-1 under conditions of EN14825.
4. The above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

Outline dimension - Super Aqua Split

HU062/102WAMNA



AW082/102SNCHA



AW042/062SSCHA

