Haier

Engineering Data Book

R290 Super Aqua

Hydro Split GT

Hydro All in One GT

Haier

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1. Safety Precautions

1.1 General Guidelines

1. The precautions described in this document cover very important topics related to safety, please read carefully.
2. Only licensed electricians and water system installers should perform all electrical and water installation works, in accordance with local regulations.
3. After completing the installation/repair work, make sure that the unit operates normally by carrying out test run operation.
4. Instruct the customer how to operate and maintain the unit and explain the cautions to the customer.
5. Keep this manual for future reference.

1.2 Meaning of Warnings and Symbols

	**WARNNING** Indicates a situation that could result in death or serious injury.
	**CAUTION** Indicates a situation that could result in minor or moderate injury. It may also be used to alert against unsafe practices.
	This symbol with white background indicates item that must be PROHIBITED.
	This symbol with black background indicates item that must be carried out.

1.3 Safety Measures for Workers

WARNING	
	For electrical work, must ensure to follow the local regulations, wiring standards and installation manual.
	For water circuit installation work, must ensure to follow the relevant European and national regulations and local plumbing and building regulation codes.
	Do not store the units near sources of fire, such as open flames, gas appliances, or electric heaters.
	Must ship and store the units in upright conditions and dry area.
	Must disconnect the power cable from the socket prior to disassembling equipment for repair to avoid electrical shocks. Never touch electrically charged sections of the equipment if power supply is necessary for repair or circuit inspection.
	Do not contact with discharged refrigerant gas during repair as it can cause frostbite.
	Must ensure complete evacuation of the refrigerant gas in a well-ventilated place before disconnecting the suction or discharge pipe of the compressor at the welded section. In case of gas remaining inside the compressor, disconnection of the pipe can lead to discharge of refrigerant gas or refrigerating machine oil, which may cause injury.
	Must ensure good ventilation if refrigerant gas leaks during repair as refrigerant gas may generate toxic gases when it contacts flames.
	Must discharge the capacitor completely prior to repair to avoid electrical shocks as it supplies high-voltage electricity to the outdoor unit's electrical components.

WARNING	
	Do not plug in or unplug the power cable to turn the air conditioner on or off as it may cause an electrical shock or fire.
	Must wear a safety helmet, gloves, and a safety belt to prevent falls when working in high places (more than 2 m or 6.5 ft).
	Must use exclusively designed pipes, flare nuts, and tools for R32, R410A and R290 refrigerant models to avoid serious accidents like damage to the refrigerant cycle or equipment failure.
	Do not mix air or any gas other than the specified refrigerant (R32, R410A, R290) in the refrigerant system to avoid excessively high pressure that could result in equipment damage and injury.

CAUTION	
	Do not repair electrical components with wet hands to avoid electrical shocks.
	Do not clean the units with water; it can cause electrical shocks.
	Must ensure proper grounding when working in a humid or wet place to avoid electrical shocks.
	Must switch off the power and unplug the cable when cleaning the equipment. The internal fan rotates at a high speed, and may cause injury.
	Must use appropriate tools for repairs to avoid injury.
	Must ensure the refrigerating cycle section has cooled down enough before conducting repair work to avoid burns.
	Must conduct welding work in a well-ventilated place to avoid oxygen deficiency.

1.4 Safety Warnings for Users

WARNING	
	Do not store the units near sources of fire, such as open flames, gas appliances, or electric heaters.
	Only use the parts in the spare parts list for the specific model and appropriate tools when performing repairs. Modifying the equipment is strictly prohibited as it can lead to electrical shocks, excessive heat or fire.
	Replace power cables and lead wires if they show signs of damage or deterioration or it may cause electrical shocks, excessive heat or fire.
	Do not use a joined power cable or extension cable, or share the same power outlet with other electrical appliances. This can cause electrical shocks, excessive heat or fire.
	Must ensure to use an exclusive power circuit for the equipment. Follow local technical standards, internal wiring regulations and the installation instruction manual when conducting electrical work. Improper electrical work or insufficient power circuit capacity can cause electrical shocks or fire.
	Must use the specified cable for wiring between the indoor and outdoor units and ensure the connections are secure and the cable is routed properly to avoid any force pulling at the connection terminals. Improper connections can lead to excessive heat or fire.
	Must ensure the terminal cover doesn't lift or dismount due to the cable during wiring. If the cover isn't mounted correctly, it can cause electrical shocks, excessive heat or fire.
	Do not damage or modify the power cable as it can cause electrical shocks or fire. Do not place heavy items on the power cable, or heating or pulling the cable.
	Only use the specified refrigerant (R32, R410A, R290) in the refrigerant system. If air enters into the system, it can result in high pressure, causing equipment damage and injury.
	Must locate and repair the leak first before recharging the refrigerant if refrigerant gas leaks. Ensure there are no leaks after recharging. If leaks can't be located and repair work needs to be halted, pump-down and close the service valve to prevent refrigerant gas from leaking into the room. While refrigerant gas is harmless, it may produce toxic gases upon contact with flames.
	Must ensure the new installation site can support the weight of the equipment when relocating the equipment. If not properly installed or the site lacks sufficient strength, the equipment can fall and cause injury.
	Must ensure the power cable plug is clean and securely inserted into the power outlet. A dirty or loose plug can cause electrical shocks or fire.
	Must ensure the dispose of old batteries from the remote controller to prevent children from swallowing them. If a child does swallow a battery, seek immediate medical attention.

CAUTION	
	A leakage breaker may be required depending on installation site conditions to prevent electrical shocks.
	Do not install the equipment in an area where combustible gas leaks may occur as this can cause a fire.
	Must confirm that parts and wires are properly mounted and connected, and that connections at soldered or crimped terminals are secure. Improper installation or connections can cause excessive heat, fire or electrical shocks.
	Must ensure to replace corroded installation platforms or frames as it can cause the unit to fall and result in injury.
	Must ensure proper earthing/grounding and repair if necessary. Improper earthing/grounding can cause electrical shocks.
	Must measure insulation resistance after repair and ensure that the resistance is 1 MΩor above. Faulty insulation can cause an electrical shock.
	Must check the drainage of the indoor unit after repair. Faulty drainage can cause water damage to furniture and flooring.
	Do not tilt the unit when removing it. Water inside the unit may spill and damage furniture or flooring.

2. Precautions for Using R290 Refrigerant

Please pay attention to the following points:

WARNING	
	Do not mix any different refrigerants within a system.
	Well trained and certified personnel are required for operating, maintaining, repairing, and recovering the flammable refrigerants, and also for conducting any operation, servicing and maintenance on a system or relevant parts of the units.
	Do not store any of the parts of refrigeration circuit or pipes near sources of fire, such as open flames, gas appliances, or electric heaters.
	The alarms, mechanical ventilation and detectors must be checked regularly by users or the authorized dealer at least once a year based on the national rules to ensure correct operation.
	It is necessary to keep a logbook and record all outcomes of these checks.
	Ventilation in occupied areas must be checked to make sure there are no any obstructions.
	Before a new refrigeration system is put into operation, the person in charge of system operation should ensure that the operating personnel are properly trained and certified and familiarized with the system's construction, supervision, operation and maintenance, safety precautions, and the properties and handling of the refrigerant used.
	For the trained and certified personnel, they must: 1. Well understand the legislation, regulations, and standards related to flammable refrigerants; 2. Own the knowledge and skills in managing flammable refrigerants, personal protective equipment, preventing refrigerant leaks, handling cylinders, charging, leak detection, recovery and disposal; 3. Be able to comprehend and apply national legislation, regulations and standards; 4. Keep continuous, regular and additional training to maintain these skills.
	Must protect the protection devices, refrigeration circuits, and fittings from potentially damaging environmental factors, such as the risk of water collection and freezing in relief pipes or the accumulation of dirt and debris.

CAUTION	
Installation	
	Must follow all related national gas regulations, state municipal regulations and laws, and notify the relevant authorities as per all applicable rules.
	Must ensure that all mechanical connections are accessible for maintenance purposes.
	Must ensure that all ventilation openings are clear without any obstructions.
	Always reach out to local authorities for proper guidance.

CAUTION	
Servicing	
● **Service Personnel**	
❗	Any certified individual working on or breaking into a refrigerant circuit should have a valid certificate from an industry-recognized assessment authority, confirming their ability to safely handle refrigerants per industry assessment specifications.
	Servicing should only be done as recommended by the equipment manufacturer. Maintenance and repairs requiring additional specialized personnel should be done under the supervision of a person competent in the use of flammable refrigerants.
	Servicing should be performed only as recommended by the equipment manufacturer.
	The system should be inspected, regularly monitored and maintained by a trained and certified service personnel employed by the user or responsible party.
	Must ensure no leak during refrigerant charge.
● **Work**	
❗	Must ensure conducting safety checks before starting work on systems that contain flammable refrigerants to minimize the risk of ignition.
	Must ensure to follow all related safety precautions before conducting work on the system when repairing the refrigeration system.
	Must ensure the work is conducted under controlled procedures to minimize the risk of a flammable gas or vapor being present.
	Avoid working in enclosed space and ensure a safety distance of at least 2 meters from any source, or establish a free space zone of at least 2 meters in radius.
	Must use suitable protective equipment per the actual situation.
	Must ensure to stay away from any flammable materials and heat-producing items.
● **Confirming Refrigerant Existence**	
❗	A suitable refrigerant detector should be used to check the area before and during work to identify potentially combustible environments.
	The leak detection equipment should be non-sparking, adequately sealed, or intrinsically safe.
	If a leak or spill occurs, ventilate the area immediately, stay upwind and avoid the spill/release.
	In the event of a leak or spill, inform individuals downwind of the leak/spill, isolate the immediate hazard area, and restrict unauthorized personnel.
● **Fire Extinguisher Availability**	
❗	If any heat-related work is to be done on the cooling equipment or any related parts, relevant fire extinguishing equipment should be accessible.
	Keep a dry powder or CO_2 fire extinguisher close to the charging area.
● **Avoid Ignition Sources**	
❗	When working on a cooling system, avoid using any ignition sources that could risk a fire or explosion.
	Keep all potential ignition sources, including smoking, sufficiently far from the installation, repair, removal, and disposal site where flammable refrigerant could be released.
	Check the area around the equipment before starting work to ensure that there are no flammable hazards or ignition risks.
	Must display "No Smoking" signs.
● **Ventilated Area**	
❗	Must ensure the area is open or adequately ventilated before opening the system or conducting any heat-related work.
	Ensure continuous ventilation throughout the work.
	Safely disperse any released refrigerant during ventilation, preferably expelling into the atmosphere outside.

CAUTION	
● **Checking for Refrigerating Equipment**	
❗	When changing electrical components, must ensure they are suitable and meet the correct specifications.
	Must ensure to follow the guidelines provided by the manufacturer for maintenance and service.
	Must reach out to the manufacturer's technical support for help if there are any unsure points.
	When using flammable refrigerants during installation, please conduct below checks:
	1. Must ensure ventilation equipment and outlets are not obstructed and are functioning properly.
	2. Must check the secondary circuit for the presence of refrigerant if an indirect cooling circuit is being used.
	3. Must ensure the equipment markings are legible and visible and correct any markings that are not legible.
	4. Refrigeration pipes or components should not be exposed to corrosive substances unless they are made of corrosion-resistant materials or are properly protected.
● **Checking for Electrical Devices**	
❗	Maintenance and repairs of electrical components should include initial safety checks and component inspection procedures.
	Initial safety checks should include but not limited to: 1. Safe discharge of capacitors to prevent sparking. 2. No live electrical components or wiring exposed during system charging, recovery, or purging. 3. Continuity of earth bonding.
	Must follow the guidelines provided by the manufacturer for maintenance and service.
	Must reach out to the manufacturer's technical support for help if there are any unsure points.
	If a fault that could compromise safety is present, do not connect the electrical supply to the circuit until it is satisfactorily resolved.
	If the fault cannot be immediately corrected but operation must continue, implement a suitable temporary fix.
	The equipment owner must be informed of any issues so that all parties are aware.
Repairs to Sealed Components	
❗	Must disconnect all electrical supplies from the equipment before removing any sealed covers during repairs.
	Must ensure there is a permanent form of leak detection located at the most critical point to warn of potential hazards if it is necessary to have an electrical supply during servicing.
	Must pay special attention to ensure that working on electrical components will not change the casing in a way that impacts the level of protection, which includes cable damage, excessive connections, terminals not made to the original specification, seal damage, incorrect fitting of glands, etc.
	Must ensure that the equipment is securely mounted.
	Must check that seals or sealing materials have not degraded to the point that they can no longer prevent the entry of flammable atmospheres.
	Must ensure the replacement parts meet the manufacturer's specifications.
Note	The use of silicone sealant may affect the performance of some types of leak detection equipment. Intrinsically safe components do not need to be isolated before working on them.

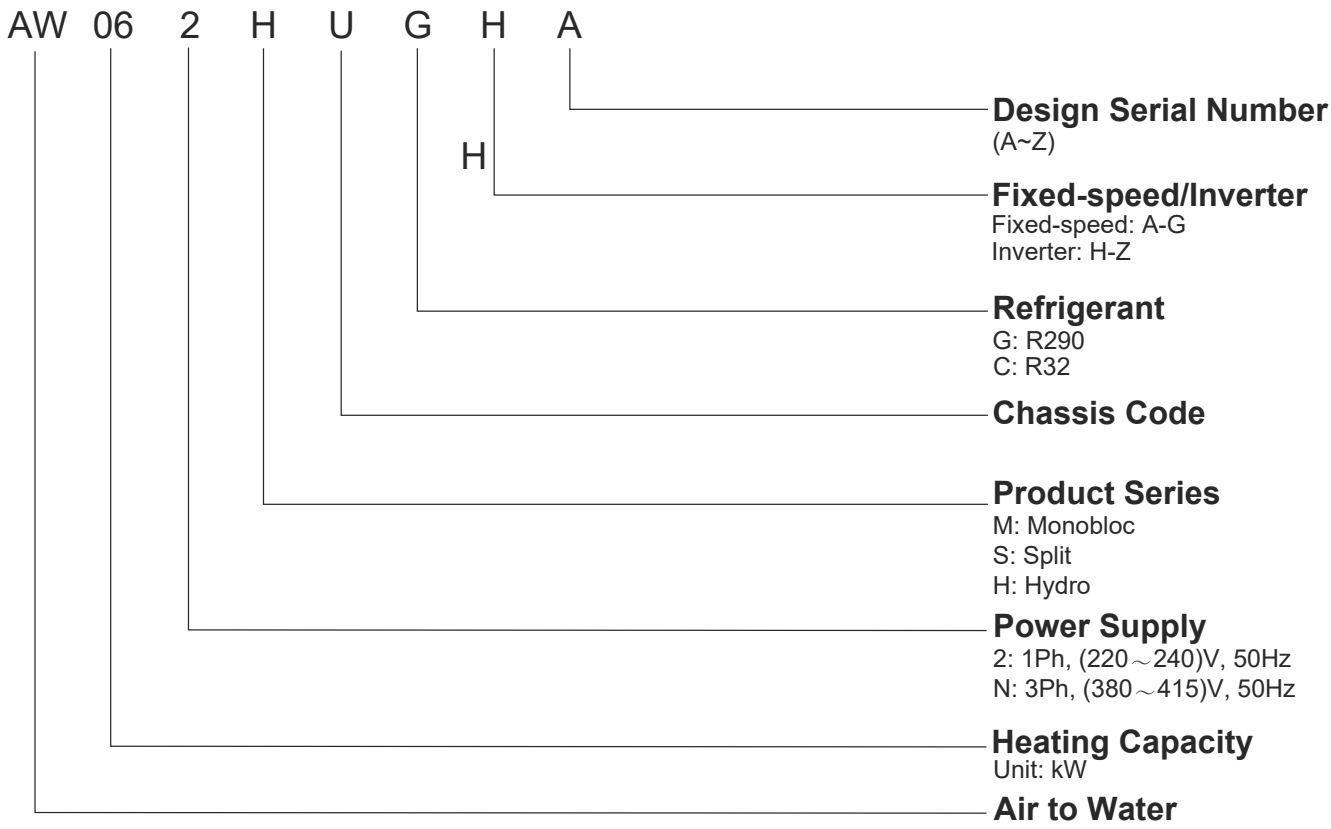
CAUTION	
Maintenance of Intrinsically Safe Components	
	Avoid adding any permanent inductive or capacitance loads to the circuit without verifying that this will not surpass the allowed voltage and current for the equipment in operation.
	Only intrinsically safe components can be serviced while powered on in an environment with a potential for combustion.
	Ensure that the testing equipment is correctly rated.
	Only replace components with parts explicitly recommended by the manufacturer. Utilizing non-specified parts could potentially lead to the ignition of refrigerant in the environment due to a leak.
	Must replace components with parts specified by the manufacturer. Any unspecified parts by manufacturer could potentially lead to the ignition of refrigerant in the environment due to a leak.
Cabling	
	Confirm that the cabling will not be exposed to wear, corrosion, extreme pressure, vibration, sharp edges or other damaging environmental conditions.
	Consider the impacts of aging or continuous vibration from compressors or fans during this check.
Detection of Combustible Refrigerants	
	Absolutely avoid the use of potential ignition sources when searching for or detecting refrigerant leaks.
	A halide torch (or any other detector that uses an open flame) should not be used.
Methods for Detecting Leaks	
	The following methods for detecting leaks are considered suitable for all types of refrigerant systems:
	1. Leak detection should be conducted using equipment with a sensitivity of 5 grams per year of refrigerant or better under a pressure of at least 0.25 times the maximum allowable pressure (>0.98MPa, max 3.90MPa). A universal sniffer, for instance.
	2. Electronic leak detectors can be used for flammable refrigerants, but they may require recalibration for adequate sensitivity.
	(The calibration of detector should be done in an area free of refrigerant.)
	3. Ensure the detector does not pose a risk of ignition and is compatible with the refrigerant being used.
	4. The detector should be calibrated to the specific refrigerant used and set to a percentage of the refrigerant's Lower Flammable Limit (LFL), ensuring it doesn't exceed 25%.
	5. Leak-detecting fluids, such as bubble or fluorescent method agents, can be used with most refrigerants. However, detergents with chlorine should be avoided as they can react with the refrigerant and corrode copper piping.
	6. If a leak is suspected, eliminate any potential ignition sources.
	7. If a leak requires brazing to repair, all refrigerant must be recovered from the system first. Must follow the related precautions to remove the refrigerant.
Removal and Evacuation	
	Conventional procedures should be followed when needing to access the refrigerant circuit for repairs or other purposes. Flammability factor must be taken into account, and follow below procedures:
	remove refrigerant ->purge the circuit with inert gas ->evacuate ->purge with inert gas ->open the circuit by cutting
	Brazing is prohibited.
	Recover the refrigerant charge into the appropriate recovery cylinders.
	Purge the system with Oxygen Free Nitrogen (OFN) to ensure safety.
	Repeat this process for several times as necessary.
	Compressed air or oxygen is prohibited for this task.

CAUTION	
	The purging process involves filling the system with OFN until working pressure is achieved, venting to atmosphere, pulling down to a vacuum, and repeating until no refrigerant remains in the system. (Until the concentration of purge gas is 0.25 LFL or less by the leak detector). ø0.25LFL = 0.525Vol%
	After the final OFN charge, vent the system down to atmospheric pressure before starting any work.
	This process is crucial if brazing on the pipework is needed.
	Must ensure the vacuum pump outlet is located away from any potential ignition sources and in a well-ventilated area.
Charging procedures	
	In addition to standard charging procedures, the following steps should be followed: 1. Prevent contamination of different refrigerants when using charging equipment. 2. Use the shortest possible hoses or lines to minimize the amount of refrigerant they can hold. 3. Store cylinders in the correct position as per their instructions. 4. Ground the refrigerating system before charging it with refrigerant. 5. Label the system once charging is complete (if not already). 6. Pay special attention not to overcharge the refrigerating system.
	Before recharging the system, pressure test it with OFN (refer to “**Removal and Evacuation”**).
	After charging, but before commissioning, perform a leak test on the system.
	Perform a follow-up leak test before leaving the site.
	Static electricity can build up and create a hazardous situation when charging and discharging refrigerant. To prevent fires or explosions, ground and bond containers and equipment before starting the process.
Decommissioning	
	Before beginning this process, the technician should be thoroughly familiar with the equipment and all its components.
	It is highly advised that all refrigerants should be safely collected.
	Do not reuse the collected refrigerant.
	Must ensure that the electricity is accessible before starting the task. 1. Learn about the equipment and how it operates. 2. Cut off the system's electrical power. 3. Prior to starting the process, confirm that: 1) If necessary, mechanical transport tools are ready for moving refrigerant cylinders; 2) all needed personal protection equipment and leak detectors are at hand and used properly; 3) the recovery process is constantly overseen by a qualified individual; 4) Recovery tools and cylinders meet the standard requirements. 4. Ensure that the cylinder is placed on the scales before the recovery begins. 5. Operate the recovery machine by following the guidelines. 6. Avoid overfilling cylinders. (Do not exceed 80% of the cylinder's volume). 7. Must ensure not exceeding the maximum operational pressure of the cylinder, even temporarily. 8. Once the cylinders have been correctly filled and the procedure is done, ensure that the cylinders and equipment are promptly removed from the location and all equipment isolation valves are closed.
	Charging or discharging the refrigerant might lead to static electricity accumulation, which can be hazardous. To prevent fire or explosion, neutralize static electricity during transfer by grounding and connecting containers and equipment before charging/discharging.

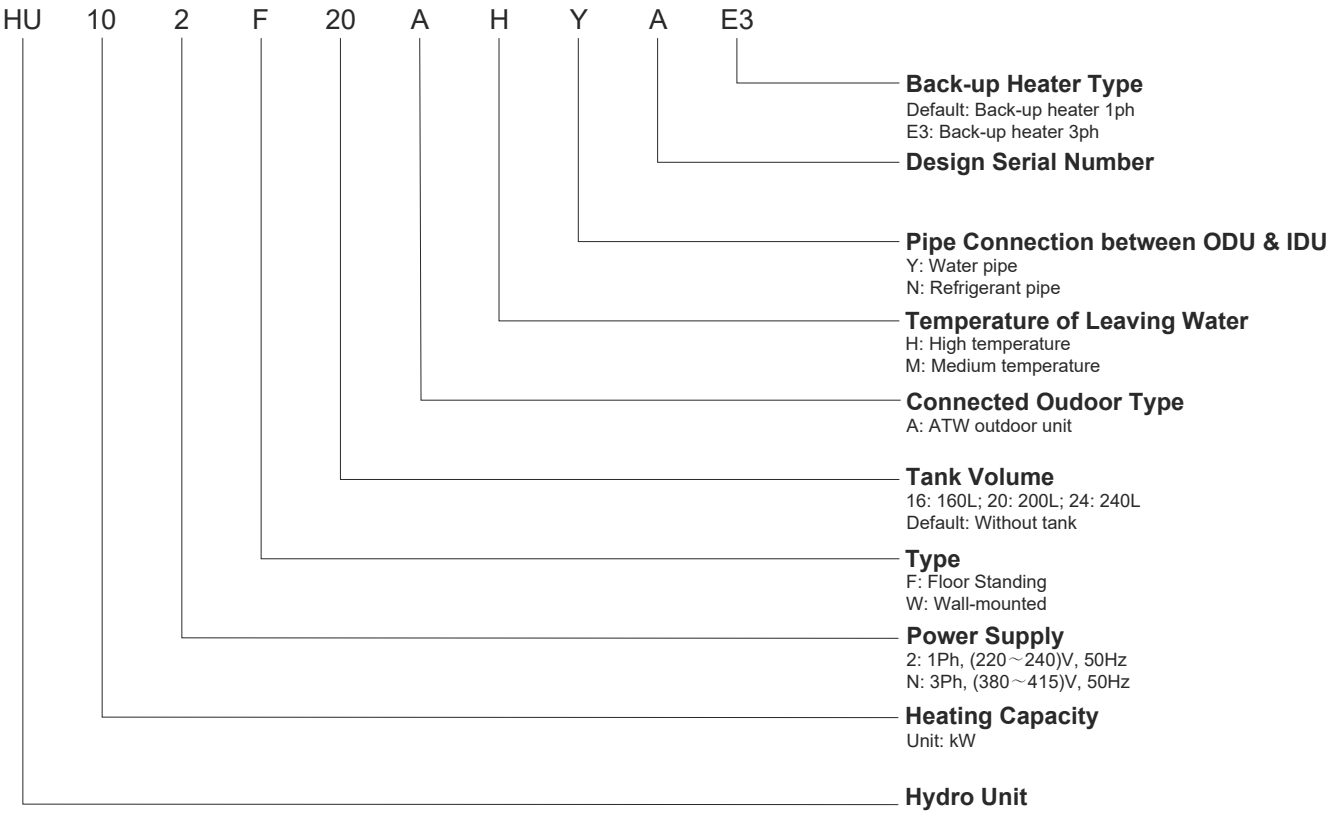
CAUTION	
Labelling	
!	Label the equipment to indicate that it has been decommissioned and emptied of refrigerant.
	The label should include the date and signature.
	Ensure that labels on the equipment state that it contains flammable refrigerant.
Recovery	
!	It is advised that all refrigerants are safely removed when removing refrigerant from a system, either for servicing or decommissioning.
	Must ensure using suitable refrigerant recovery cylinders if transferring refrigerant into cylinders,.
	Prepare the right amount of cylinders to contain the total system charge.
	All cylinders to be used should be assigned for the recovered refrigerant and labelled for that specific refrigerant (i.e., dedicated cylinders for refrigerant recovery).
	Cylinders should have a fully operational pressure relief valve and associated shut-off valves of good working conditions.
	Recovery cylinders should be evacuated and, if possible, cooled before recovery.
	The recovery equipment should be operational with a set of instructions about the device available and appropriate for flammable refrigerant recovery.
	Ensure the recovery equipment does not create potential ignition risks and is compatible with the refrigerant being used.
	Prepare a set of calibrated weighing scales of good working conditions.
	Hoses should have leak-free disconnected couplings of good working conditions.
	Before using the recovery machine, verify its operational state, proper maintenance, and that any related electrical components are sealed to prevent ignition if a refrigerant leak occurs. Contact the manufacturer if there are any uncertainties.
	Return the recovered refrigerant to the refrigerant supplier in the correct recovery cylinder, and arrange the relevant Waste Transfer Note.
	Refrigerants should not be mixed in recovery units, and especially not in cylinders.
	If compressors or compressor oils need to be removed, they should be evacuated to an acceptable level to ensure no flammable refrigerant remains in the lubricant.
	The evacuation process should be completed before returning the compressor to the suppliers.
	Only electrical heating to the compressor body should be used to accelerate this process.
	When draining oil from a system, it should be done safely.

3. General Information

3.1 Nomenclature



Indoor Unit


HU 10 2 F 20 A H Y A E3
Back-up Heater Type
Default: Back-up heater 1ph
E3: Back-up heater 3ph
Design Serial Number
Pipe Connection between ODU & IDU
Y: Water pipe
N: Refrigerant pipe
Temperature of Leaving Water
H: High temperature
M: Medium temperature
Connected Oudoor Type
A: ATW outdoor unit
Tank Volume
16: 160L; 20: 200L; 24: 240L
Default: Without tank
Type
F: Floor Standing
W: Wall-mounted
Power Supply
2: 1Ph, (220～240)V, 50Hz
N: 3Ph, (380～415)V, 50Hz
Heating Capacity
Unit: kW
Hydro Unit

3.2 Certificates and Regulations

Structure
Panels and base are made from galvanized steel plate painted with epoxy power to ensure total resistance to atmospheric pollution, condensate collection pan as standard.

Fin-coil heat exchanger
Φ7 inner-threaded copper pipes optimize heat exchange efficiency. Plate type hydrophilic aluminum foil used for air side heat exchange, which is easy for water drain and prevents forest to a great extent. Blue coating increases the resistance against corrosive agents, enhance durability.

High & low pressure sensor
The high & low pressure sensor achieves the real-time monitoring of the system running pressure, adjust the compressor running frequency based on the load change and make the system run stably and control precisely. The parameters sensed by pressures keep compressor running at the safer and more energy saving range to ensure the system reliability

Brushless DC fan motor
600mm and 700mm diameter fans. BLDC fan motor with stepless control helps to meet heating and cooling demands with low noise fan, super quiet operation, as well low power consumption.

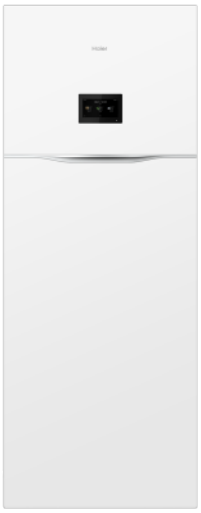
DC inverter compressor
The newly designed twin rotary DC inverter compressor with permanent magnet brings low working sound, wide working frequency and precession control. The upgraded DC motor power system of inverter model forms a full DC frequency conversion system and dramatically reduces power consumption by more than 30%.

3.3 Lineup

Model	Dimension	Power Supply (Ph/V/Hz)	Capacity	Compressor type	Heat exchanger	Refrigerant
AW042HUGHA	1250/380/790	1/220~240/50	4	DC Inverter	Plate-heat exchanger	R290
AW062HUGHA		1/220~240/50	6Kw			
AW082HUGHA		1/220~240/50	8Kw			
AW102HUGHA		1/220~240/50	10Kw			
AW10NHUGHA		3/380~415/50	10Kw			

Model	Dimension	Power Supply (Ph/V/Hz)	Capacity	Compressor type	Heat exchanger	Refrigerant
AW122HVGHA	1250/460/880	1/220~240/50	12Kw	DC Inverter	Plate-heat exchanger	R290
AW142HVGHA		1/220~240/50	14Kw			
AW162HVGHA		1/220~240/50	16Kw			
AW12NHVGHA		3/380~415/50	12Kw			
AW14NHVGHA		3/380~415/50	14Kw			
AW16NHVGHA		3/380~415/50	16Kw			

Model	Power Supply (V/Ph/Hz)	Capacity	A/C mode	Hydraulic module
HU102WAHYA	220~240/1/50	10kW	Heat pump	Split
HU162WAHYA	220~240/1/50	16kW		
HU10NWAHYAE3	380~415V/3/50	10kW		
HU16NWAHYAE3	380~415V/3/50	16kW		
HU102WAHYB	220~240/1/50	10kW		
HU162WAHYB	220~240/1/50	16kW		
HU16NWAHYBE3	380~415V/3/50	16kW		



Model	Power Supply (V/Ph/Hz)	Capacity	A/C mode	Hydraulic module
HU102F16AHYA	200~240/1/50	10kW	Heat pump	All in one
HU102F16AHYAE3	380~415/3/50	10kW		
HU102F20AHYA	220~240/1/50	10kW		
HU102F20AHYAE3	380~415/3/50	10kW		
HU102F24AHYA	200~240/1/50	10kW		
HU102F24AHYAE3	380~415/3/50	10kW		
HU162F20AHYA	220~240/1/50	16kW		
HU162F20AHYAE3	380~415/3/50	16kW		
HU162F24AHYA	200~240/1/50	16kW		
HU162F24AHYAE3	380~415/3/50	16kW		

3.4 Matching Table

Hydro Split

ODU	AW042HUGHA	AW062HUGHA	AW082HUGHA	AW102HUGHA	AW122HVGHA	AW142HVGHA	AW162HVGHA
IDU1	HU102WAHYA				HU162WAHYA		
IDU2	HU102WAHYB				HU162WAHYB		
Note: •ODU1: A stands for the unit without three way valve, with expansion tank •ODU2: B stands for the unit with three way valve, without expansion tank							

ODU	AW10NHUGHA	AW12NHVGHA	AW14NHVGHA	AW16NHVGHA
IDU1	HU10NWAHYAE3	HU16NWAHYAE3		
IDU2	/	HU16NWAHYBE3		
Note: •ODU1: A stands for the unit without three way valve, with expansion tank •ODU2: B stands for the unit with three way valve, without expansion tank				

Hydro All in one

ODU	AW042HUGHA	AW062HUGHA	AW082HUGHA	AW102HUGHA	AW122HVGHA	AW142HVGHA	AW162HVGHA
IDU	HU102F16AHYA HU102F20AHYA HU102F24AHYA				HU162F20AHYA HU162F24AHYA		
Note: R290 Hydro All in one ODU models are consistent with Hydro Split ODU.							

ODU	AW10NHUGHA	AW12NHVGHA	AW14NHVGHA	AW16NHVGHA
IDU	HU102F16AHYAE3 HU102F20AHYAE3 HU102F24AHYAE3	HU162F20AHYAE3 HU162F24AHYAE3		
Note: R290 Hydro All in one ODU models are consistent with Hydro Split ODU.				

3.5 Features and Benefits

Environmental-friendly

- **Natural refrigerant R290**

High-efficiency

The GT series performs excellently as a result of the following: a higher compression ratio, less oil compressors and an efficient internal thread regenerator are used in the appliance to increase the suction temperature. In turn, improving the units energy efficiency, reaching a maximum COP value of 5.50 can be reached.

- **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 reaches the top class A+.

Ultimate Comfort

- **High leaving water temperature**

The maximum leaving water temperature can reach 80°C, an industry leading figure. The GT series is the best solution to replace the boiler heating.

- **Low sound level**

With excellent design, the Haier Super Aqua GT series sound pressure level is as low as 55dB(A).

Super Convenience

Easy installation and easy maintenance

The internal structural layout has been optimized to allow for easy installation and maintenance. Components can be removed and assembled without interfering with one another.

High Reliability

- **Wide operating range**

The GT series can operate normally at minus 25°C, guaranteeing the users warmth in cold weather.

- **Silver brazing technology**

Optimisation of system design by reducing the number of welding joints alongside adopting silver brazing, ensures a stronger weld and avoids any leakage of the R290 refrigerant, which is combustible.

- **Refrigerant separator**

The refrigerant separator quickly removing refrigerant from the water system in case of leakage, preventing the refrigerant from entering the water system or indoor space.

- **Sealed electric control box**

Explosion proof electrical control box design, provides increased safety for R290 products. Used to avoid potential fire hazards and provide protection to users.

Intelligence

- **Smart control**

Haier WIFI control can check the running state of the heat pump, allowing flexibility and control of the unit. Encouraging easier lifestyle choices for the user.

- **Selection software**

Authorised users can access a cloud service enabling the system to be built and designed, accessed via their mobile phone or computer. All ATW heat pump models are available for selection and design, an output report specific to the customers residence is produced, allowing a project plan to be constructed.

4. Specifications

4.1 Indoor Units - Hydro Split

Indoor Unit		Unit	HU102WAHYA(B)
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Backup Electric Heater	Capacity	kW	1+2
Pressure Relief Valve Water Circuit		bar	Open: 3.5, Close: 2.5 and below
Flow Switch			Electronic Sensor
Expansion Vessel (Only for HU1*2WAHYA**)	Volume	L	8
	MWP	bar	10
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	14.1
Maximum Fuse Amps(MFA)		A	20
Water Flow Rate	Standard	m^3/h	0.690
	Minimum	m^3/h	0.240
Sound Power Level		dB	40
Net Dimension	H*W*D	mm	850*480*310
Packing Dimension	H*W*D	mm	1020*580*460
Net / Gross Weight	HU1*2WAHYA**(2)	kg	35.5 / 49
	HU1*2WAHYB**(3)	kg	32.5/46

Outdoor Unit		Unit	AW042HUGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	4.00
	Power input	kW	0.73
	COP	W/W	5.50
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	4.00
	Power input	kW	1.19
	COP	W/W	3.35
Space Heating Average Climate Water Outlet 35℃	SCOP	~	5.10
	η_s	%	201
	Energy class	-	A+++
Space Heating Average Climate Water Outlet 55℃	SCOP	-	3.85
	η_s	%	151
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	4.00
	Power input	kW	0.79
	EER	W/W	5.05
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	3.50
	Power input	kW	0.95
	EER	W/W	3.70
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43

Outdoor Unit		Unit	AW042HUGHA
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	5.80
	Crankcase Heater	W	27
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	380
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP44
	Type		DC
	Quantity		1
	Insulation Class		E
	Safe Class		I
	Max. Speed	rpm	900
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø604
Heat Exchanger	Number of Rows		2
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA
Four Way Valve		Brand	SANHUA
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA

Outdoor Unit		Unit	AW042HUGHA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃ /Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃ /Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	0.80
	CO_2 Eq.	kg	2.40
Sound pressure level*(1)		dB(A)	44
Sound power level*(1)		dB	55
Net dimension	H*W*D	mm	790*1250*380
Packing dimension	H*W*D	mm	1022*1395*550
Net / Gross weight		kg	86/109
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	13.5
Maximum Fuse Amps(MFA)		A	16
Minimum Power Supply Cable		mm²	4

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU102WAHYA(B)
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Backup Electric Heater	Capacity	kW	1+2
Pressure Relief Valve Water Circuit		bar	Open: 3.5, Close: 2.5 and below
Flow Switch			Electronic Sensor
Expansion Vessel (Only for HU1*2WAHYA**)	Volume	L	8
	MWP	bar	10
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	14.1
Maximum Fuse Amps(MFA)		A	20
Water Flow Rate	Standard	m^3/h	1.032
	Minimum	m^3/h	0.360
Sound Power Level		dB	40
Net Dimension	H*W*D	mm	850*480*310
Packing Dimension	H*W*D	mm	1020*580*460
Net / Gross Weight	HU1*2WAHYA**(2)	kg	35.5 / 49
	HU1*2WAHYB**(3)	kg	32.5/46

Outdoor Unit			AW062HUGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	6.00
	Power input	kW	1.12
	COP	W/W	5.35
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	6.00
	Power input	kW	1.82
	COP	W/W	3.30
Space Heating Average Climate Water Outlet 35℃	SCOP	~	5.10
	η_s	%	201
	Energy class	-	A+++
Space Heating Average Climate Water Outlet 55℃	SCOP	-	3.83
	η_s	%	150
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	6.00
	Power input	kW	1.20
	EER	W/W	5.00
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	5.00
	Power input	kW	1.37
	EER	W/W	3.65
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43

Outdoor Unit			AW062HUGHA
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	5.80
	Crankcase Heater	W	27
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	380
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP44
	Type		DC
	Quantity		1
	Insulation Class		E
	Safe Class		I
	Max. Speed	rpm	900
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø604
Heat Exchanger	Number of Rows		2
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA

Outdoor Unit			AW062HUGHA
Four Way Valve		Brand	SANHUA
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃ /Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃ /Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	0.80
	CO_2 Eq.	kg	2.40
Sound pressure level*(1)		dB(A)	47
Sound power level*(1)		dB	58
Net dimension	H*W*D	mm	790*1250*380
Packing dimension	H*W*D	mm	1022*1395*550
Net / Gross weight		kg	86/109
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	13.5
Maximum Fuse Amps(MFA)		A	16
Minimum Power Supply Cable		mm²	4

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU102WAHYA(B)
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Backup Electric Heater	Capacity	kW	1+2
Pressure Relief Valve Water Circuit		bar	Open: 3.5, Close: 2.5 and below
Flow Switch			Electronic Sensor
Expansion Vessel (Only for HU1*2WAHYA**)	Volume	L	8
	MWP	bar	10
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	14.1
Maximum Fuse Amps(MFA)		A	20
Water Flow Rate	Standard	m^3/h	1.374
	Minimum	m^3/h	0.540
Sound Power Level		dB	40
Net Dimension	H*W*D	mm	850*480*310
Packing Dimension	H*W*D	mm	1020*580*460
Net / Gross Weight	HU1*2WAHYA**(2)	kg	35.5 / 49
	HU1*2WAHYB**(3)	kg	32.5/46

Outdoor Unit		Unit	AW082HUGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	8.00
	Power input	kW	1.50
	COP	W/W	5.35
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	8.00
	Power input	kW	2.35
	COP	W/W	3.40
Space Heating Average Climate Water Outlet 35℃	SCOP	~	5.20
	η_s	%	205
	Energy class	-	A+++
Space Heating Average Climate Water Outlet 55℃	SCOP	-	3.85
	η_s	%	151
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	7.50
	Power input	kW	1.58
	EER	W/W	4.75
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	6.80
	Power input	kW	1.97
	EER	W/W	3.45
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43

Outdoor Unit		Unit	AW082HUGHA
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	7.50
	Crankcase Heater	W	27
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	600
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP44
	Type		DC
	Quantity		1
	Insulation Class		E
	Safe Class		I
	Max. Speed	rpm	900
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø604
Heat Exchanger	Number of Rows		2
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA

Outdoor Unit		Unit	AW082HUGHA
Four Way Valve		Brand	SANHUA/DANAN
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	0.90
	CO_2 Eq.	kg	2.70
Sound pressure level*(1)		dB(A)	48
Sound power level*(1)		dB	59
Net dimension	H*W*D	mm	790*1250*380
Packing dimension	H*W*D	mm	1022*1395*550
Net / Gross weight		kg	98/121
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	18.6
Maximum Fuse Amps(MFA)		A	20
Minimum Power Supply Cable		mm²	6

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU102WAHYA(B)
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Backup Electric Heater	Capacity	kW	1+2
Pressure Relief Valve Water Circuit		bar	Open: 3.5, Close: 2.5 and below
Flow Switch			Electronic Sensor
Expansion Vessel (Only for HU1*2WAHYA**)	Volume	L	8
	MWP	bar	10
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	14.1
Maximum Fuse Amps(MFA)		A	20
Water Flow Rate	Standard	m^3/h	1.722
	Minimum	m^3/h	0.660
Sound Power Level		dB	40
Net Dimension	H*W*D	mm	850*480*310
Packing Dimension	H*W*D	mm	1020*580*460
Net / Gross Weight	HU1*2WAHYA**(2)	kg	35.5 / 49
	HU1*2WAHYB**(3)	kg	32.5/46

Outdoor Unit		Unit	AW102HUGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	10.00
	Power input	kW	1.96
	COP	W/W	5.10
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	10.00
	Power input	kW	3.13
	COP	W/W	3.20
Space Heating Average Climate Water Outlet 35℃	SCOP	~	5.10
	η_s	%	201
	Energy class	-	A+++
Space Heating Average Climate Water Outlet 55℃	SCOP	-	3.83
	η_s	%	150
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	9.50
	Power input	kW	2.21
	EER	W/W	4.30
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	8.50
	Power input	kW	2.62
	EER	W/W	3.25
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43

Outdoor Unit		Unit	AW102HUGHA
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	7.50
	Crankcase Heater	W	27
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	600
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP44
	Type		DC
	Quantity		1
	Insulation Class		E
	Safe Class		I
	Max. Speed	rpm	900
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø604
Heat Exchanger	Number of Rows		2
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA

Outdoor Unit		Unit	AW102HUGHA
Four Way Valve		Brand	SANHUA/DANAN
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	0.90
	CO_2 Eq.	kg	2.70
Sound pressure level*(1)		dB(A)	49
Sound power level*(1)		dB	60
Net dimension	H*W*D	mm	790*1250*380
Packing dimension	H*W*D	mm	1022*1395*550
Net / Gross weight		kg	98/121
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	18.6
Maximum Fuse Amps(MFA)		A	20
Minimum Power Supply Cable		mm²	6

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU162WAHYA(B)
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Backup Electric Heater	Capacity	kW	2+4
Pressure Relief Valve Water Circuit		bar	Open: 3.5, Close: 2.5 and below
Flow Switch			Electronic Sensor
Expansion Vessel (Only for HU1*2WAHYA**)	Volume	L	8
	MWP	bar	10
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	28.2
Maximum Fuse Amps(MFA)		A	40
Water Flow Rate	Standard	m^3/h	2.064
	Minimum	m^3/h	0.840
Sound Power Level		dB	42
Net Dimension	H*W*D	mm	850*480*310
Packing Dimension	H*W*D	mm	1020*580*460
Net / Gross Weight	HU1*2WAHYA**(2)	kg	37 / 50.5
	HU1*2WAHYB**(3)	kg	34/47.5

Outdoor Unit		Unit	AW122HVGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	12.00
	Power input	kW	2.35
	COP	W/W	5.10
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	11.50
	Power input	kW	3.48
	COP	W/W	3.30
Space Heating Average Climate Water Outlet 35℃	SCOP	~	4.82
	η_s	%	190
	Energy class	-	A+++
Space Heating Average Climate Water Outlet 55℃	SCOP	-	3.85
	η_s	%	151
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	11.50
	Power input	kW	2.56
	EER	W/W	4.50
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	10.00
	Power input	kW	2.99
	EER	W/W	3.35
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43

Outdoor Unit		Unit	AW122HVGHA
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	10.25
	Crankcase Heater	W	27
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	900
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP55
	Type		DC
	Quantity		1
	Insulation Class		B
	Safe Class		I
	Max. Speed	rpm	700
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø700
Heat Exchanger	Number of Rows		2
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA

Outdoor Unit		Unit	AW122HVGHA
Four Way Valve		Brand	DANAN
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	1.05
	CO_2 Eq.	kg	3.15
Sound pressure level*(1)		dB(A)	52
Sound power level*(1)		dB	63
Net dimension	H*W*D	mm	880*1250*460
Packing dimension	H*W*D	mm	1112*1396*630
Net / Gross weight		kg	114/140
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	30.6
Maximum Fuse Amps(MFA)		A	32
Minimum Power Supply Cable		mm²	10

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU162WAHYA(B)
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Backup Electric Heater	Capacity	kW	2+4
Pressure Relief Valve Water Circuit		bar	Open: 3.5, Close: 2.5 and below
Flow Switch			Electronic Sensor
Expansion Vessel (Only for HU1*2WAHYA**)	Volume	L	8
	MWP	bar	10
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	28.2
Maximum Fuse Amps(MFA)		A	40
Water Flow Rate	Standard	m^3/h	2.406
	Minimum	m^3/h	0.960
Sound Power Level		dB	42
Net Dimension	H*W*D	mm	850*480*310
Packing Dimension	H*W*D	mm	1020*580*460
Net / Gross Weight	HU1*2WAHYA**(2)	kg	37 / 50.5
	HU1*2WAHYB**(3)	kg	34/47.5

Outdoor Unit		Unit	AW142HVGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	14.00
	Power input	kW	2.83
	COP	W/W	4.95
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	13.50
	Power input	kW	4.22
	COP	W/W	3.20
Space Heating Average Climate Water Outlet 35℃	SCOP	~	4.80
	η_s	%	189
	Energy class	-	A+++
Space Heating Average Climate Water Outlet 55℃	SCOP	-	3.83
	η_s	%	150
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	13.50
	Power input	kW	3.14
	EER	W/W	4.30
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	12.00
	Power input	kW	3.75
	EER	W/W	3.20
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43

Outdoor Unit		Unit	AW142HVGHA
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	10.25
	Crankcase Heater	W	28
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	900
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP55
	Type		DC
	Quantity		1
	Insulation Class		B
	Safe Class		I
	Max. Speed	rpm	700
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø700
Heat Exchanger	Number of Rows		2
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA

Outdoor Unit		Unit	AW142HVGHA
Four Way Valve		Brand	DANAN
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	1.05
	CO_2 Eq.	kg	3.15
Sound pressure level*(1)		dB(A)	53
Sound power level*(1)		dB	64
Net dimension	H*W*D	mm	880*1250*460
Packing dimension	H*W*D	mm	1112*1396*630
Net / Gross weight		kg	114/140
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	30.6
Maximum Fuse Amps(MFA)		A	32
Minimum Power Supply Cable		mm²	10

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU162WAHYA(B)
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Backup Electric Heater	Capacity	kW	2+4
Pressure Relief Valve Water Circuit		bar	Open: 3.5, Close: 2.5 and below
Flow Switch			Electronic Sensor
Expansion Vessel (Only for HU1*2WAHYA**)	Volume	L	8
	MWP	bar	10
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	28.2
Maximum Fuse Amps(MFA)		A	40
Water Flow Rate	Standard	m^3/h	2.754
	Minimum	m^3/h	1.080
Sound Power Level		dB	42
Net Dimension	H*W*D	mm	850*480*310
Packing Dimension	H*W*D	mm	1020*580*460
Net / Gross Weight	HU1*2WAHYA**(2)	kg	37 / 50.5
	HU1*2WAHYB**(3)	kg	34/47.5

Outdoor Unit		Unit	AW162HVGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	16.00
	Power input	kW	3.23
	COP	W/W	4.95
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	15.50
	Power input	kW	5.08
	COP	W/W	3.05
Space Heating Average Climate Water Outlet 35℃	SCOP	~	4.80
	η_s	%	189
	Energy class	-	A+++
Space Heating Average Climate Water Outlet 55℃	SCOP	-	3.85
	η_s	%	151
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	15.50
	Power input	kW	3.88
	EER	W/W	4.00
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	14.00
	Power input	kW	4.52
	EER	W/W	3.10
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43

Outdoor Unit		Unit	AW162HVGHA
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	12.50
	Crankcase Heater	W	28
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	900
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP55
	Type		DC
	Quantity		1
	Insulation Class		B
	Safe Class		I
	Max. Speed	rpm	700
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø700
Heat Exchanger	Number of Rows		3
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA

Outdoor Unit		Unit	AW162HVGHA
Four Way Valve		Brand	DANAN
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	1.25
	CO_2 Eq.	kg	3.75
Sound pressure level*(1)		dB(A)	55
Sound power level*(1)		dB	66
Net dimension	H*W*D	mm	880*1250*460
Packing dimension	H*W*D	mm	1112*1396*630
Net / Gross weight		kg	123/149
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	34.8
Maximum Fuse Amps(MFA)		A	40
Minimum Power Supply Cable		mm²	10

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU10NWAHYAE3
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Backup Electric Heater	Capacity	kW	1+2
Pressure Relief Valve Water Circuit		bar	Open: 3.5, Close: 2.5 and below
Flow Switch			Electronic Sensor
Expansion Vessel (Only for HU1*2WAHYA**)	Volume	L	8
	MWP	bar	10
Power Supply		Ph/V/Hz	3/380~415/50
Minimum Circuit Amps(MCA)		A	5.0
Maximum Fuse Amps(MFA)		A	10
Water Flow Rate	Standard	m^3/h	1.722
	Minimum	m^3/h	0.660
Sound Power Level		dB	40
Net Dimension	H*W*D	mm	850*480*310
Packing Dimension	H*W*D	mm	1020*580*460
Net / Gross Weight	HU1*2WAHYA**(2)	kg	36 / 49.5
	HU1*2WAHYB**(3)	kg	/

Outdoor Unit		Unit	AW10NHUGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	10.00
	Power input	kW	1.96
	COP	W/W	5.10
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	10.00
	Power input	kW	3.13
	COP	W/W	3.20
Space Heating Average Climate Water Outlet 35℃	SCOP	~	5.10
	η_s	%	201
	Energy class	-	A+++
Space Heating Average Climate Water Outlet 55℃	SCOP	-	3.83
	η_s	%	150
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	9.50
	Power input	kW	2.21
	EER	W/W	4.30
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	8.50
	Power input	kW	2.62
	EER	W/W	3.25
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43

Outdoor Unit		Unit	AW10NHUGHA
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	7.50
	Crankcase Heater	W	27
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	600
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP44
	Type		DC
	Quantity		1
	Insulation Class		E
	Safe Class		I
	Max. Speed	rpm	900
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø604
Heat Exchanger	Number of Rows		2
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA

Outdoor Unit		Unit	AW10NHUGHA
Four Way Valve		Brand	DANAN
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	0.90
	CO_2 Eq.	kg	2.70
Sound pressure level*(1)		dB(A)	49
Sound power level*(1)		dB	60
Net dimension	H*W*D	mm	790*1250*380
Packing dimension	H*W*D	mm	1022*1395*550
Net / Gross weight		kg	113/136
Power Supply		Ph/V/Hz	3/380~415/50
Minimum Circuit Amps(MCA)		A	6.2
Maximum Fuse Amps(MFA)		A	16
Minimum Power Supply Cable		mm²	4

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU16NWAHYA(B)E3
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Backup Electric Heater	Capacity	kW	2+4
Pressure Relief Valve Water Circuit		bar	Open: 3.5, Close: 2.5 and below
Flow Switch			Electronic Sensor
Expansion Vessel (Only for HU1*2WAHYA**)	Volume	L	8
	MWP	bar	10
Power Supply		Ph/V/Hz	3/380~415/50
Minimum Circuit Amps(MCA)		A	9.5
Maximum Fuse Amps(MFA)		A	16
Water Flow Rate	Standard	m^3/h	2.064
	Minimum	m^3/h	0.840
Sound Power Level		dB	42
Net Dimension	H*W*D	mm	850*480*310
Packing Dimension	H*W*D	mm	1020*580*460
Net / Gross Weight	HU1*2WAHYA**(2)	kg	37.5 / 51
	HU1*2WAHYB**(3)	kg	34.5/48

Outdoor Unit		Unit	AW12NHVGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	12.00
	Power input	kW	2.35
	COP	W/W	5.10
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	11.50
	Power input	kW	3.48
	COP	W/W	3.30
Space Heating Average Climate Water Outlet 35℃	SCOP	~	4.82
	η_s	%	190
	Energy class	-	A+++
Space Heating Average Climate Water Outlet 55℃	SCOP	-	3.85
	η_s	%	151
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	11.50
	Power input	kW	2.56
	EER	W/W	4.50
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	10.00
	Power input	kW	2.99
	EER	W/W	3.35
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43

Outdoor Unit		Unit	AW12NHVGHA
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	10.25
	Crankcase Heater	W	27
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	900
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP55
	Type		DC
	Quantity		1
	Insulation Class		B
	Safe Class		I
	Max. Speed	rpm	700
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø700
Heat Exchanger	Number of Rows		2
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA

Outdoor Unit		Unit	AW12NHVGHA
Four Way Valve		Brand	DANAN
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	1.05
	CO_2 Eq.	kg	3.15
Sound pressure level*(1)		dB(A)	52
Sound power level*(1)		dB	63
Net dimension	H*W*D	mm	880*1250*460
Packing dimension	H*W*D	mm	1112*1396*630
Net / Gross weight		kg	129/155
Power Supply		Ph/V/Hz	3/380~415/50
Minimum Circuit Amps(MCA)		A	10.2
Maximum Fuse Amps(MFA)		A	16
Minimum Power Supply Cable		mm²	4

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU16NWAHYA(B)E3
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Backup Electric Heater	Capacity	kW	2+4
Pressure Relief Valve Water Circuit		bar	Open: 3.5, Close: 2.5 and below
Flow Switch			Electronic Sensor
Expansion Vessel (Only for HU1*2WAHYA**)	Volume	L	8
	MWP	bar	10
Power Supply		Ph/V/Hz	3/380~415/50
Minimum Circuit Amps(MCA)		A	9.5
Maximum Fuse Amps(MFA)		A	16
Water Flow Rate	Standard	m^3/h	2.406
	Minimum	m^3/h	0.96
Sound Power Level		dB	42
Net Dimension	H*W*D	mm	850*480*310
Packing Dimension	H*W*D	mm	1020*580*460
Net / Gross Weight	HU1*2WAHYA**(2)	kg	37.5 / 51
	HU1*2WAHYB**(3)	kg	34.5/48
Outdoor Unit		**Unit**	**AW14NHVGHA**
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	14.00
	Power input	kW	2.83
	COP	W/W	4.95
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	13.50
	Power input	kW	4.22
	COP	W/W	3.20
Space Heating Average Climate Water Outlet 35℃	SCOP	~	4.80
	η_s	%	189
	Energy class	-	A+++
Space Heating Average Climate Water Outlet 55℃	SCOP	-	3.83
	η_s	%	150
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	13.50
	Power input	kW	3.14
	EER	W/W	4.30
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	12.00
	Power input	kW	3.75
	EER	W/W	3.20
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43

Outdoor Unit		Unit	AW14NHVGHA
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	10.25
	Crankcase Heater	W	28
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	900
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP55
	Type		DC
	Quantity		1
	Insulation Class		B
	Safe Class		I
	Max. Speed	rpm	700
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø700
Heat Exchanger	Number of Rows		2
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA

Outdoor Unit		Unit	AW14NHVGHA
Four Way Valve		Brand	DANAN
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	1.05
	CO_2 Eq.	kg	3.15
Sound pressure level*(1)		dB(A)	53
Sound power level*(1)		dB	64
Net dimension	H*W*D	mm	880*1250*460
Packing dimension	H*W*D	mm	1112*1396*630
Net / Gross weight		kg	129/155
Power Supply		Ph/V/Hz	3/380~415/50
Minimum Circuit Amps(MCA)		A	10.2
Maximum Fuse Amps(MFA)		A	16
Minimum Power Supply Cable		mm²	4

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU16NWAHYA(B)E3
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Backup Electric Heater	Capacity	kW	2+4
Pressure Relief Valve Water Circuit		bar	Open: 3.5, Close: 2.5 and below
Flow Switch			Electronic Sensor
Expansion Vessel (Only for HU1*2WAHYA**)	Volume	L	8
	MWP	bar	10
Power Supply		Ph/V/Hz	3/380~415/50
Minimum Circuit Amps(MCA)		A	9.5
Maximum Fuse Amps(MFA)		A	16
Water Flow Rate	Standard	m^3/h	2.754
	Minimum	m^3/h	1.080
Sound Power Level		dB	42
Net Dimension	H*W*D	mm	850*480*310
Packing Dimension	H*W*D	mm	1020*580*460
Net / Gross Weight	HU1*2WAHYA**(2)	kg	37.5 / 51
	HU1*2WAHYB**(3)	kg	34.5/48

Outdoor Unit		Unit	AW16NHVGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	16.00
	Power input	kW	3.23
	COP	W/W	4.95
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	15.50
	Power input	kW	5.08
	COP	W/W	3.05
Space Heating Average Climate Water Outlet 35℃	SCOP	~	4.80
	η_s	%	189
	Energy class	-	A+++
Space Heating Average Climate Water Outlet 55℃	SCOP	-	3.85
	η_s	%	151
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	15.50
	Power input	kW	3.88
	EER	W/W	4.00
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	14.00
	Power input	kW	4.52
	EER	W/W	3.10
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43

Outdoor Unit		Unit	AW16NHVGHA
Water Piping Connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	12.50
	Crankcase Heater	W	28
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	900
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP55
	Type		DC
	Quantity		1
	Insulation Class		B
	Safe Class		I
	Max. Speed	rpm	700
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø700
Heat Exchanger	Number of Rows		3
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA

Outdoor Unit		Unit	AW16NHVGHA
Four Way Valve		Brand	DANAN
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	1.25
	CO_2 Eq.	kg	3.75
Sound pressure level*(1)		dB(A)	55
Sound power level*(1)		dB	66
Net dimension	H*W*D	mm	880*1250*460
Packing dimension	H*W*D	mm	1112*1396*630
Net / Gross weight		kg	138/164
Power Supply		Ph/V/Hz	3/380~415/50
Minimum Circuit Amps(MCA)		A	11.6
Maximum Fuse Amps(MFA)		A	16
Minimum Power Supply Cable		mm²	4

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

4.2 Indoor Units - Hydro All in One

Indoor Unit		Unit	HU102F16/20/24AHYA
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet (except for DHW)	inch	R 1/R 1
	Inlet/Outlet (DHW)	inch	R 3/4
Expansion Vessel		L	8
Primary Circuit	Pressure Relief Valve	bar	3
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)*(1)		A	14.1
Maximum Fuse Amps(MFA)		A	20
DHW Tank	Tank Volume(16/20/24)	L	160/200/240
	Maximum Water Pressure Limit	bar	7
	Tank Heater	kW	3
	Inner Coil heat exchange area(16/20/24)	m^2	1.38/1.8/1.93
Pressure Relief Valve Water Circuit	Water Circuit	bar	Open: 3.5, Close: 2.5 and below
	DHW Tank	bar	Open: 7.5, Close: 6.5 and below
Flow Switch			Electronic Sensor
Backup Electric Heater	Power Supply	Ph/V/Hz	1/220~240/50
	Capacity	kW	1+2
	Steps	-	2
	Minimum Circuit Amps(MCA)	A	14.0
	Maximum Fuse Amps(MFA)	A	20
Water Flow Rate	Standard	m^3/h	0.690
	Minimum	m^3/h	0.240
Sound Power Level		dB	40
Net Dimension	H*W*D(16/20/24)	mm	1580*590*590 1780*590*590 1985*590*590
Packing Dimension	H*W*D(16/20/24)	mm	1860*695*695 2060*695*695 2265*695*695
Net / Gross Weight(16/20/24)		kg	103 / 121 115 / 131 120.5 / 139.5

Outdoor Unit		Unit	AW042HUGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	4.00
	Power input	kW	0.73
	COP	W/W	5.50
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	4.00
	Power input	kW	1.19
	COP	W/W	3.35
Space heating Average climate water outlet 35℃	SCOP	~	5.10
	η_s	%	201
	Energy class	-	A+++

Outdoor Unit		Unit	AW042HUGHA
Space heating Average climate water outlet 55℃	SCOP	-	3.85
	η_s	%	151
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	4.00
	Power input	kW	0.79
	EER	W/W	5.05
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	3.50
	Power input	kW	0.95
	EER	W/W	3.70
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43
Water piping connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	5.80
	Crankcase Heater	W	27
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	380
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP44
	Type		DC
	Quantity		1
	Insulation Class		E
	Safe Class		I
	Speed	rpm	900
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø604

Outdoor Unit		Unit	AW042HUGHA
Heat Exchanger	Number of Rows		2
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA
Four Way Valve		Brand	SANHUA
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	0.80
	CO_2 Eq.	kg	2.40
Sound pressure level*(1)		dB(A)	44
Sound power level*(1)		dB	55
Net dimension	H*W*D	mm	790*1250*380
Packing dimension	H*W*D	mm	1022*1395*550
Net / Gross weight		kg	86/109
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	13.5
Maximum Fuse Amps(MFA)		A	16
Minimum Power Supply Cable		mm²	4

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU102F16/20/24AHYA
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet (except for DHW)	inch	R 1/R 1
	Inlet/Outlet (DHW)	inch	R 3/4
Expansion Vessel		L	8
Primary Circuit	Pressure Relief Valve	bar	3
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)*(1)		A	14.1
Maximum Fuse Amps(MFA)		A	20
DHW Tank	Tank Volume(16/20/24)	L	160/200/240
	Maximum Water Pressure Limit	bar	7
	Tank Heater	kW	3
	Inner Coil heat exchange area(16/20/24)	m²	1.38/1.8/1.93
Pressure Relief Valve Water Circuit	Water Circuit	bar	Open: 3.5, Close: 2.5 and below
	DHW Tank	bar	Open: 7.5, Close: 6.5 and below
Flow Switch			Electronic Sensor
Backup Electric Heater	Power Supply	Ph/V/Hz	1/220~240/50
	Capacity	kW	1+2
	Steps	-	2
	Minimum Circuit Amps(MCA)	A	14.0
	Maximum Fuse Amps(MFA)	A	20
Water Flow Rate	Standard	m³/h	1.032
	Minimum	m³/h	0.360
Sound Power Level		dB	40
Net Dimension	H*W*D(16/20/24)	mm	1580*590*590 1780*590*590 1985*590*590
Packing Dimension	H*W*D(16/20/24)	mm	1860*695*695 2060*695*695 2265*695*695
Net / Gross Weight(16/20/24)		kg	103 / 121 115 / 131 120.5 / 139.5

Outdoor Unit		Unit	AW062HUGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	6.00
	Power input	kW	1.12
	COP	W/W	5.35
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	6.00
	Power input	kW	1.82
	COP	W/W	3.30
Space heating Average climate water outlet 35℃	SCOP	~	5.10
	η_s	%	201
	Energy class	-	A+++

Outdoor Unit		Unit	AW062HUGHA
Space heating Average climate water outlet 55℃	Capacity	kW	5.00
	Power input	kW	1.37
	EER	W/W	3.65
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43
Water piping connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	5.80
	Crankcase Heater	W	27
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	380
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP44
	Type		DC
	Quantity		1
	Insulation Class		E
	Safe Class		I
	Speed	rpm	900
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø604
Heat Exchanger	Number of Rows		2
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA

Outdoor Unit		Unit	AW062HUGHA
Four Way Valve		Brand	SANHUA
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	0.80
	CO_2 Eq.	kg	2.40
Sound pressure level*(1)		dB(A)	47
Sound power level*(1)		dB	58
Net dimension	H*W*D	mm	790*1250*380
Packing dimension	H*W*D	mm	1022*1395*550
Net / Gross weight		kg	86/109
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	13.5
Maximum Fuse Amps(MFA)		A	16
Minimum Power Supply Cable		mm²	4

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU102F16/20/24AHYA
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet (except for DHW)	inch	R 1/R 1
	Inlet/Outlet (DHW)	inch	R 3/4
Expansion Vessel		L	8
Primary Circuit	Pressure Relief Valve	bar	3
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)*(1)		A	14.1
Maximum Fuse Amps(MFA)		A	20
DHW Tank	Tank Volume	L	200
	Maximum Water Pressure Limit	bar	7
	Tank Heater	kW	3
	Inner Coil heat exchange area(16/20/24)	m²	1.38/1.8/1.93
Pressure Relief Valve Water Circuit	Water Circuit	bar	Open: 3.5, Close: 2.5 and below
	DHW Tank	kPa	Open: 7.5, Close: 6.5 and below
Flow Switch			Electronic Sensor
Backup Electric Heater	Power Supply	Ph/V/Hz	1/220~240/50
	Capacity	kW	1+2
	Steps	-	2
	Minimum Circuit Amps(MCA)	A	14.0
	Maximum Fuse Amps(MFA)	A	20
Water Flow Rate	Standard	m³/h	1.374
	Minimum	m³/h	0.540
Sound Power Level		dB	40
Net Dimension	H*W*D(16/20/24)	mm	1580*590*590 1780*590*590 1985*590*590
Packing Dimension	H*W*D(16/20/24)	mm	1860*695*695 2060*695*695 2265*695*695
Net / Gross Weight(16/20/24)		kg	103 / 121 115 / 131 120.5 / 139.5

Outdoor Unit		Unit	AW082HUGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	8.00
	Power input	kW	1.50
	COP	W/W	5.35
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	8.00
	Power input	kW	2.35
	COP	W/W	3.40
Space heating Average climate water outlet 35℃	SCOP	~	5.20
	η_s	%	205
	Energy class	-	A+++

Outdoor Unit		Unit	AW082HUGHA
Space heating Average climate water outlet 55℃	SCOP	-	3.85
	η_s	%	151
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	7.50
	Power input	kW	1.58
	EER	W/W	4.75
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	6.80
	Power input	kW	1.97
	EER	W/W	3.45
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43
Water piping connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	7.50
	Crankcase Heater	W	27
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	600
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP44
	Type		DC
	Quantity		1
	Insulation Class		E
	Safe Class		I
	Speed	rpm	900
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø604

Outdoor Unit		Unit	AW082HUGHA
Heat Exchanger	Number of Rows		2
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA
Four Way Valve		Brand	SANHUA/DANAN
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	0.90
	CO_2 Eq.	kg	2.70
Sound pressure level*(1)		dB(A)	48
Sound power level*(1)		dB	59
Net dimension	H*W*D	mm	790*1250*380
Packing dimension	H*W*D	mm	1022*1395*550
Net / Gross weight		kg	98/121
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	18.6
Maximum Fuse Amps(MFA)		A	20
Minimum Power Supply Cable		mm²	6

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU102F16/20/24AHYA
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet (except for DHW)	inch	R 1/R 1
	Inlet/Outlet (DHW)	inch	R 3/4
Expansion Vessel		L	8
Primary Circuit	Pressure Relief Valve	bar	3
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)*(1)		A	14.1
Maximum Fuse Amps(MFA)		A	20
DHW Tank	Tank Volume	L	200
	Maximum Water Pressure Limit	bar	7
	Tank Heater	kW	3
	Inner Coil heat exchange area(16/20/24)	m²	1.38/1.8/1.93
Pressure Relief Valve Water Circuit	Water Circuit	bar	Open: 3.5, Close: 2.5 and below
	DHW Tank	bar	Open: 7.5, Close: 6.5 and below
Flow Switch			Electronic Sensor
Backup Electric Heater	Power Supply	Ph/V/Hz	1/220~240/50
	Capacity	kW	1+2
	Steps	-	2
	Minimum Circuit Amps(MCA)	A	14.0
	Maximum Fuse Amps(MFA)	A	20
Water Flow Rate	Standard	m³/h	1.374
	Minimum	m³/h	0.540
Sound Power Level		dB	40
Net Dimension	H*W*D(16/20/24)	mm	1580*590*590 1780*590*590 1985*590*590
Packing Dimension	H*W*D(16/20/24)	mm	1860*695*695 2060*695*695 2265*695*695
Net / Gross Weight(16/20/24)		kg	103 / 121 115 / 131 120.5 / 139.5

Outdoor Unit		Unit	AW102HUGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	10.00
	Power input	kW	1.96
	COP	W/W	5.10
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	10.00
	Power input	kW	3.13
	COP	W/W	3.20
Space heating Average climate water outlet 35℃	SCOP	~	5.10
	η_s	%	201
	Energy class	-	A+++

Outdoor Unit		Unit	AW102HUGHA
Space heating Average climate water outlet 55℃	SCOP	-	3.83
	η_s	%	150
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	9.50
	Power input	kW	2.21
	EER	W/W	4.30
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	8.50
	Power input	kW	2.62
	EER	W/W	3.25
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43
Water piping connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	7.50
	Crankcase Heater	W	27
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	600
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP44
	Type		DC
	Quantity		1
	Insulation Class		E
	Safe Class		I
	Speed	rpm	900
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø604

Outdoor Unit		Unit	AW102HUGHA
Heat Exchanger	Number of Rows		2
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA
Four Way Valve		Brand	SANHUA/DANAN
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	0.90
	CO_2 Eq.	kg	2.70
Sound pressure level*(1)		dB(A)	49
Sound power level*(1)		dB	60
Net dimension	H*W*D	mm	790*1250*380
Packing dimension	H*W*D	mm	1022*1395*550
Net / Gross weight		kg	98/121
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	18.6
Maximum Fuse Amps(MFA)		A	20
Minimum Power Supply Cable		mm²	6

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU162F20/24AHYA
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet (except for DHW)	inch	R 1/R 1
	Inlet/Outlet (DHW)	inch	R 3/4
Expansion Vessel		L	8
Primary Circuit	Pressure Relief Valve	bar	3
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)*(1)		A	15.0
Maximum Fuse Amps(MFA)		A	20
DHW Tank	Tank Volume(20/24)	L	200/240L
	Maximum Water Pressure Limit	bar	7
	Tank Heater	kW	3
	Inner Coil heat exchange area(20/24)	m²	1.8/1.93
Pressure Relief Valve Water Circuit	Water Circuit	bar	Open: 3.5, Close: 2.5 and below
	DHW Tank	bar	Open: 7.5, Close: 6.5 and below
Flow Switch			Electronic Sensor
Backup Electric Heater	Power Supply	Ph/V/Hz	1/220~240/50
	Capacity	kW	2+4
	Steps	-	2
	Minimum Circuit Amps(MCA)	A	27.5
	Maximum Fuse Amps(MFA)	A	40
Water Flow Rate	Standard	m³/h	2.064
	Minimum	m³/h	0.84
Sound Power Level		dB	42
Net Dimension	H*W*D(20/24)	mm	1780*590*590 1985*590*590
Packing Dimension	H*W*D(20/24)	mm	2060*695*695 2265*695*695
Net / Gross Weight(20/24)		kg	115 / 131 120.5 / 139.5

Outdoor Unit		Unit	AW122HVGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	12.00
	Power input	kW	2.35
	COP	W/W	5.10
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	11.50
	Power input	kW	3.48
	COP	W/W	3.30
Space heating Average climate water outlet 35℃	SCOP	~	4.82
	η_s	%	190
	Energy class	-	A+++

Outdoor Unit		Unit	AW122HVGHA
Space heating Average climate water outlet 55℃	SCOP	-	3.85
	η_s	%	151
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	11.50
	Power input	kW	2.56
	EER	W/W	4.50
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	10.00
	Power input	kW	2.99
	EER	W/W	3.35
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43
Water piping connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	10.25
	Crankcase Heater	W	27
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	900
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP55
	Type		DC
	Quantity		1
	Insulation Class		B
	Safe Class		I
	Speed	rpm	700
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø700

Outdoor Unit		Unit	AW122HVGHA
Heat Exchanger	Number of Rows		2
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA
Four Way Valve		Brand	DANAN
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	1.05
	CO_2 Eq.	kg	3.15
Sound pressure level*(1)		dB(A)	52
Sound power level*(1)		dB	63
Net dimension	H*W*D	mm	880*1250*460
Packing dimension	H*W*D	mm	1112*1396*630
Net / Gross weight		kg	114/140
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	30.6
Maximum Fuse Amps(MFA)		A	32
Minimum Power Supply Cable		mm²	10

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU162F20/24AHYA
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet (except for DHW)	inch	R 1/R 1
	Inlet/Outlet (DHW)	inch	R 3/4
Expansion Vessel		L	8
Primary Circuit	Pressure Relief Valve	bar	3
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)*(1)		A	15.0
Maximum Fuse Amps(MFA)		A	20
DHW Tank	Tank Volume(20/24)	L	200/240
	Maximum Water Pressure Limit	bar	7
	Tank Heater	kW	3
	Inner Coil heat exchange area(16/20/24)	m²	1.8/1.93
Pressure Relief Valve Water Circuit	Water Circuit	bar	Open: 3.5, Close: 2.5 and below
	DHW Tank	bar	Open: 7.5, Close: 6.5 and below
Flow Switch			Electronic Sensor
Backup Electric Heater	Power Supply	Ph/V/Hz	1/220~240/50
	Capacity	kW	2+4
	Steps	-	2
	Minimum Circuit Amps(MCA)	A	27.5
	Maximum Fuse Amps(MFA)	A	40
Water Flow Rate	Standard	m³/h	2.064
	Minimum	m³/h	0.840
Sound Power Level		dB	42
Net Dimension	H*W*D(20/24)	mm	1780*590*590 1985*590*590
Packing Dimension	H*W*D(20/24)	mm	2060*695*695 2265*695*695
Net / Gross Weight(20/24)		kg	115 / 131 120.5 / 139.5

Outdoor Unit		Unit	AW142HVGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	14.00
	Power input	kW	2.83
	COP	W/W	4.95
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	13.50
	Power input	kW	4.22
	COP	W/W	3.20
Space heating Average climate water outlet 35℃	SCOP	~	4.80
	η_s	%	189
	Energy class	-	A+++

Outdoor Unit		Unit	AW142HVGHA
Space heating Average climate water outlet 55℃	SCOP	-	3.83
	η_s	%	150
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	13.50
	Power input	kW	3.14
	EER	W/W	4.30
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	12.00
	Power input	kW	3.75
	EER	W/W	3.20
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43
Water piping connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	10.25
	Crankcase Heater	W	28
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	900
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP55
	Type		DC
	Quantity		1
	Insulation Class		B
	Safe Class		I
	Speed	rpm	700
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø700

Outdoor Unit		Unit	AW142HVGHA
Heat Exchanger	Number of Rows		2
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA
Four Way Valve		Brand	DANAN
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	1.05
	CO_2 Eq.	kg	3.15
Sound pressure level*(1)		dB(A)	53
Sound power level*(1)		dB	64
Net dimension	H*W*D	mm	880*1250*460
Packing dimension	H*W*D	mm	1112*1396*630
Net / Gross weight		kg	114/140
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	30.6
Maximum Fuse Amps(MFA)		A	32
Minimum Power Supply Cable		mm²	10

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU162F20/24AHYA
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet (except for DHW)	inch	R 1/R 1
	Inlet/Outlet (DHW)	inch	R 3/4
Expansion Vessel		L	8
Primary Circuit	Pressure Relief Valve	bar	3
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)*(1)		A	15.0
Maximum Fuse Amps(MFA)		A	20
DHW Tank	Tank Volume(20/24)	L	200/240L
	Maximum Water Pressure Limit	bar	7
	Tank Heater	kW	3
	Inner Coil heat exchange area(20/24)	m^2	1.8/1.93
Pressure Relief Valve Water Circuit	Water Circuit	bar	Open: 3.5, Close: 2.5 and below
	DHW Tank	bar	Open: 7.5, Close: 6.5 and below
Flow Switch			Electronic Sensor
Backup Electric Heater	Power Supply	Ph/V/Hz	1/220~240/50
	Capacity	kW	2+4
	Steps	-	2
	Minimum Circuit Amps(MCA)	A	27.5
	Maximum Fuse Amps(MFA)	A	40
Water Flow Rate	Standard	m^3/h	2.064
	Minimum	m^3/h	0.84
Sound Power Level		dB	42
Net Dimension	H*W*D(20/24)	mm	1780*590*590 1985*590*590
Packing Dimension	H*W*D(20/24)	mm	2060*695*695 2265*695*695
Net / Gross Weight(20/24)		kg	115 / 131 120.5 / 139.5

Outdoor Unit		Unit	AW162HVGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	16.00
	Power input	kW	3.23
	COP	W/W	4.95
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	15.50
	Power input	kW	5.08
	COP	W/W	3.05
Space heating Average climate water outlet 35℃	SCOP	~	4.80
	η_s	%	189
	Energy class	-	A+++

Outdoor Unit		Unit	AW162HVGHA
Space heating Average climate water outlet 55℃	SCOP	-	3.85
	η_s	%	151
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	15.50
	Power input	kW	3.88
	EER	W/W	4.00
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	14.00
	Power input	kW	4.52
	EER	W/W	3.10
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43
Water piping connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	12.50
	Crankcase Heater	W	28
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	900
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP55
	Type		DC
	Quantity		1
	Insulation Class		B
	Safe Class		I
	Speed	rpm	700
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø700

Outdoor Unit		Unit	AW162HVGHA
Heat Exchanger	Number of Rows		3
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA
Four Way Valve		Brand	DANAN
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	1.25
	CO_2 Eq.	kg	3.75
Sound pressure level*(1)		dB(A)	55
Sound power level*(1)		dB	66
Net dimension	H*W*D	mm	880*1250*460
Packing dimension	H*W*D	mm	1112*1396*630
Net / Gross weight		kg	123/149
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)		A	34.8
Maximum Fuse Amps(MFA)		A	40
Minimum Power Supply Cable		mm²	10

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU162F20/24AHYA
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet (except for DHW)	inch	R 1/R 1
	Inlet/Outlet (DHW)	inch	R 3/4
Expansion Vessel		L	8
Primary Circuit	Pressure Relief Valve	bar	3
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)*(1)		A	14.1
Maximum Fuse Amps(MFA)		A	20
DHW Tank	Tank Volume(20/24)	L	200/240
	Maximum Water Pressure Limit	bar	7
	Tank Heater	kW	3
	Inner Coil heat exchange area(16/20/24)	m^2	1.8/1.93
Pressure Relief Valve Water Circuit	Water Circuit	bar	Open: 3.5, Close: 2.5 and below
	DHW Tank	kPa	Open: 7.5, Close: 6.5 and below
Flow Switch			Electronic Sensor
Backup Electric Heater	Power Supply	Ph/V/Hz	3/380~415/50
	Capacity	kW	1+2
	Steps	-	2
	Minimum Circuit Amps(MCA)	A	5.0
	Maximum Fuse Amps(MFA)	A	10
Water Flow Rate	Standard	m^3/h	1.722
	Minimum	m^3/h	0.660
Sound Power Level		dB	40
Net Dimension(20/24)	H*W*D	mm	1780*590*590 1985*590*590
Packing Dimension(20/24)	H*W*D	mm	2060*695*695 2265*695*695
Net / Gross Weight(20/24)		kg	115.5 / 131.5 121 /140

Outdoor Unit		Unit	AW10NHUGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	10.00
	Power input	kW	1.96
	COP	W/W	5.10
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	10.00
	Power input	kW	3.13
	COP	W/W	3.20
Space heating Average climate water outlet 35℃	SCOP	~	5.10
	η_s	%	201
	Energy class	-	A+++

Outdoor Unit		Unit	AW10NHUGHA
Space heating Average climate water outlet 55℃	SCOP	-	3.83
	η_s	%	150
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	9.50
	Power input	kW	2.21
	EER	W/W	4.30
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	8.50
	Power input	kW	2.62
	EER	W/W	3.25
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43
Water piping connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	7.50
	Crankcase Heater	W	27
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	600
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP44
	Type		DC
	Quantity		1
	Insulation Class		E
	Safe Class		I
	Speed	rpm	900
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø604

Outdoor Unit		Unit	AW10NHUGHA
Heat Exchanger	Number of Rows		2
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA
Four Way Valve		Brand	DANAN
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	0.90
	CO_2 Eq.	kg	2.70
Sound pressure level*(1)		dB(A)	49
Sound power level*(1)		dB	60
Net dimension	H*W*D	mm	790*1250*380
Packing dimension	H*W*D	mm	1022*1395*550
Net / Gross weight		kg	113/136
Power Supply		Ph/V/Hz	3/380~415/50
Minimum Circuit Amps(MCA)		A	6.2
Maximum Fuse Amps(MFA)		A	16
Minimum Power Supply Cable		mm²	4

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU162F20/24AHYAE3
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet (except for DHW)	inch	R 1/R 1
	Inlet/Outlet (DHW)	inch	R 3/4
Expansion Vessel		L	8
Primary Circuit	Pressure Relief Valve	bar	3
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)*(1)		A	15.0
Maximum Fuse Amps(MFA)		A	20
DHW Tank	Tank Volume	L	200/240
	Maximum Water Pressure Limit	bar	7
	Tank Heater	kW	3
	Inner Coil heat exchange area(20/24)	m²	1.8/1.93
Pressure Relief Valve Water Circuit	Water Circuit	kPa	Open: 3.5, Close: 2.5 and below
	DHW Tank	kPa	Open: 7.5, Close: 6.5 and below
Flow Switch			Electronic Sensor
Backup Electric Heater	Power Supply	Ph/V/Hz	3/380~415/50
	Capacity	kW	2+4
	Steps	-	2
	Minimum Circuit Amps(MCA)	A	9.5
	Maximum Fuse Amps(MFA)	A	16
Water Flow Rate	Standard	m³/h	2.064
	Minimum	m³/h	0.840
Sound Power Level		dB	42
Net Dimension(20/24)	H*W*D	mm	1780*590*590 1985*590*590
Packing Dimension(20/24)	H*W*D	mm	2060*695*695 2265*695*695
Net / Gross Weight(20/24)		kg	117 / 133 122.5 /141.5

Outdoor Unit		Unit	AW12NHVGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	12.00
	Power input	kW	2.35
	COP	W/W	5.10
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	11.50
	Power input	kW	3.48
	COP	W/W	3.30
Space heating Average climate water outlet 35℃	SCOP	~	4.82
	η_s	%	190
	Energy class	-	A+++

Outdoor Unit		Unit	AW12NHVGHA
Space heating Average climate water outlet 55℃	SCOP	-	3.85
	η_s	%	151
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	11.50
	Power input	kW	2.56
	EER	W/W	4.50
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	10.00
	Power input	kW	2.99
	EER	W/W	3.35
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43
Water piping connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	10.25
	Crankcase Heater	W	27
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	900
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP55
	Type		DC
	Quantity		1
	Insulation Class		B
	Safe Class		I
	Speed	rpm	700
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø700

Outdoor Unit		Unit	AW12NHVGHA
Heat Exchanger	Number of Rows		2
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA
Four Way Valve		Brand	DANAN
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	1.05
	CO_2 Eq.	kg	3.15
Sound pressure level*(1)		dB(A)	52
Sound power level*(1)		dB	63
Net dimension	H*W*D	mm	880*1250*460
Packing dimension	H*W*D	mm	1112*1396*630
Net / Gross weight		kg	129/155
Power Supply		Ph/V/Hz	3/380~415/50
Minimum Circuit Amps(MCA)		A	10.2
Maximum Fuse Amps(MFA)		A	16
Minimum Power Supply Cable		mm²	4

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU162F20/24AHYAE3
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet (except for DHW)	inch	R 1/R 1
	Inlet/Outlet (DHW)	inch	R 3/4
Expansion Vessel		L	8
Primary Circuit	Pressure Relief Valve	bar	3
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)*(1)		A	15.0
Maximum Fuse Amps(MFA)		A	20
DHW Tank	Tank Volume(20/24)	L	200/240
	Maximum Water Pressure Limit	bar	7
	Tank Heater	kW	3
	Inner Coil heat exchange area(20/24)	m²	1.8/1.93
Pressure Relief Valve Water Circuit	Water Circuit	bar	Open: 3.5, Close: 2.5 and below
	can we switch heat/DHW outlet?	bar	Open: 7.5, Close: 6.5 and below
Flow Switch			Electronic Sensor
Backup Electric Heater	Power Supply	Ph/V/Hz	3/380~415/50
	Capacity	kW	2+4
	Steps	-	2
	Minimum Circuit Amps(MCA)	A	9.5
	Maximum Fuse Amps(MFA)	A	16
Water Flow Rate	Standard	m³/h	2.064
	Minimum	m³/h	0.840
Sound Power Level		dB	42
Net Dimension(20/24)	H*W*D	mm	1780*590*590 1985*590*590
Packing Dimension(20/24)	H*W*D	mm	2060*695*695 2265*695*695
Net / Gross Weight(20/24)		kg	117 / 133 122.5 /141.5
Outdoor Unit		**Unit**	**AW14NHVGHA**
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	14.00
	Power input	kW	2.83
	COP	W/W	4.95
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	13.50
	Power input	kW	4.22
	COP	W/W	3.20
Space heating Average climate water outlet 35℃	SCOP	~	4.80
	η_s	%	189
	Energy class	-	A+++

Outdoor Unit		Unit	AW14NHVGHA
Space heating Average climate water outlet 55℃	SCOP	-	3.83
	η_s	%	150
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	13.50
	Power input	kW	3.14
	EER	W/W	4.30
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	12.00
	Power input	kW	3.75
	EER	W/W	3.20
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43
Water piping connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	10.25
	Crankcase Heater	W	28
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	900
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP55
	Type		DC
	Quantity		1
	Insulation Class		B
	Safe Class		I
	Speed	rpm	700
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø700

Outdoor Unit		Unit	AW14NHVGHA
Heat Exchanger	Number of Rows		2
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA
Four Way Valve		Brand	DANAN
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	1.05
	CO_2 Eq.	kg	3.15
Sound pressure level*(1)		dB(A)	53
Sound power level*(1)		dB	64
Net dimension	H*W*D	mm	880*1250*460
Packing dimension	H*W*D	mm	1112*1396*630
Net / Gross weight		kg	129/155
Power Supply		Ph/V/Hz	3/380~415/50
Minimum Circuit Amps(MCA)		A	10.2
Maximum Fuse Amps(MFA)		A	16
Minimum Power Supply Cable		mm²	4

* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

Indoor Unit		Unit	HU162F20/24AHYAE3
Leaving Water Temperature Range	Heating	℃	20~80
	Cooling	℃	5~25
Storage Temperature Range(Tank)	DHW	℃	25~75
Water Piping Connection	Inlet/Outlet (except for DHW)	inch	R 1/R 1
	Inlet/Outlet (DHW)	inch	R 3/4
Expansion Vessel		L	8
Primary Circuit	Pressure Relief Valve	bar	3
Power Supply		Ph/V/Hz	1/220~240/50
Minimum Circuit Amps(MCA)*(1)		A	15.0
Maximum Fuse Amps(MFA)		A	20
DHW Tank	Tank Volume(20/24)	L	200/240
	Maximum Water Pressure Limit	bar	7
	Tank Heater	kW	3
	Inner Coil heat exchange area	m^2	1.8/1.93
Pressure Relief Valve Water Circuit	Water Circuit	bar	Open: 3.5, Close: 2.5 and below
	DHW Tank	bar	Open: 7.5, Close: 6.5 and below
Flow Switch			Electronic Sensor
Backup Electric Heater	Power Supply	Ph/V/Hz	3/380~415/50
	Capacity	kW	2+4
	Steps	-	2
	Minimum Circuit Amps(MCA)	A	9.5
	Maximum Fuse Amps(MFA)	A	16
Water Flow Rate	Standard	m^3/h	2.064
	Minimum	m^3/h	0.840
Sound Power Level		dB	42
Net Dimension(20/24)	H*W*D	mm	1780*590*590 1985*590*590
Packing Dimension(20/24)	H*W*D	mm	2060*695*695 2265*695*695
Net / Gross Weight(20/24)		kg	117 / 133 122.5 /141.5

Outdoor Unit		Unit	AW16NHVGHA
Heating (LWT 35℃ / OAT 7℃)	Capacity	kW	16.00
	Power input	kW	3.23
	COP	W/W	4.95
Heating (LWT 55℃ / OAT 7℃)	Capacity	kW	15.50
	Power input	kW	5.08
	COP	W/W	3.05
Space heating Average climate water outlet 35℃	SCOP	~	4.80
	η_s	%	189
	Energy class	-	A+++

Outdoor Unit		Unit	AW16NHVGHA
Space heating Average climate water outlet 55℃	SCOP	-	3.85
	η_s	%	151
	Energy class	-	A+++
Cooling (LWT 18℃ / OAT 35℃)	Capacity	kW	15.50
	Power input	kW	3.88
	EER	W/W	4.00
Cooling (LWT 7℃ / OAT 35℃)	Capacity	kW	14.00
	Power input	kW	4.52
	EER	W/W	3.10
Outdoor operating temperature range	Heating	℃	-25 ~35
	Cooling	℃	10 ~ 48
	DHW	℃	-25 ~43
Water piping connection	Inlet/Outlet	inch	R 1/R 1
Safety Devices			High pressure switch, Fan driver overload protector, Overcurrent fuse, Inverter overload protector, Refrigerant separator
Defrost Method			4WV reverse defrosting
Casing	Color		Slate Grey
	Material		Galvanized steel
Compressor	Brand		MITSUBISHI ELECTRIC
	Type		DC Inverter Twin Rotary
	Compressor Quantity		1
	Rated Load Amps. (RLA)	A	12.50
	Crankcase Heater	W	28
		Quantity	1
	Compressor Oil Brand		IDEMITSUKOSAN CO.,LTD
	Compressor Oil Type		PZ46M
	Compressor Oil Charge(Compressor + Gas-liquid Separator)	ml	900
Fan Motor	Brand		BROAD-OCEAN
	IP Class		IP55
	Type		DC
	Quantity		1
	Insulation Class		B
	Safe Class		I
	Speed	rpm	700
Fan	Brand		Shun wei
	Type		Axial
	Diameter	mm	Ø700

Outdoor Unit		Unit	AW16NHVGHA
Heat Exchanger	Number of Rows		3
	Tube Pitch	mm	21
	Row Pitch	mm	18.186
	Fin Spacing	mm	1.45
	Fin Type		Hydrophilic aluminum
	Fin Coating Type	Optional	Clear lacquer
	Salt Spray Test Duration	hour	168
	Tube(ID)	mm	φ7
	Tube Type		INNERGROOVE TUBE
Plate Heat Exchanger	Brand		Weyee
Electronic Expansion Valve	LEVa	Brand	SANHUA
Four Way Valve		Brand	DANAN
		Quantity	1
Pressure Sensor of Discharge	Brand		Sensata/SANHUA
Pressure Sensor of Suction	Brand		Sensata/SANHUA
Temp. Sensor	Temperature Sensor Type		Discharge
	Value of Resistance @20℃/Ω		50K
	Temperature Sensor Type		Suction/Outdoor Ambient/Defrost/ Liquid pipe/Gas pipe/Inlet water/ Outlet water
	Value of Resistance @20℃/Ω		10K
Cabinet Coating	Coating Type		Powder Coating
	Salt Spray Test Duration	hour	72
	Sheet Metal Material		Hot zinc plate
	Sheet Metal Thickness	mm	1
Electrical Control Box IP Class		Standard	IP24
Refrigerant	Type	-	R290
	Charge	kg	1.25
	CO_2 Eq.	kg	3.75
Sound pressure level*(1)		dB(A)	55
Sound power level*(1)		dB	66
Net dimension	H*W*D	mm	880*1250*460
Packing dimension	H*W*D	mm	1112*1396*630
Net / Gross weight		kg	138/164
Power Supply		Ph/V/Hz	3/380~415/50
Minimum Circuit Amps(MCA)		A	11.6
Maximum Fuse Amps(MFA)		A	16
Minimum Power Supply Cable		mm²	4

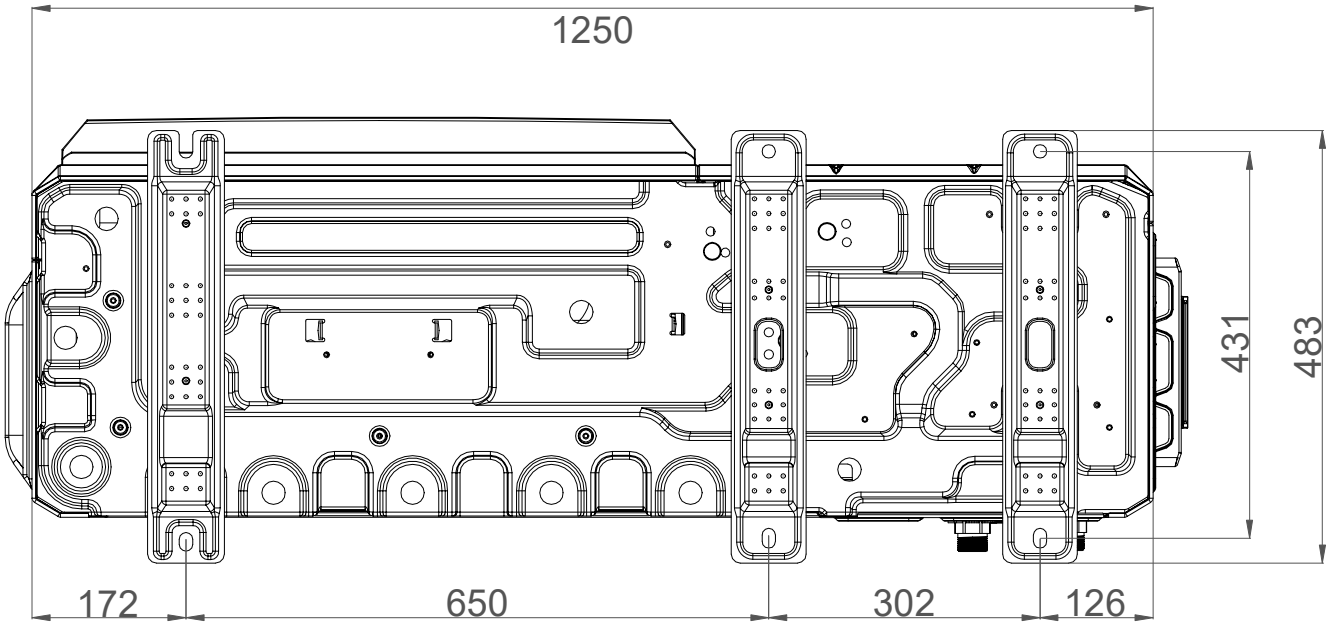
* (1)The testing conditions refer to EN14511-2018 and the testing method refers to EN12102-2017（A7/W35)
* HU1*2WAHYA** stands for the unit without 3-way valve,with expansion tank;
* HU1*2WAHYB** stands for the unit with 3-way valve,without expansion tank.

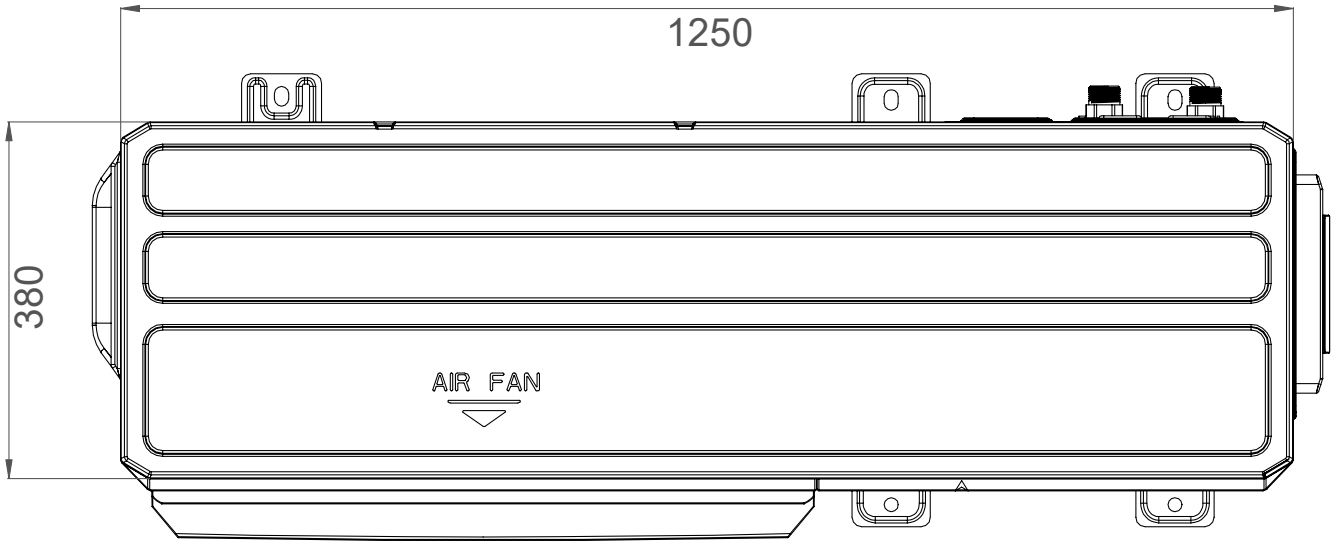
5. Dimensions

5.1 Outdoor Units

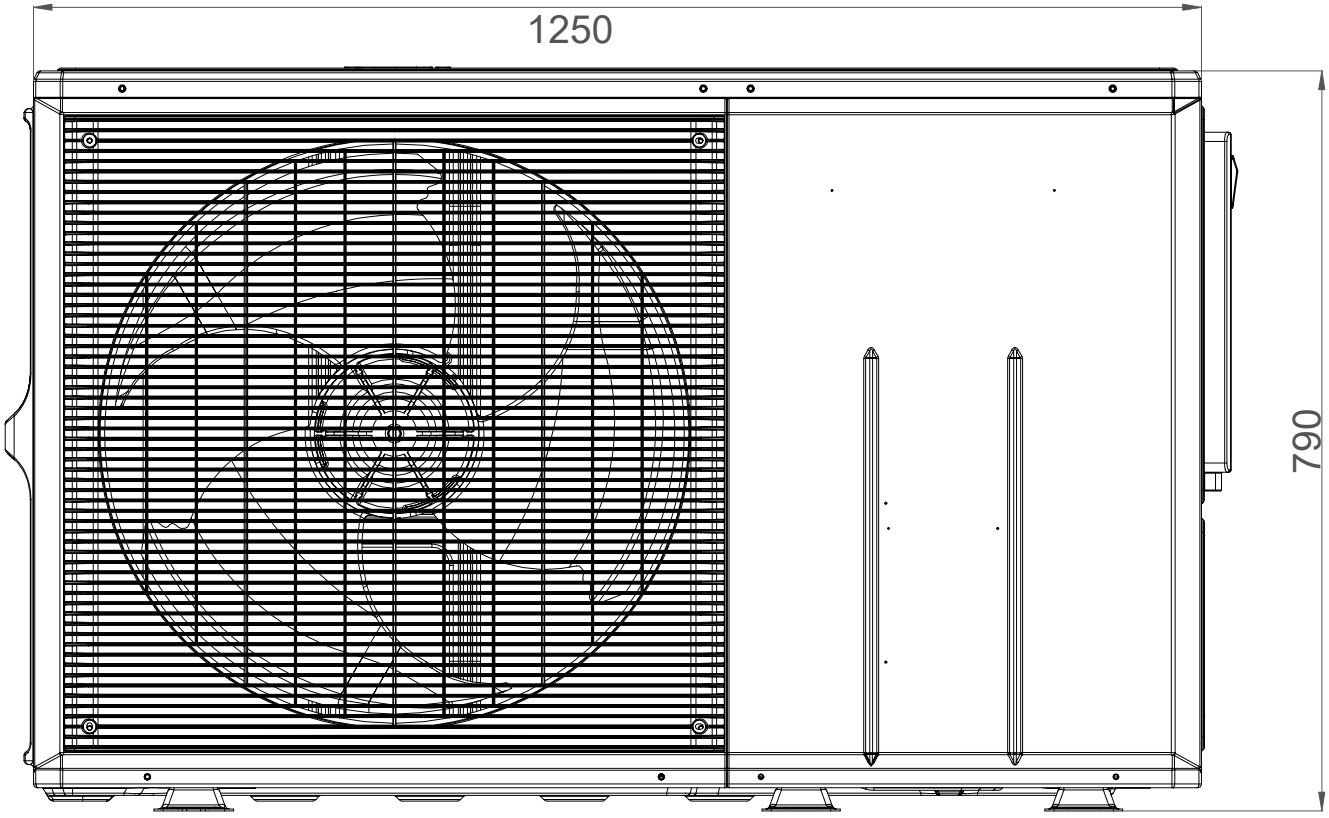
AW042HUGHA AW062HUGHA AW082HUGHA
AW102HUGHA AW10NHUGHA

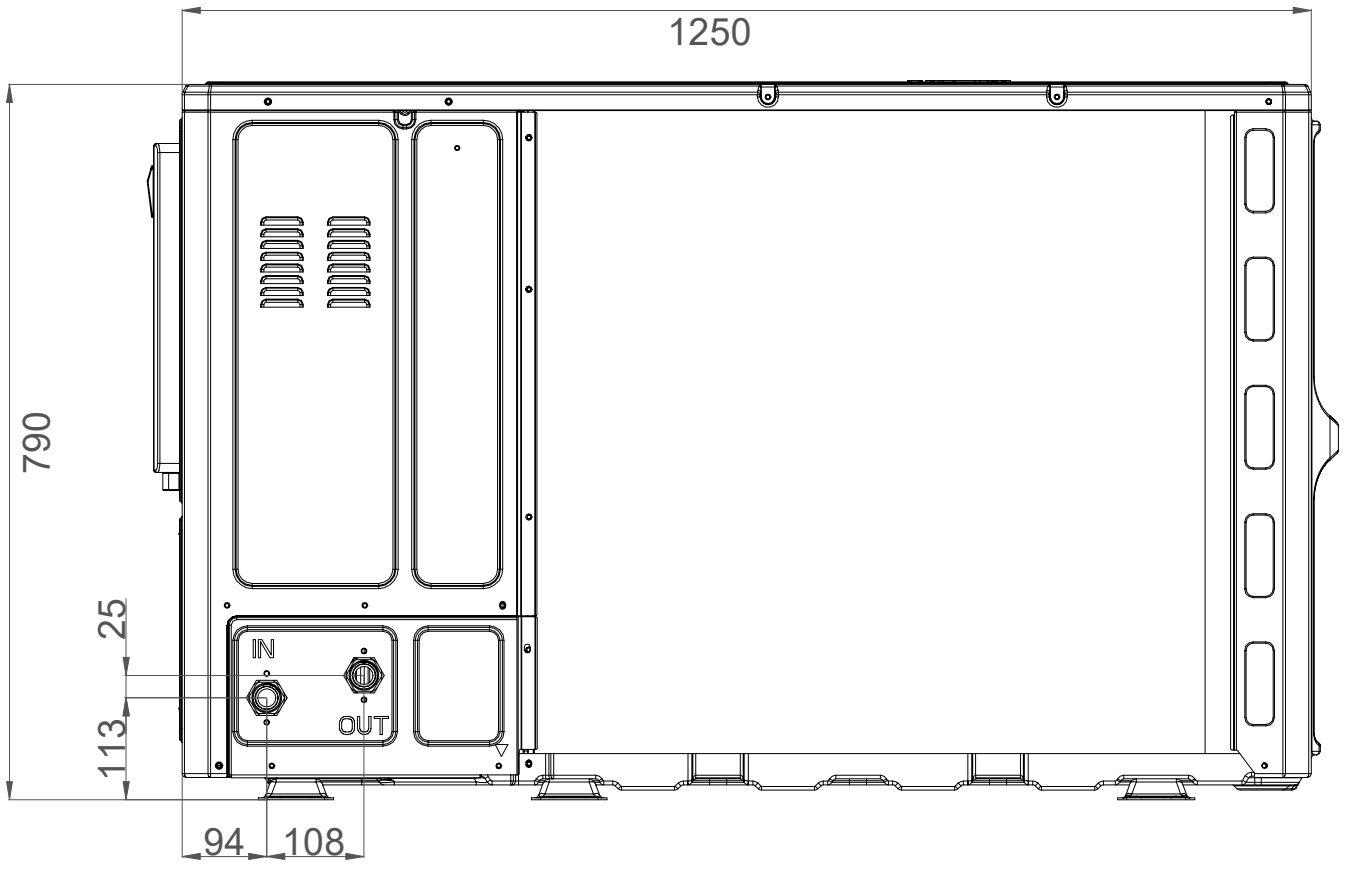
Unit: mm



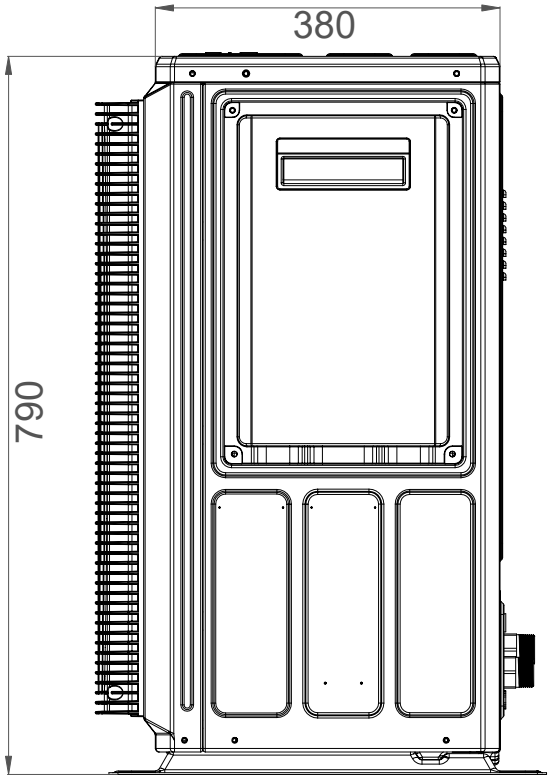


Unit: mm



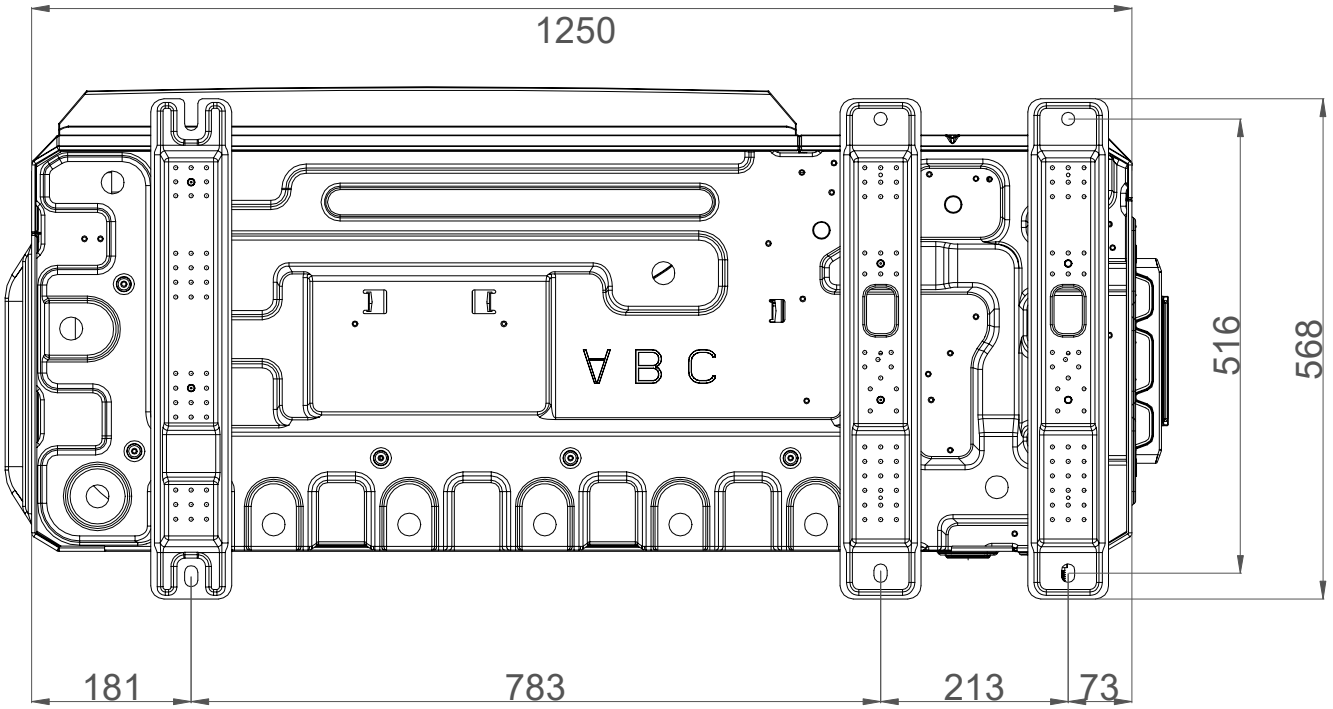


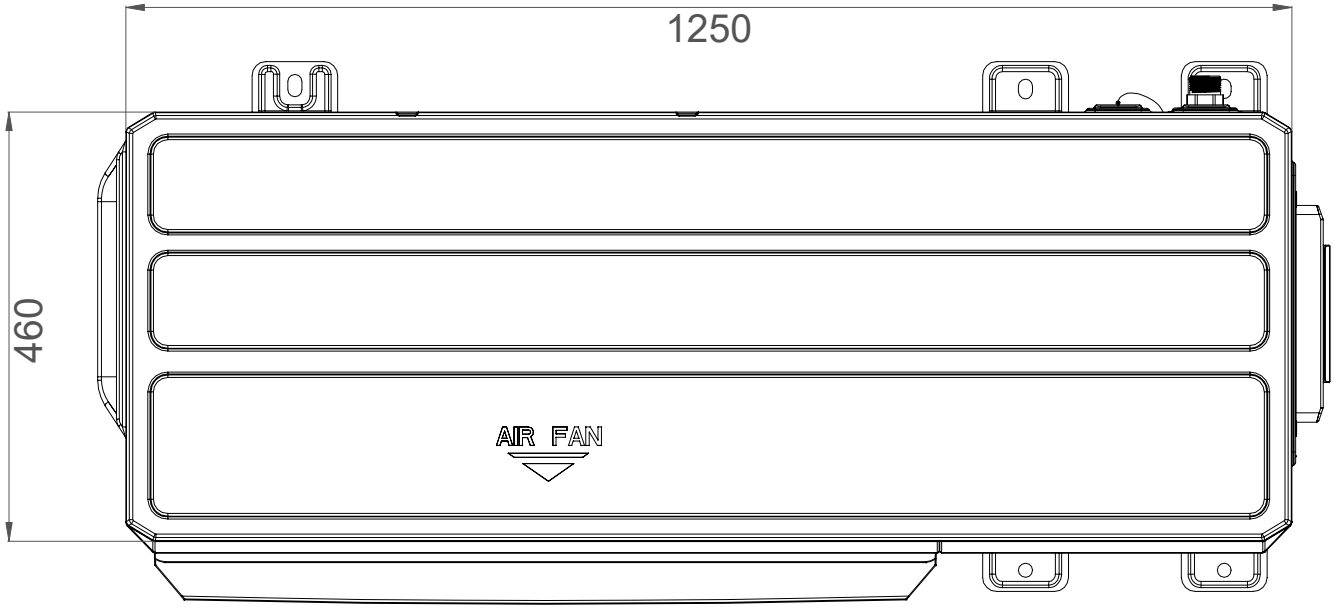
Unit: mm



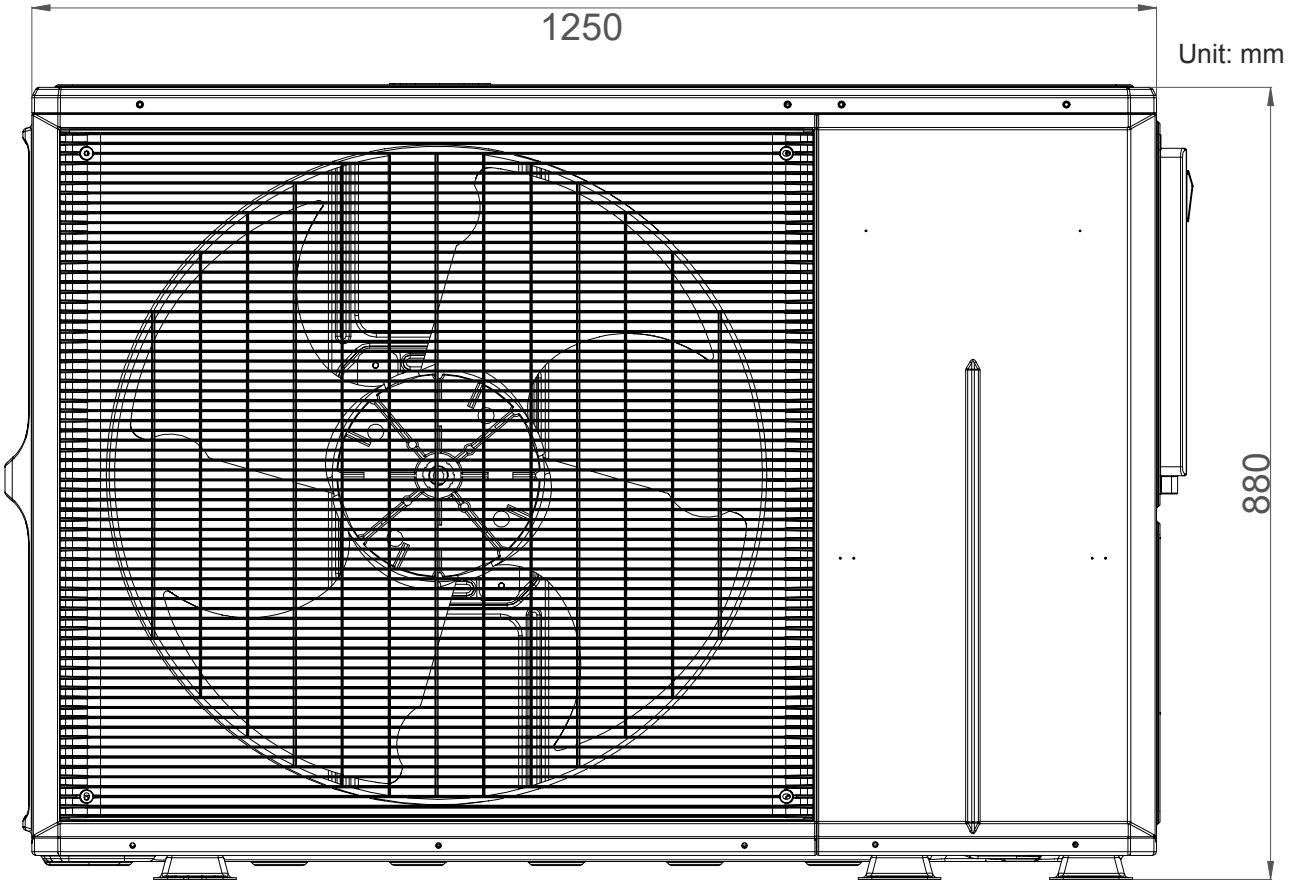
AW122HVGHA AW142HVGHA AW162HVGHA
AW12NHVGHA AW14NHVGHA AW16NHVGHA

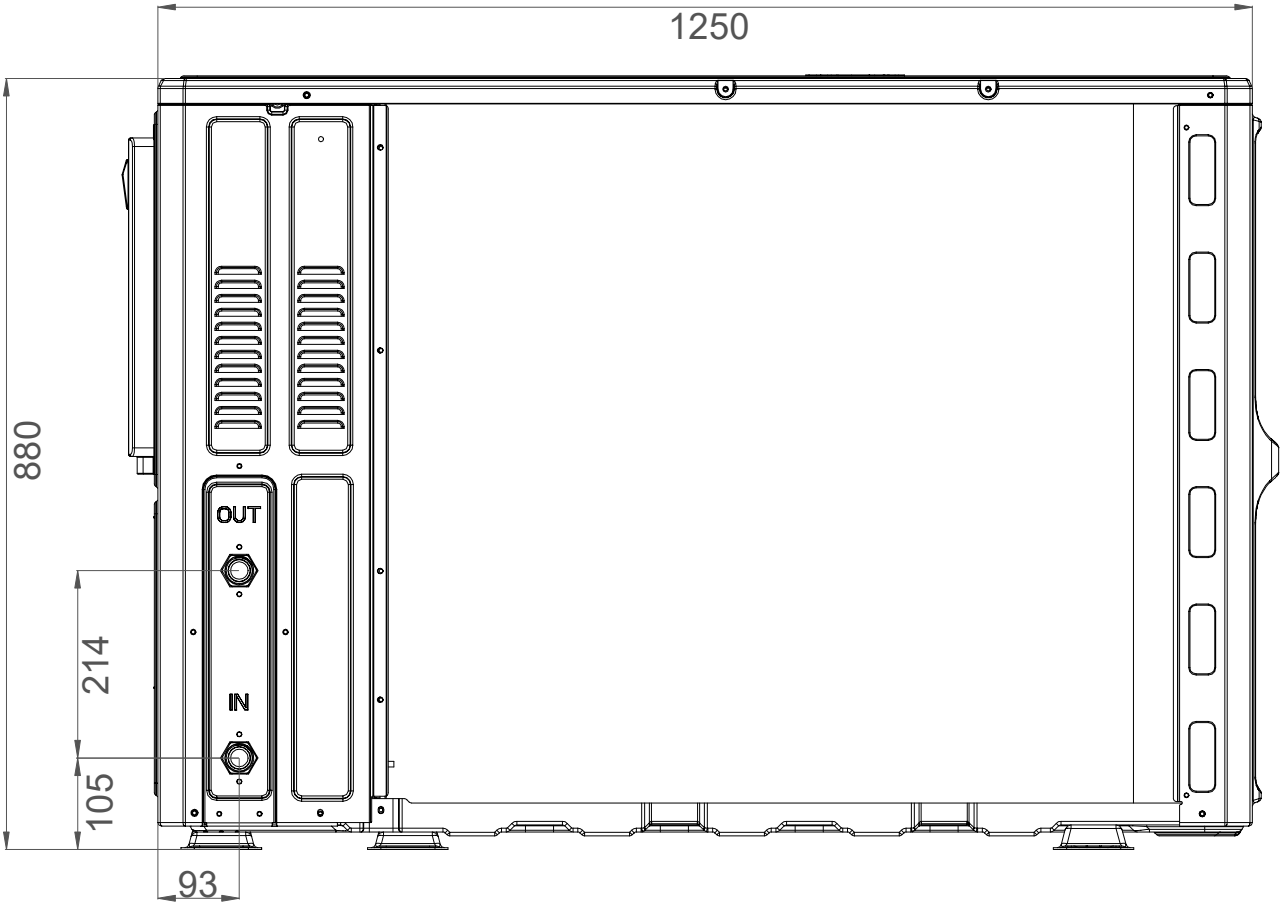
Unit: mm





Unit: mm

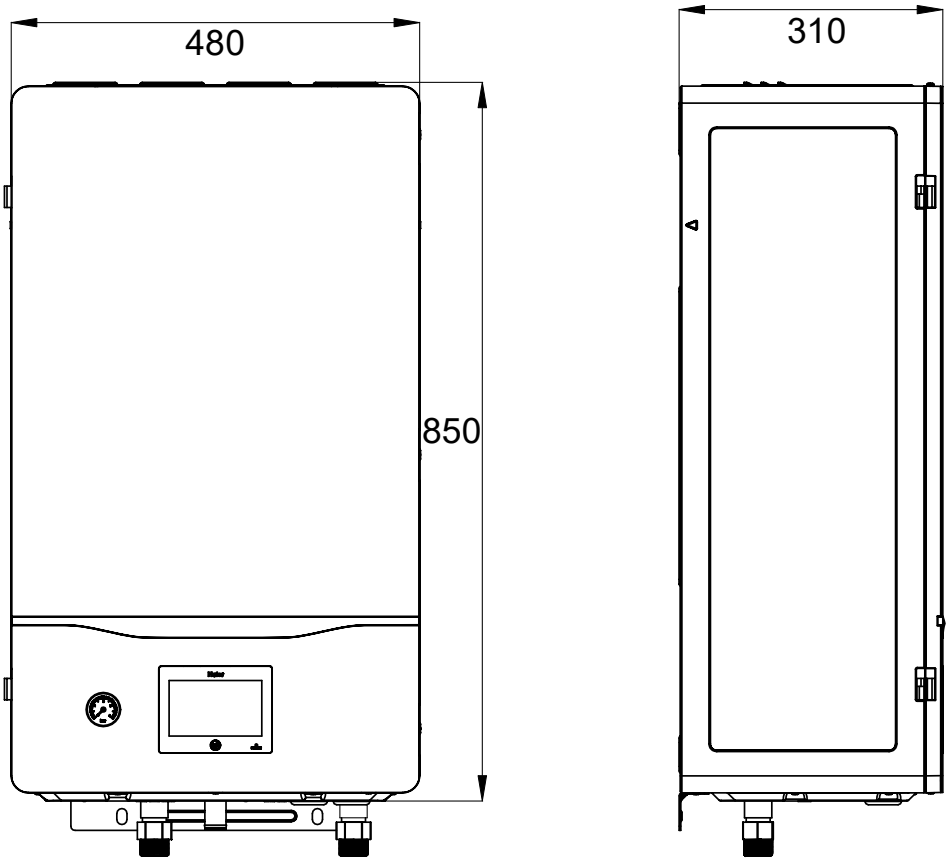


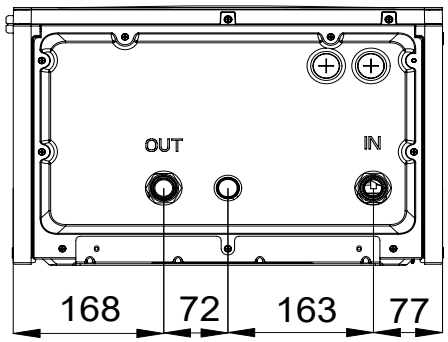


5.2 Indoor Units - Hydro Split

HU102WAHYA HU162WAHYA HU102WAHYAE3 HU162WAHYAE3

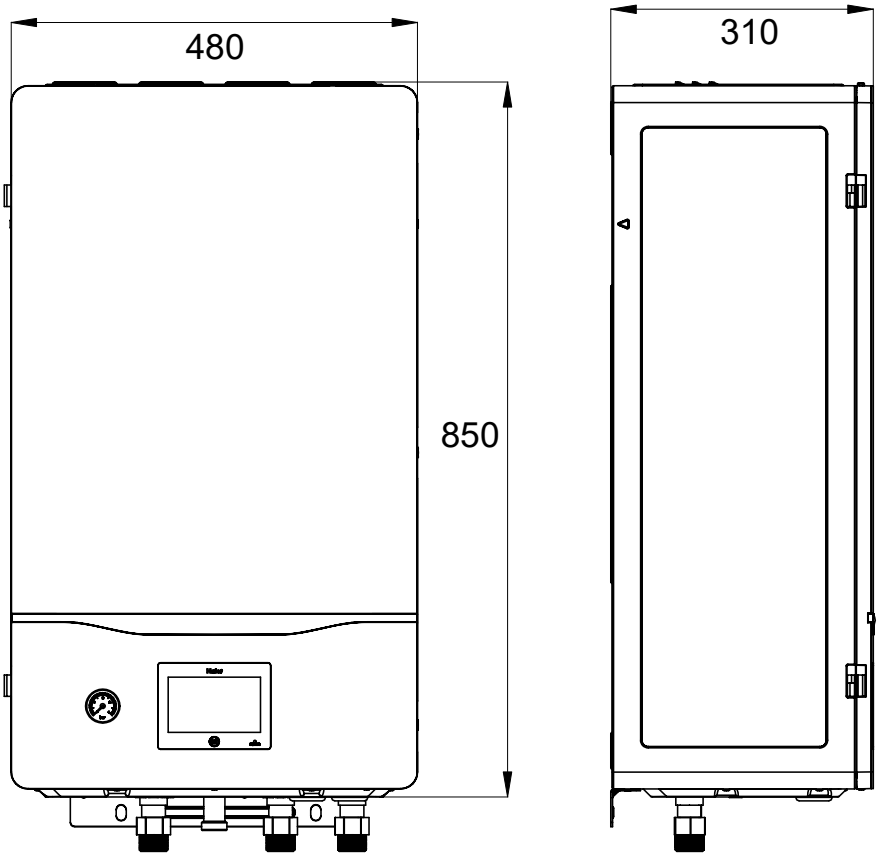
Unit: mm

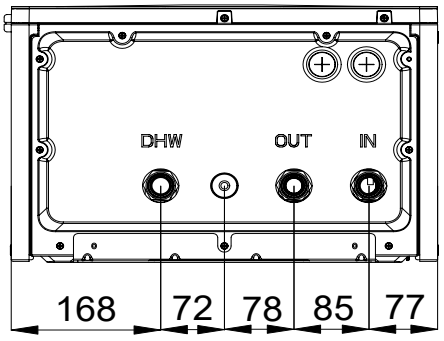




HU102WAHYB HU162WAHYB HU162WAHYBE3

Unit: mm

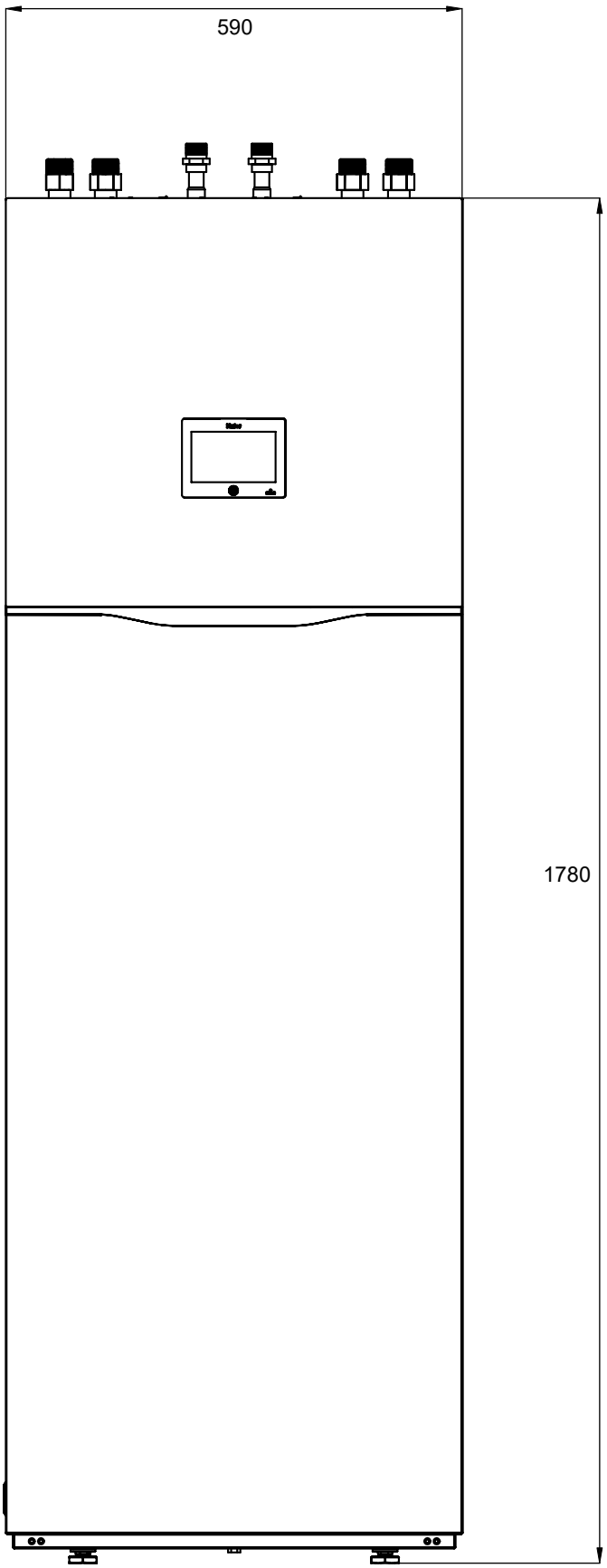




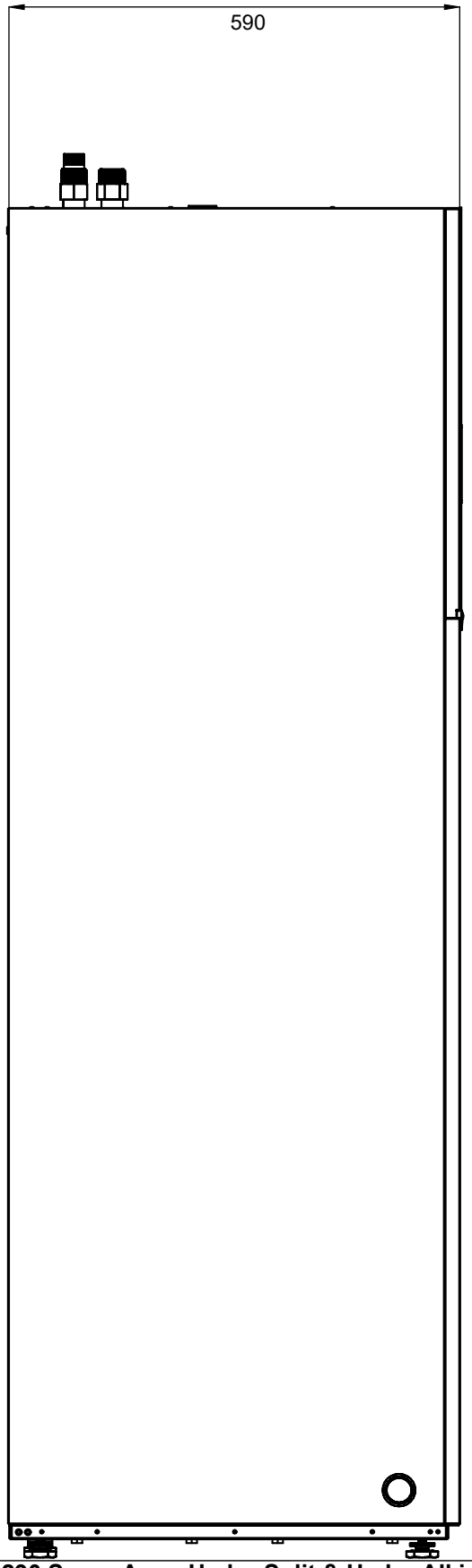
5.3 Indoor Units - Hydro All in One

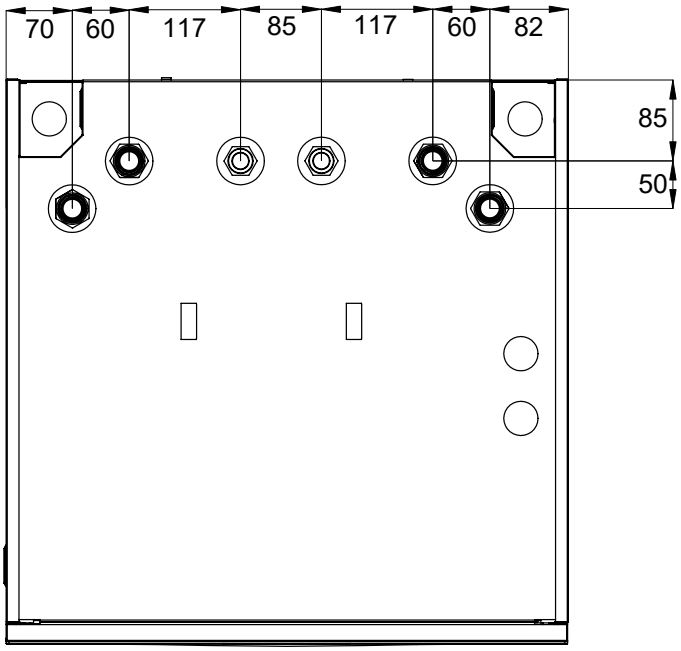
HU102F20AHYA HU162F20AHYA HU102F20AHYAE3 HU162F20AHYAE3

Unit: mm



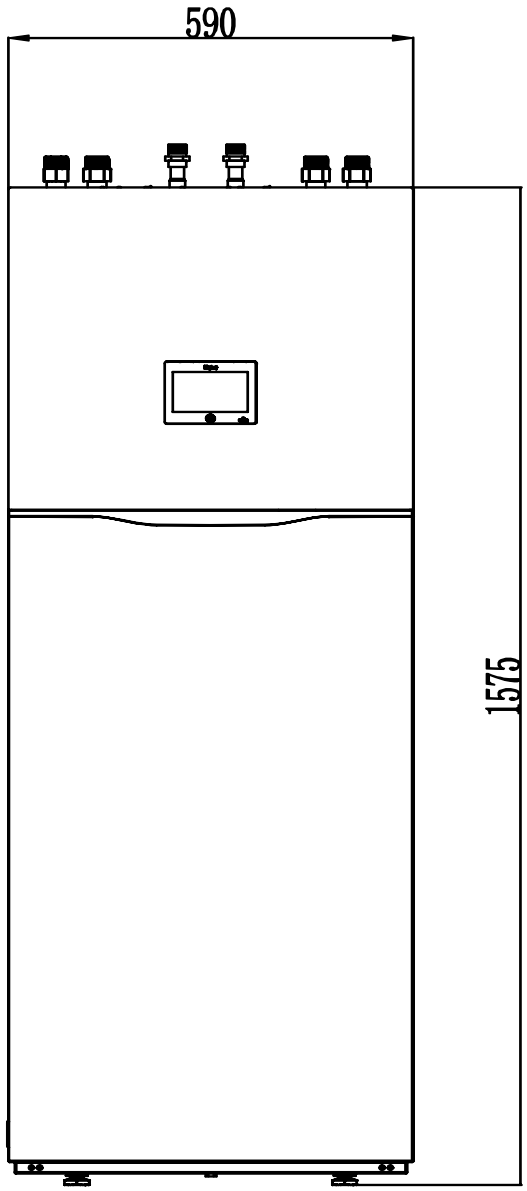
Unit: mm



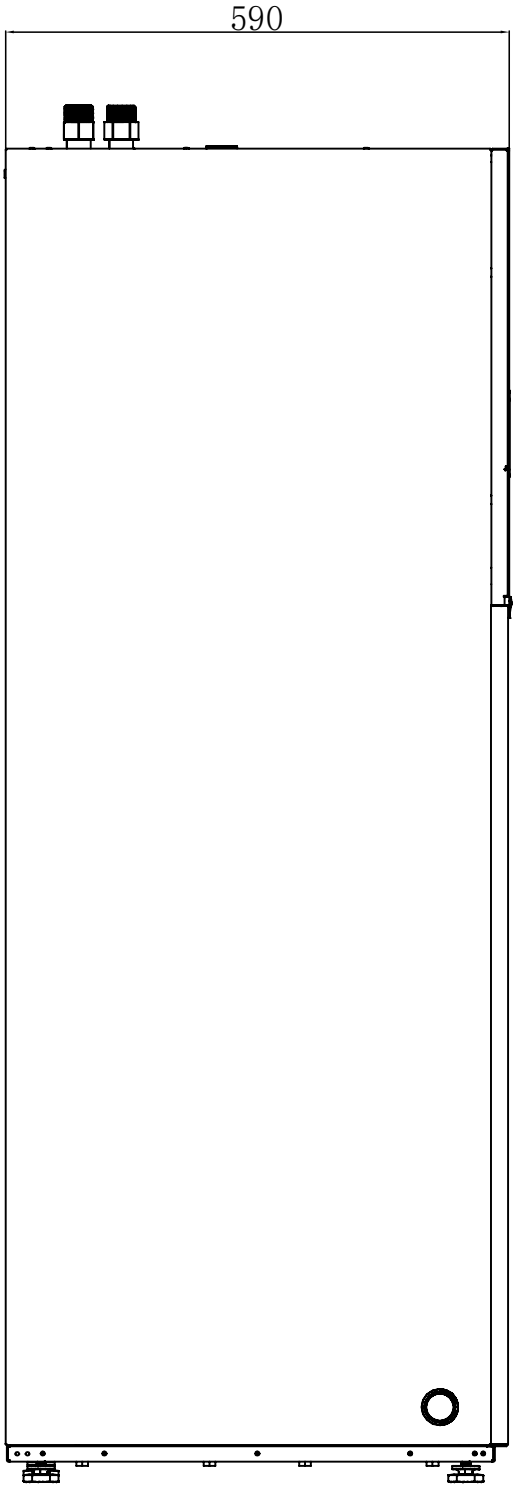


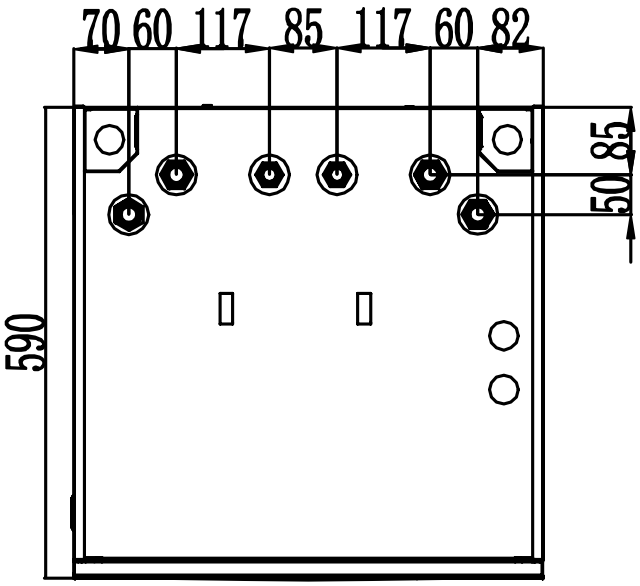
HU102F16AHYA HU102F16AHYAE3

Unit: mm



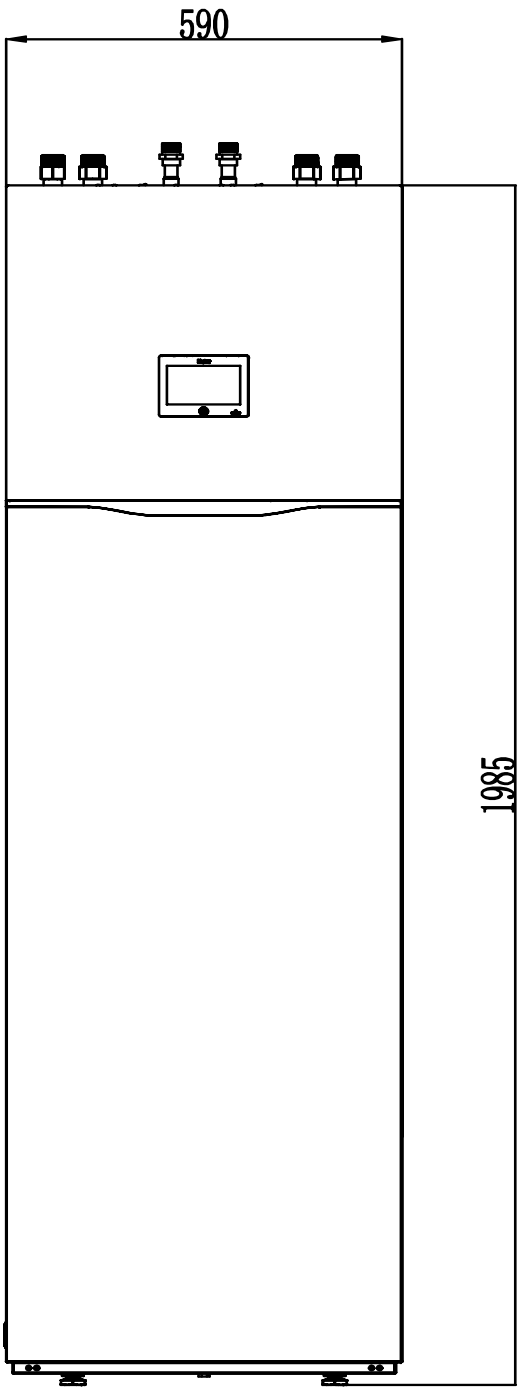
Unit: mm



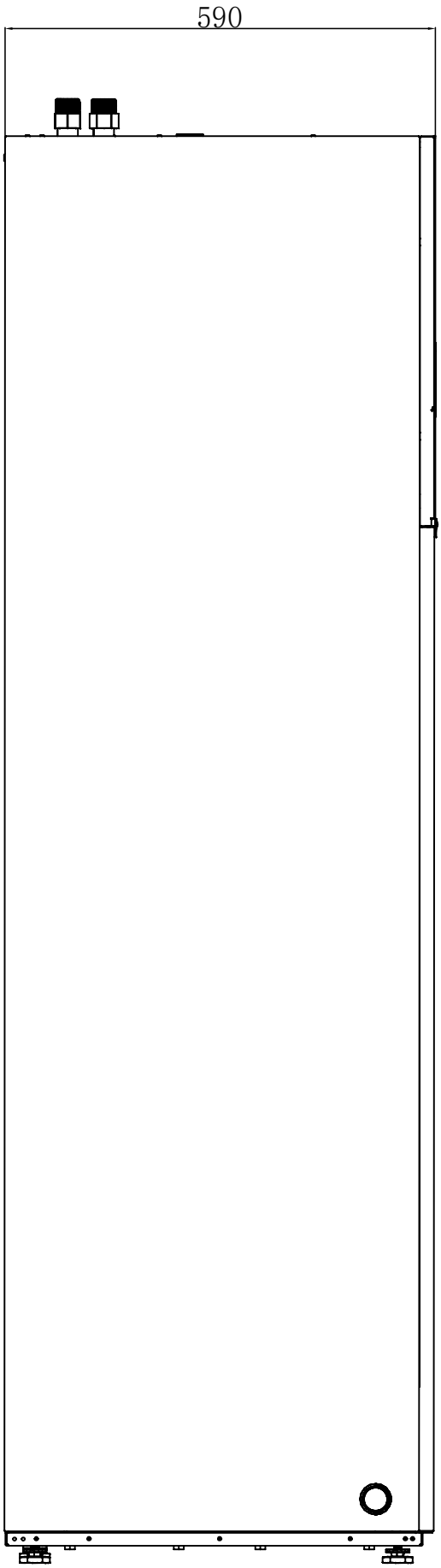


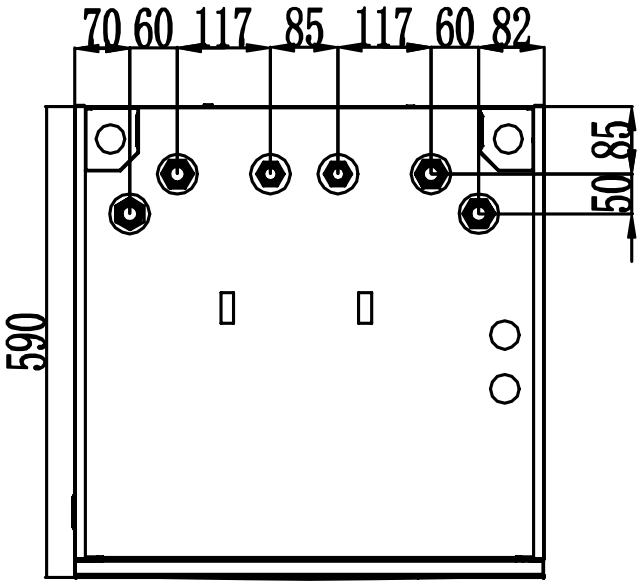
HU102F24AHYA HU162F24AHYA HU102F24AHYAE3 HU162F24AHYAE3

Unit: mm



Unit: mm



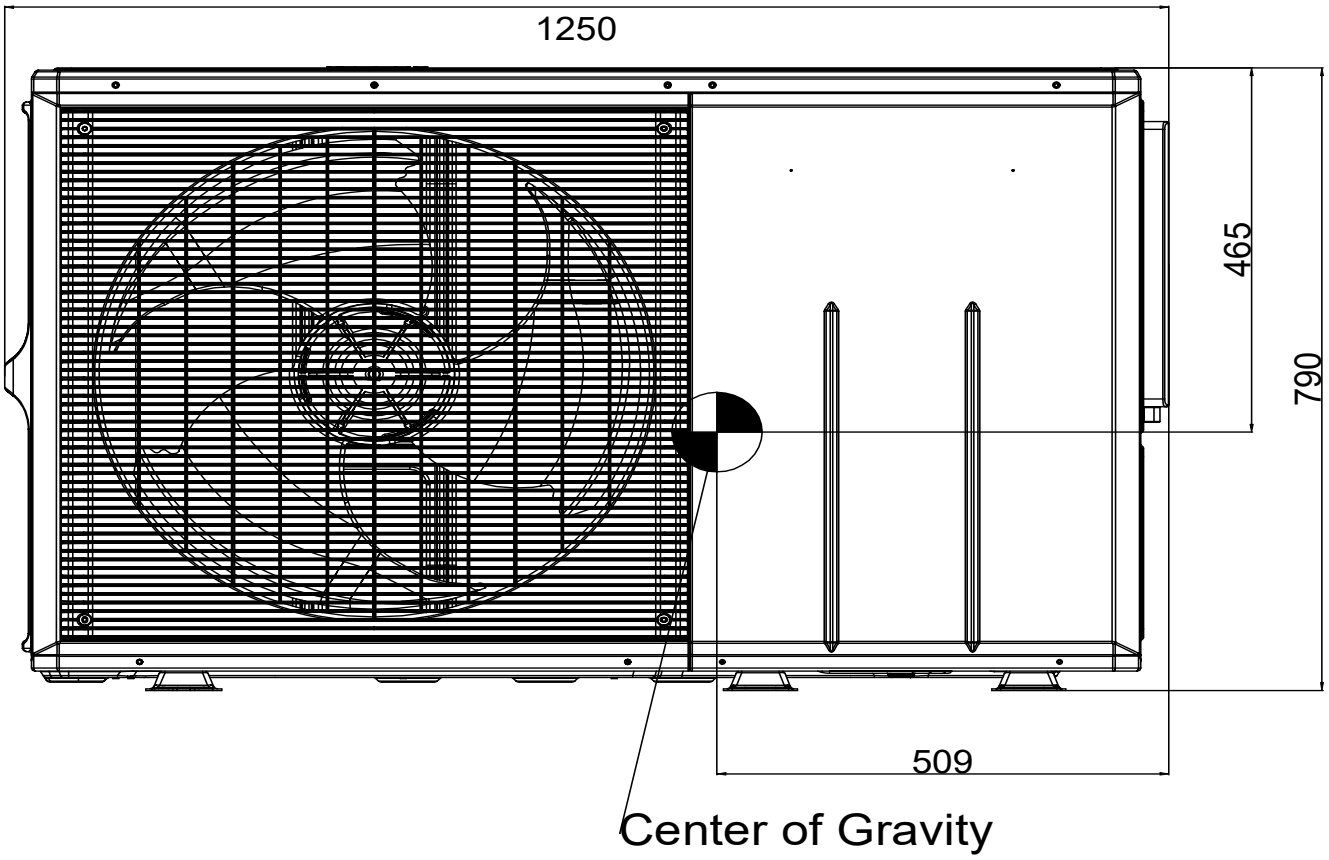


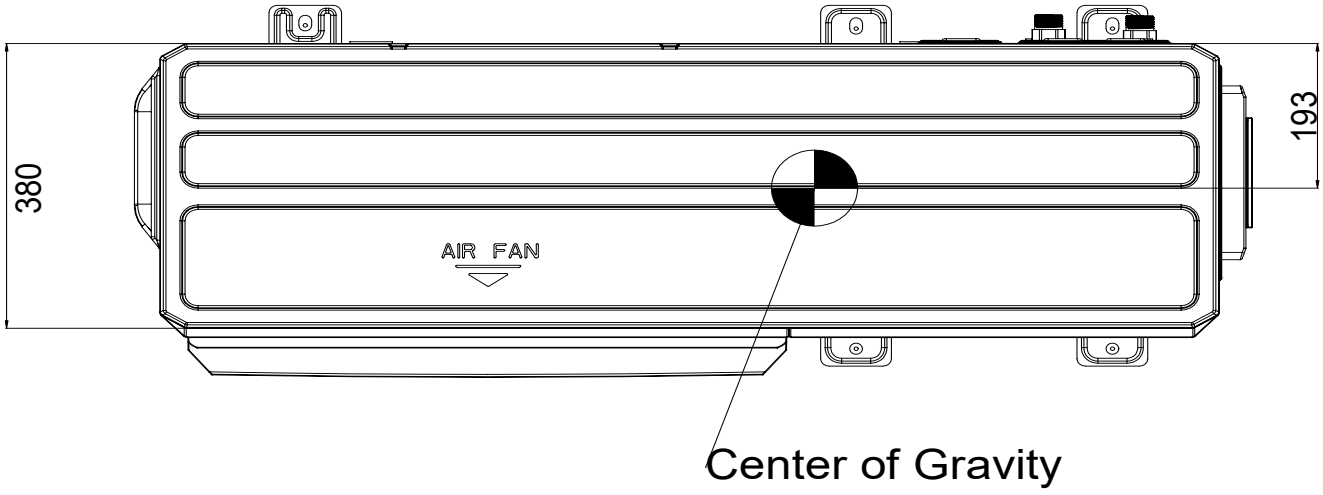
6. Center of Gravity

6.1 Outdoor Units

AW042HUGHA AW062HUGHA AW082HUGHA
AW102HUGHA AW10NHUGHA

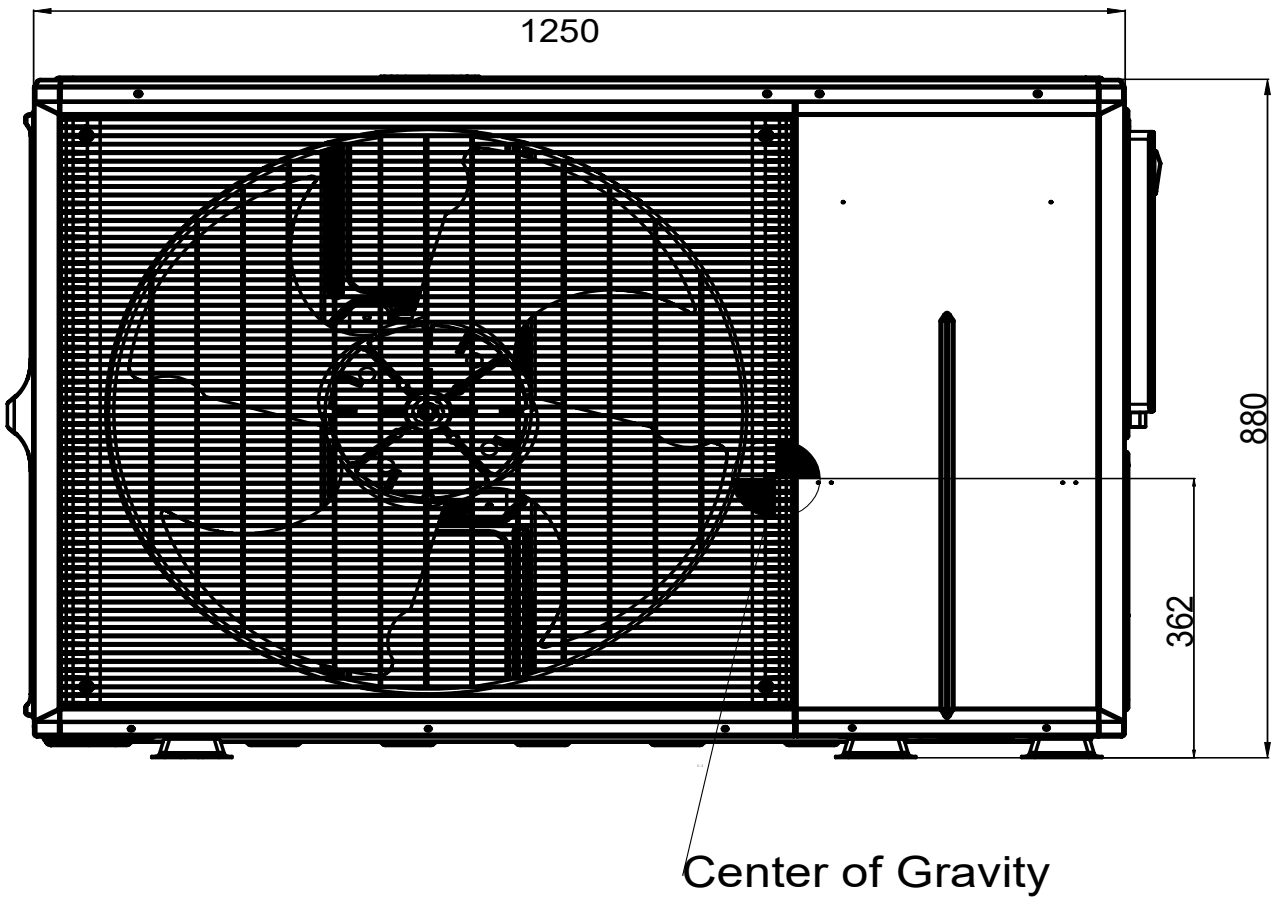
Unit: mm

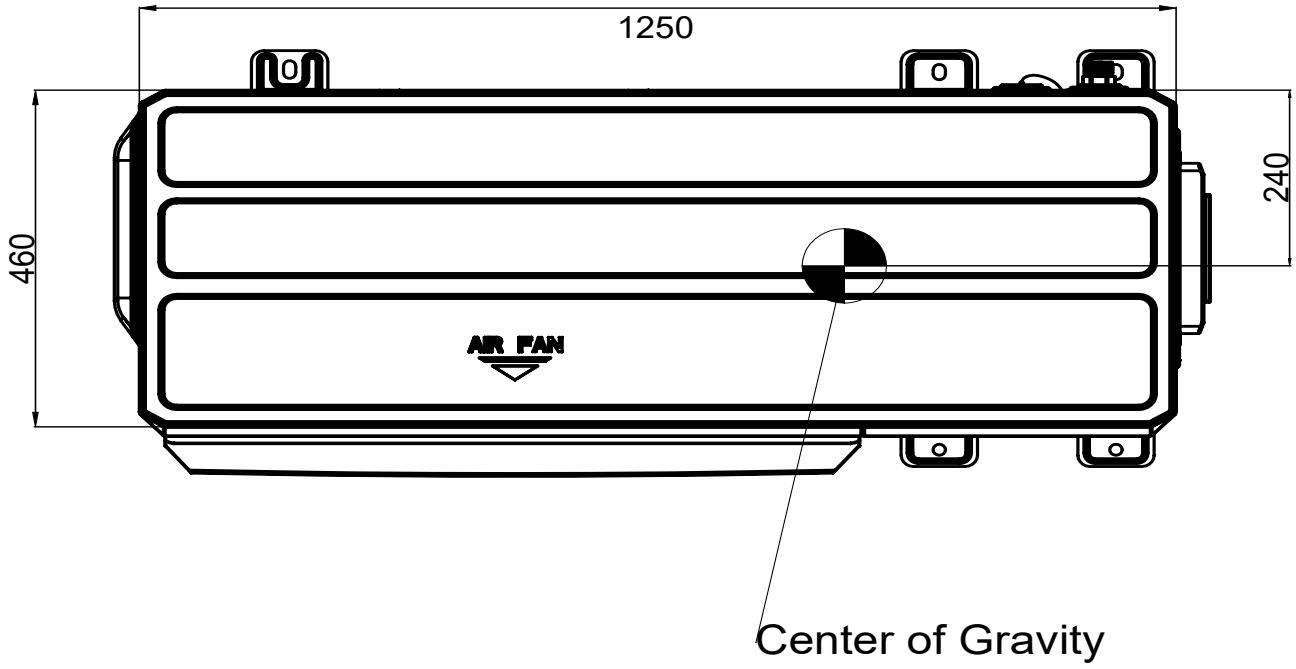




AW122HVGHA AW142HVGHA AW162HVGHA
AW12NHVGHA AW14NHVGHA AW16NHVGHA

Unit: mm

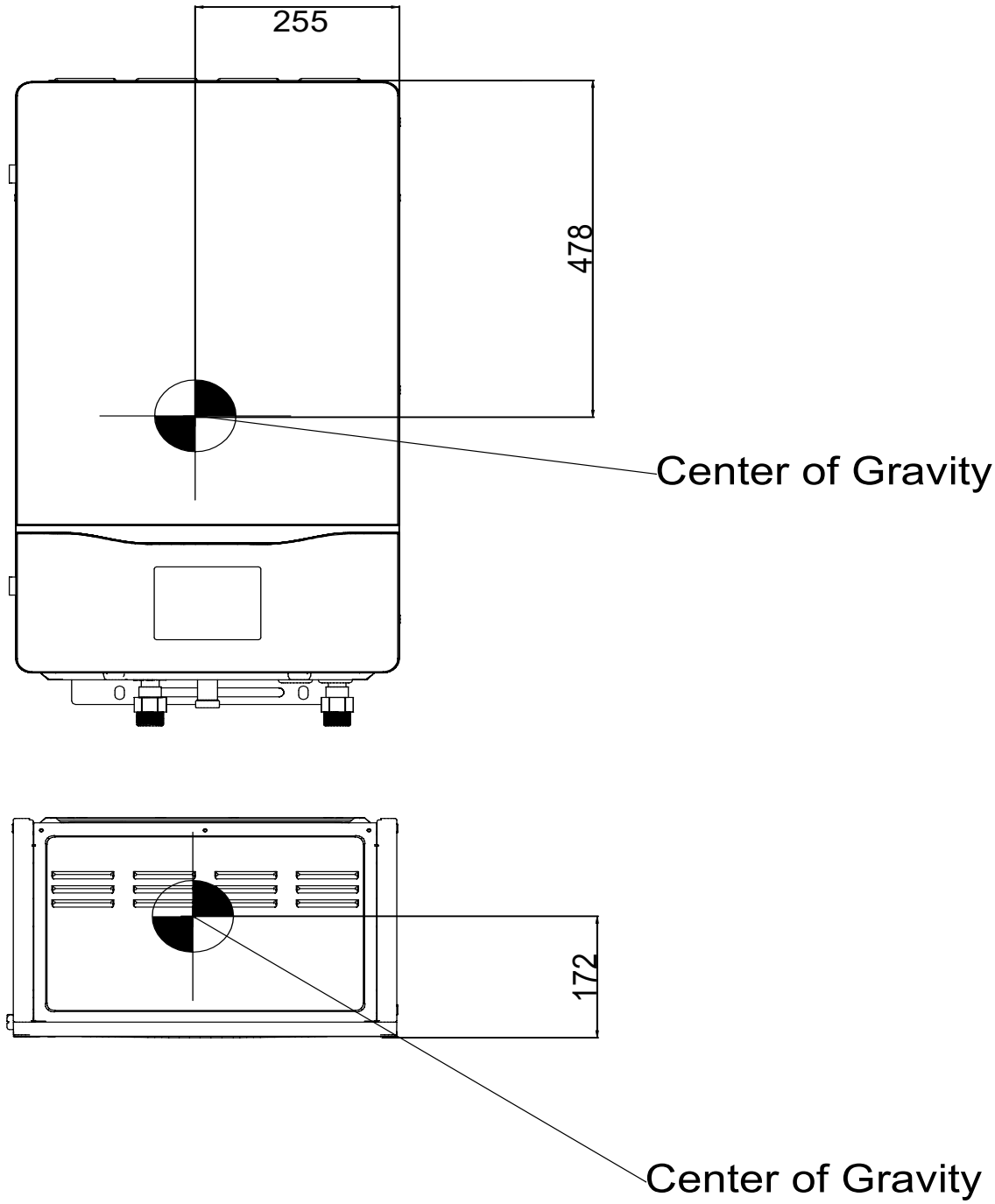




6.2 Indoor Units - Hydro Split

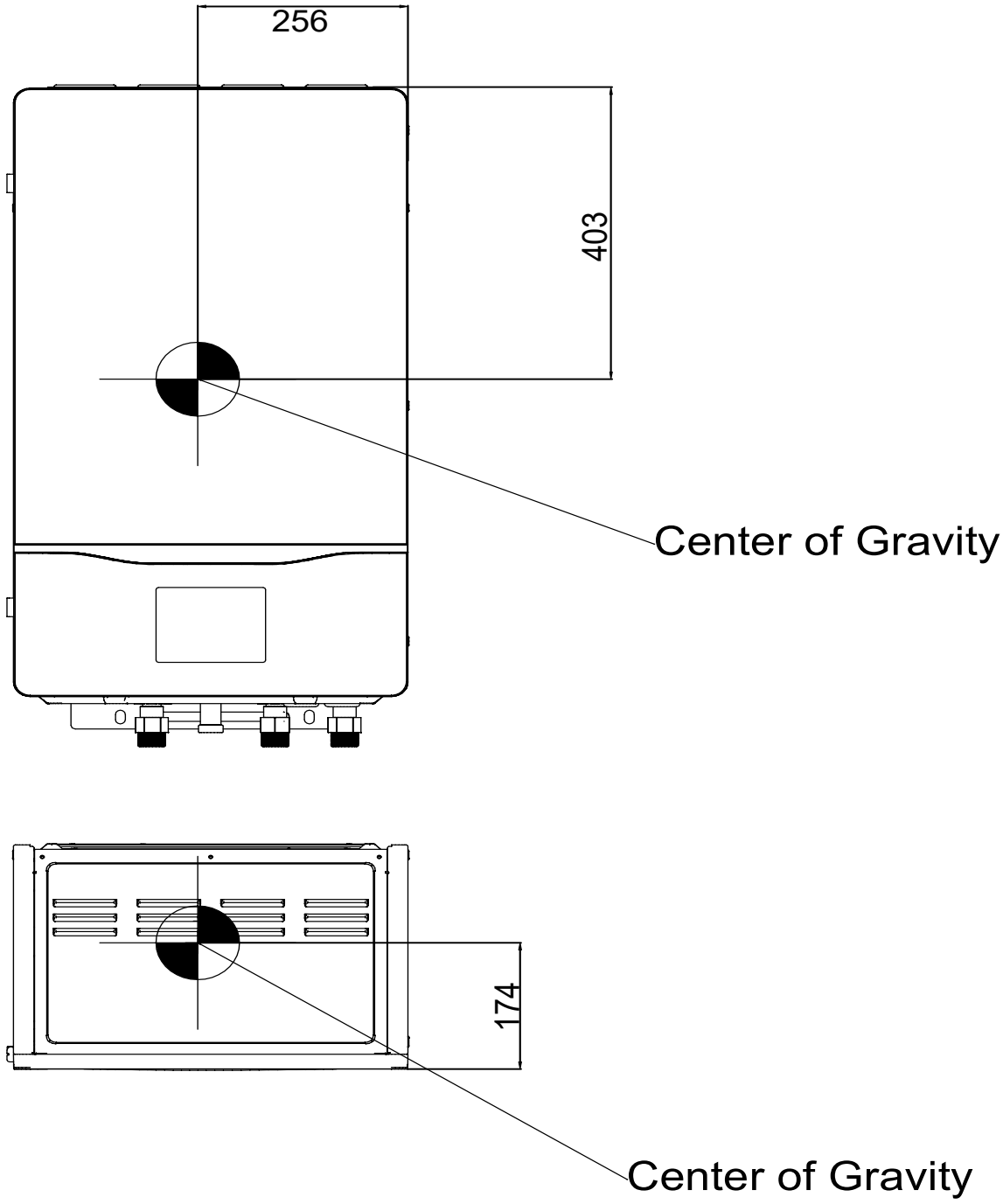
HU102WAHYA HU162WAHYA HU10NWAHYAE3 HU16NWAHYAE3

Unit: mm



HU102WAHYB HU162WAHYB HU16NWAHYBE3

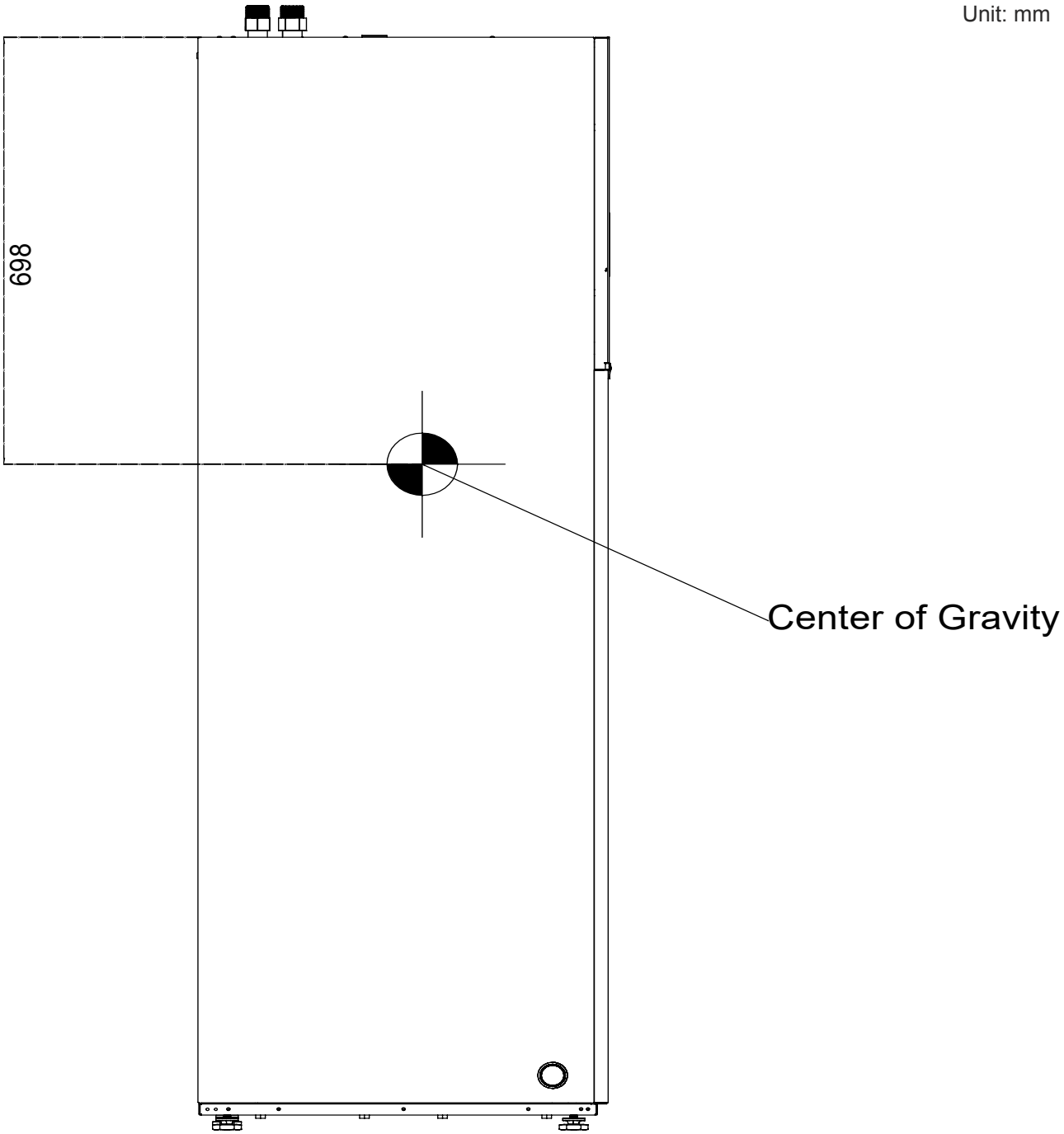
Unit: mm



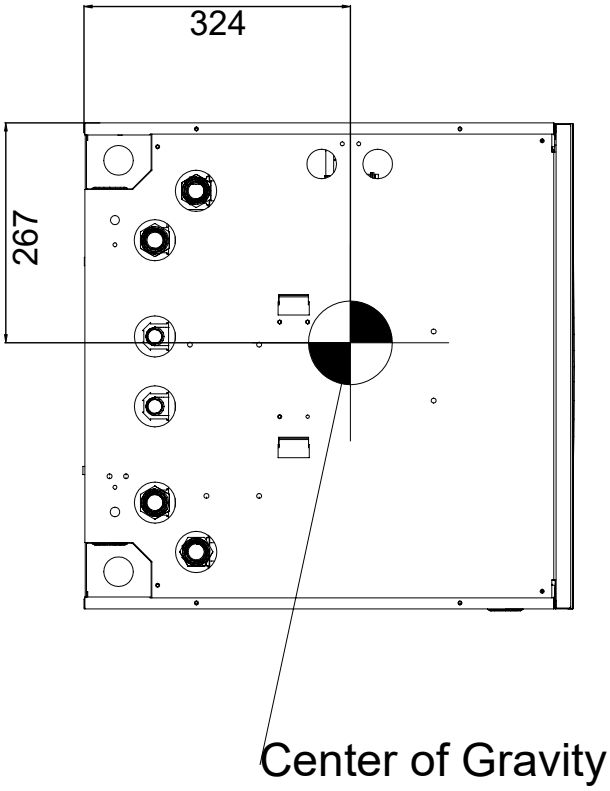
6.3 Indoor Units - Hydro All in One

HU102F20AHYA HU162F20AHYA HU102F20AHYAE3 HU162F20AHYAE3

Unit: mm

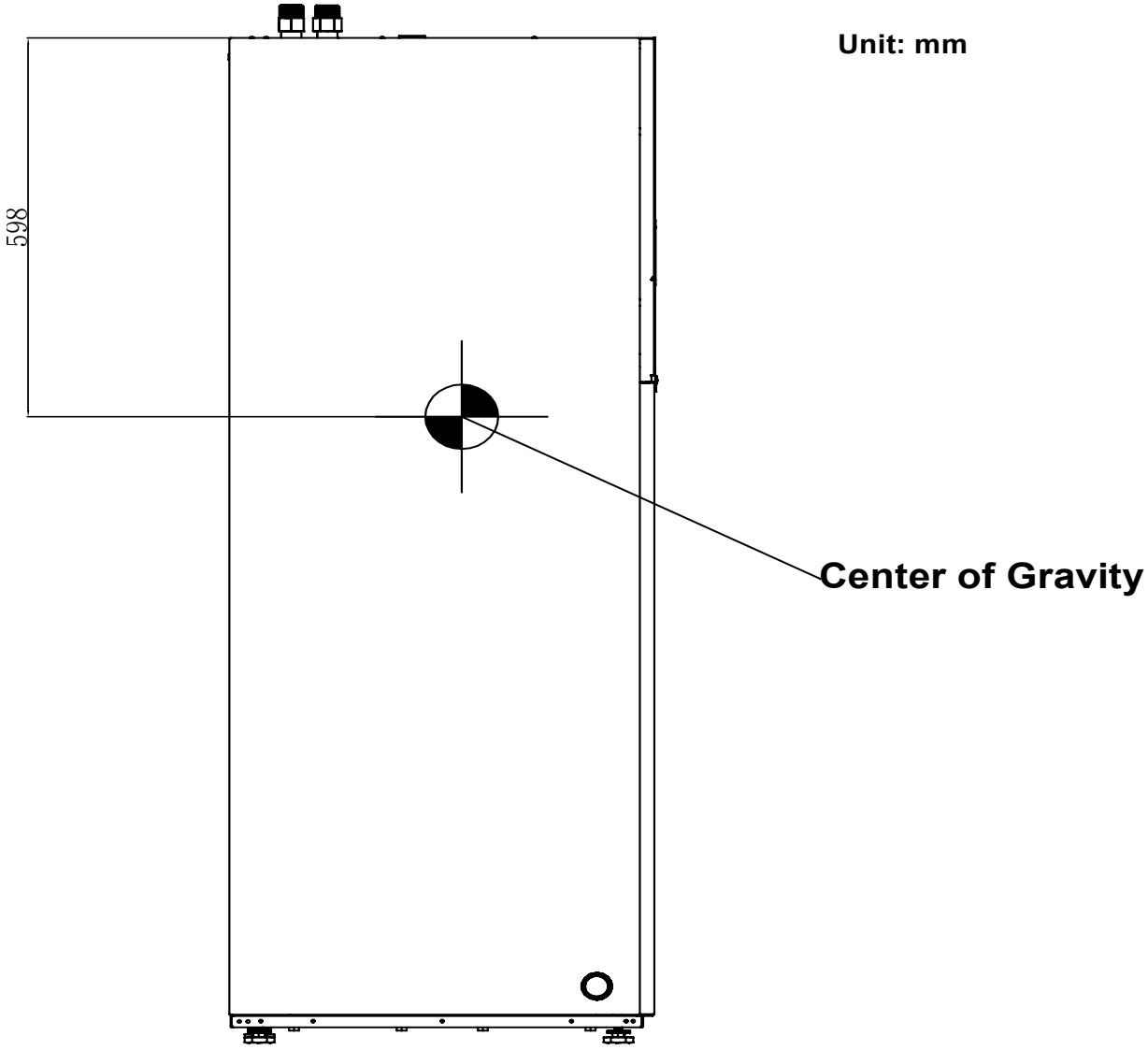


Unit: mm

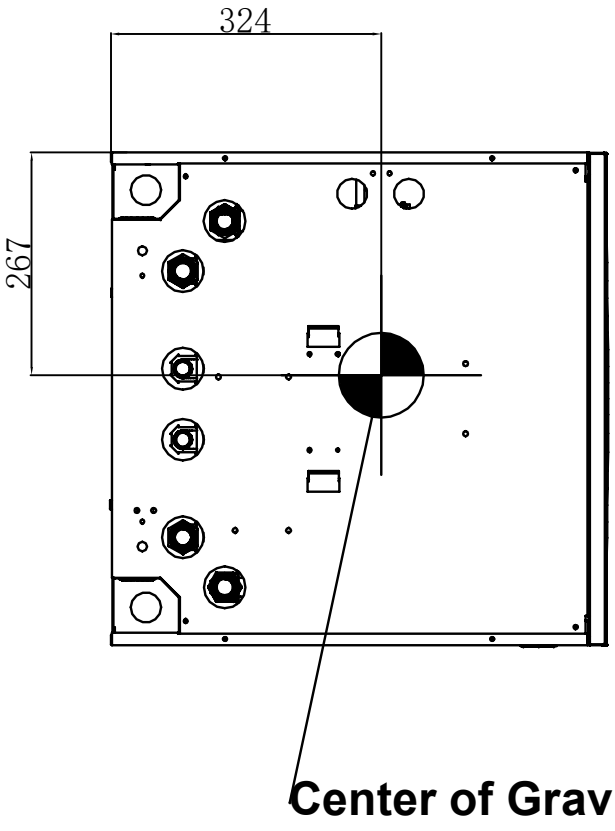


6.4 Indoor Units - Hydro All in One

HU102F16AHYA HU102F16AHYAE3



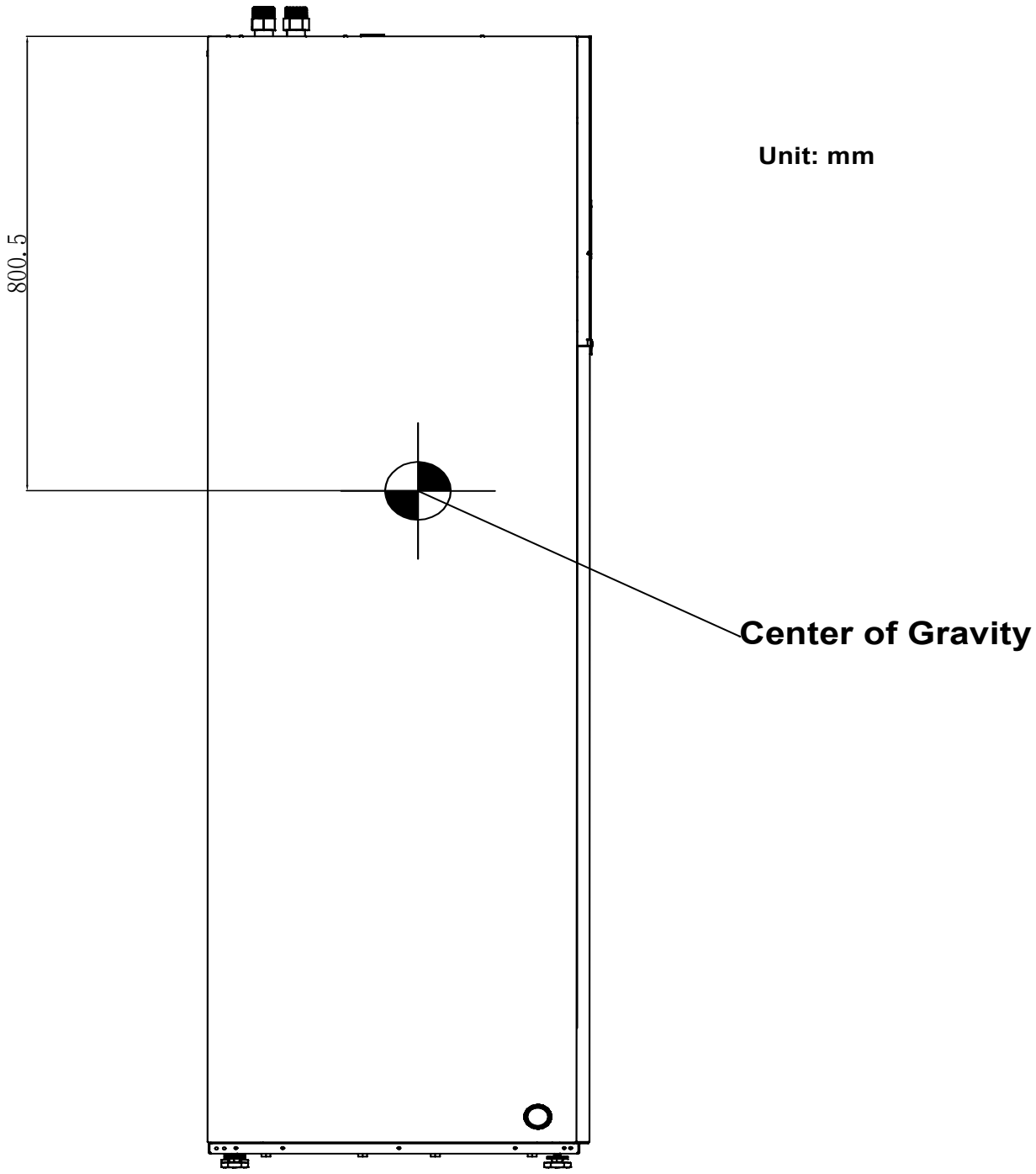
Unit: mm

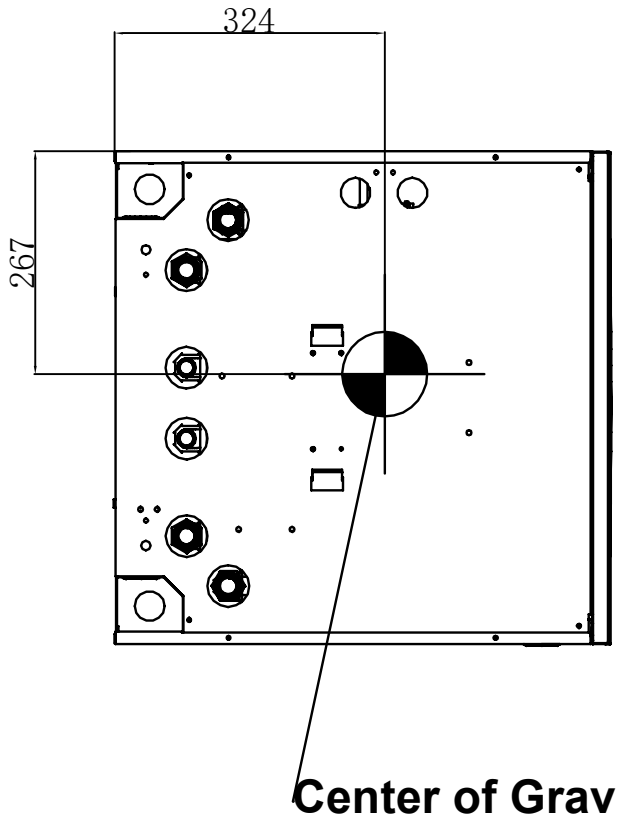


Unit: mm

6.5 Indoor Units - Hydro All in One

HU102F24AHYA HU102F24AHYAE3 HU162F24AHYA HU162F24AHYAE3

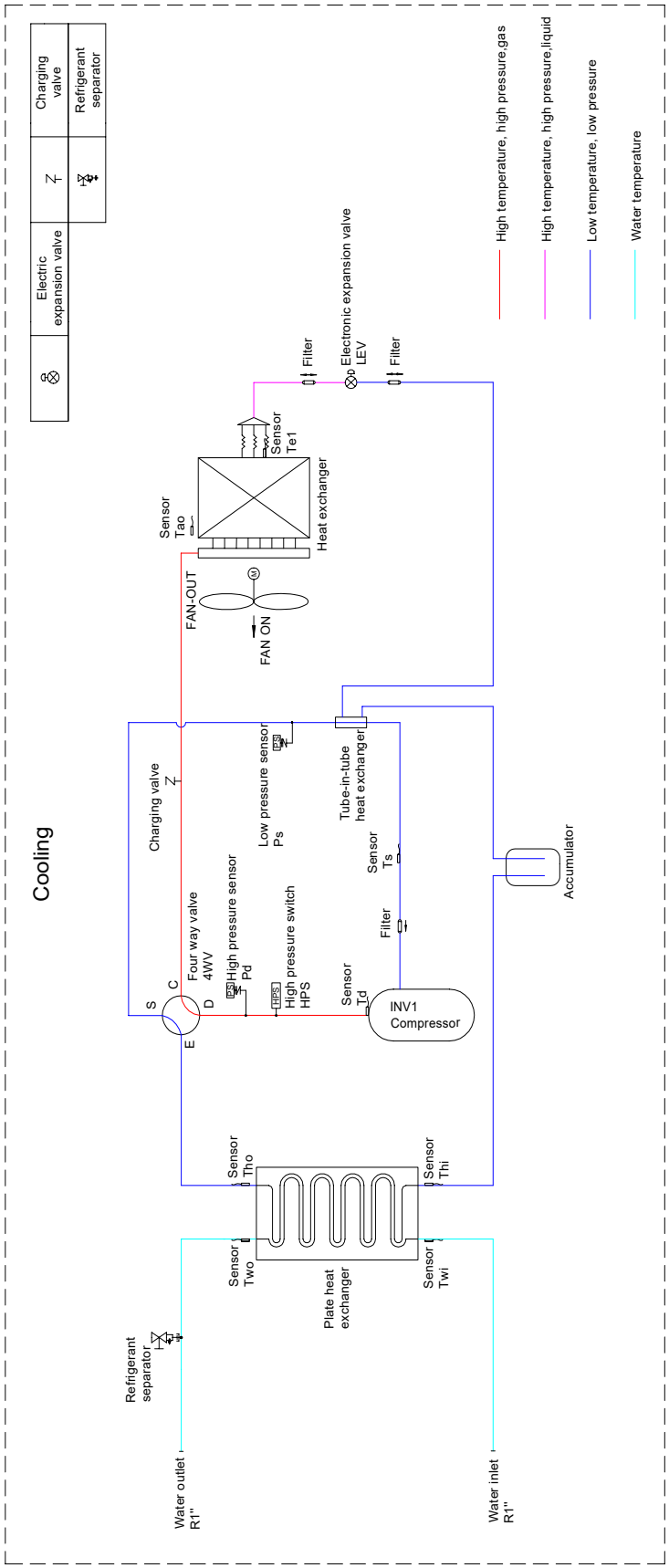




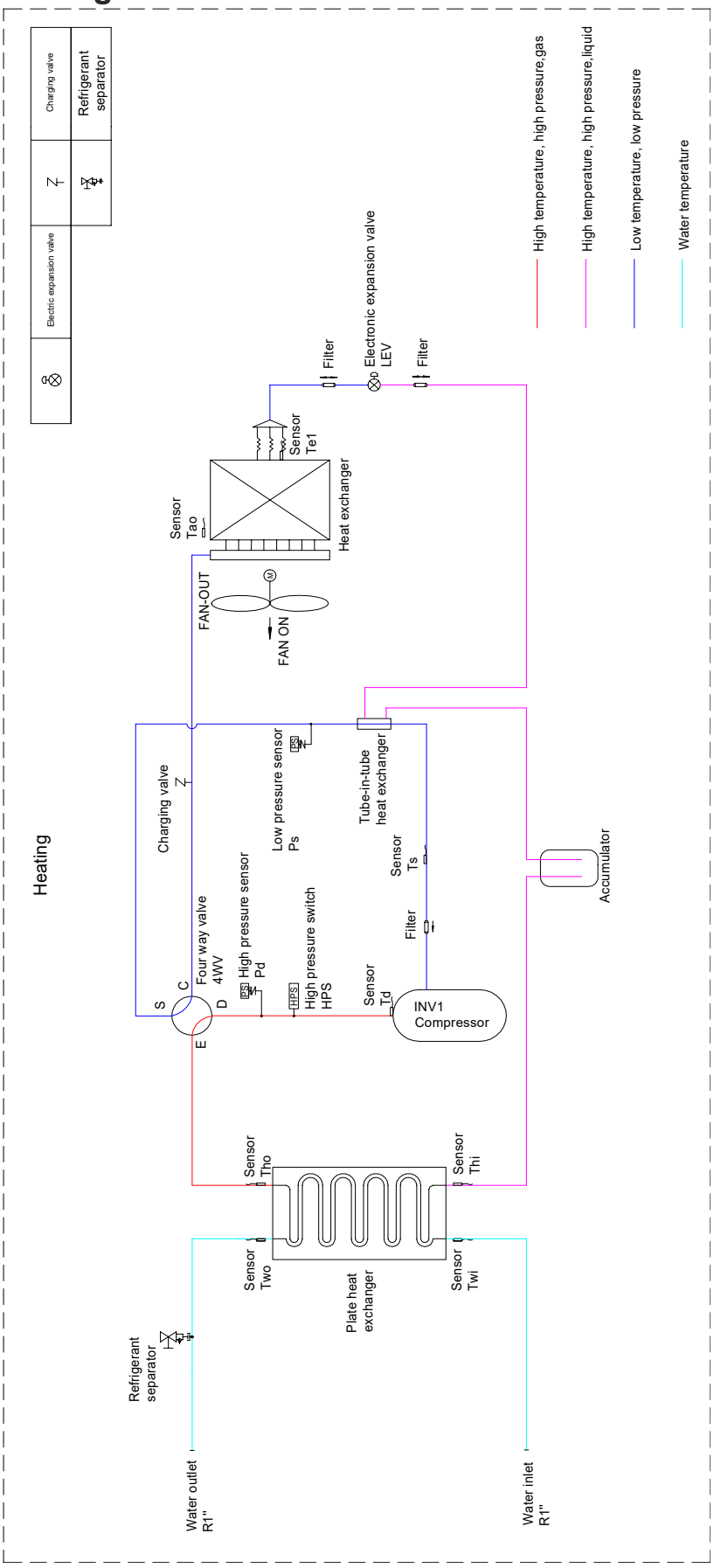
Unit: mm

7. Piping Diagrams

7.1 Outdoor Unit - Cooling



7.2 Outdoor Unit - Heating

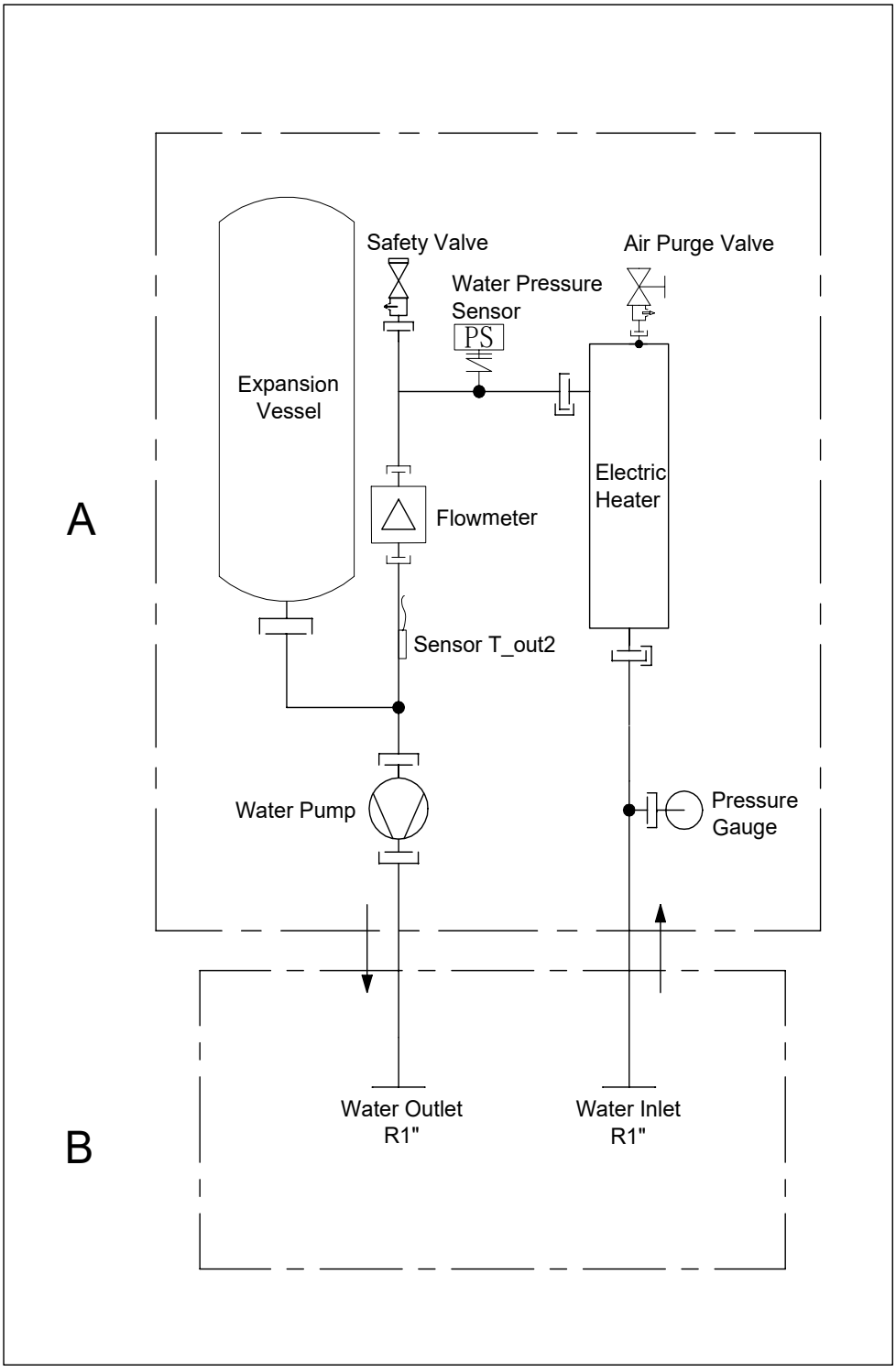


Part name	Model	Abbr.	Function	Characteristics
Compressor	AW042HUGHA AW062HUGHA	Comp.	Capacity control, meet indoor load request by adjusting the frequency	Motor resistance(at 20°C):1.44±5%Ω
	AW082HUGHA AW102HUGHA AW10NHUGHA			Motor resistance(at 20°C):0.88±5%Ω
	AW122HVGHA AW142HVGHA AW12NHVGHA AW14NHVGHA			Motor resistance(at 20°C):0.54±5%Ω
	AW162HVGHA AW16NHVGHA			Motor resistance(at 20°C):0.54±5%Ω
Pressure Sensor	All	Pd	High pressure detection	Pressure range: 0 to 4.15 MPa
		Ps	Low pressure detection	Pressure range: 0 to 1.7 MPa
Pressure Switch	All	Hps	High pressure protection	break:3.3MPa reset:2.65MPa
Electronic Expansion Valve1	AW042HUGHA AW062HUGHA	LEVA	Refrigerant flow control	Φ1.8
	AW082HUGHA AW102HUGHA AW10NHUGHA AW122HVGHA AW142HVGHA AW12NHVGHA AW14NHVGHA			Φ2.4
	AW162HVGHA AW16NHVGHA			Φ3.0
4-Way Valve	AW042HUGHA AW062HUGHA	4WV	Change over between cooling and heating	AC220V, electrified in heat; not electrified in cooling or defrosting
	AW082HUGHA AW102HUGHA AW10NHUGHA			
	AW122HVGHA AW142HVGHA AW12NHVGHA AW14NHVGHA AW162HVGHA AW16NHVGHA			
Charging Valve	All	/	Used to charge the refrigerant to unit	φ6.35
Filter	All	/	Filter impurities	40 mesh
Refrigerant Separator	All	/	Release refrigerant from the water system	/
Plate Heat Exchanger	All	/	Used to exchange the heat from refrigerant to water	Design pressure of refrigerant side:4.5MPa

Part name	Model	Abbr.	Function	Characteristics
Temp. Sensor	All	Td	Discharge temp. of compressor	R80=50kΩ B25/80=4450K
		Ts	Suction temp. of compressor	R25=10KΩ B25/50=3700K
		Te	Check frost condition of outdoor heat exchanger	R25=10KΩ B25/50=3700K
		Tao	Detect ambient temp. set primary setting for fan speed target pressure and PMV open angle	R25=10KΩ B25/50=3700K
		Thi	Detect the refrigerant iutlet temp. of heat exchanger	R25=10KΩ B25/50=3700K
		Tho	Detect the refrigerant outlet temp. of heat exchanger	R25=10KΩ B25/50=3700K
		Twi	Detect the water inlet temp. of heat exchanger	R25=10KΩ B25/50=3700K
		Two	Detect the water onlet temp. of heat exchanger	R25=10KΩ B25/50=3700K

7.3 Indoor Unit - Hydro Split

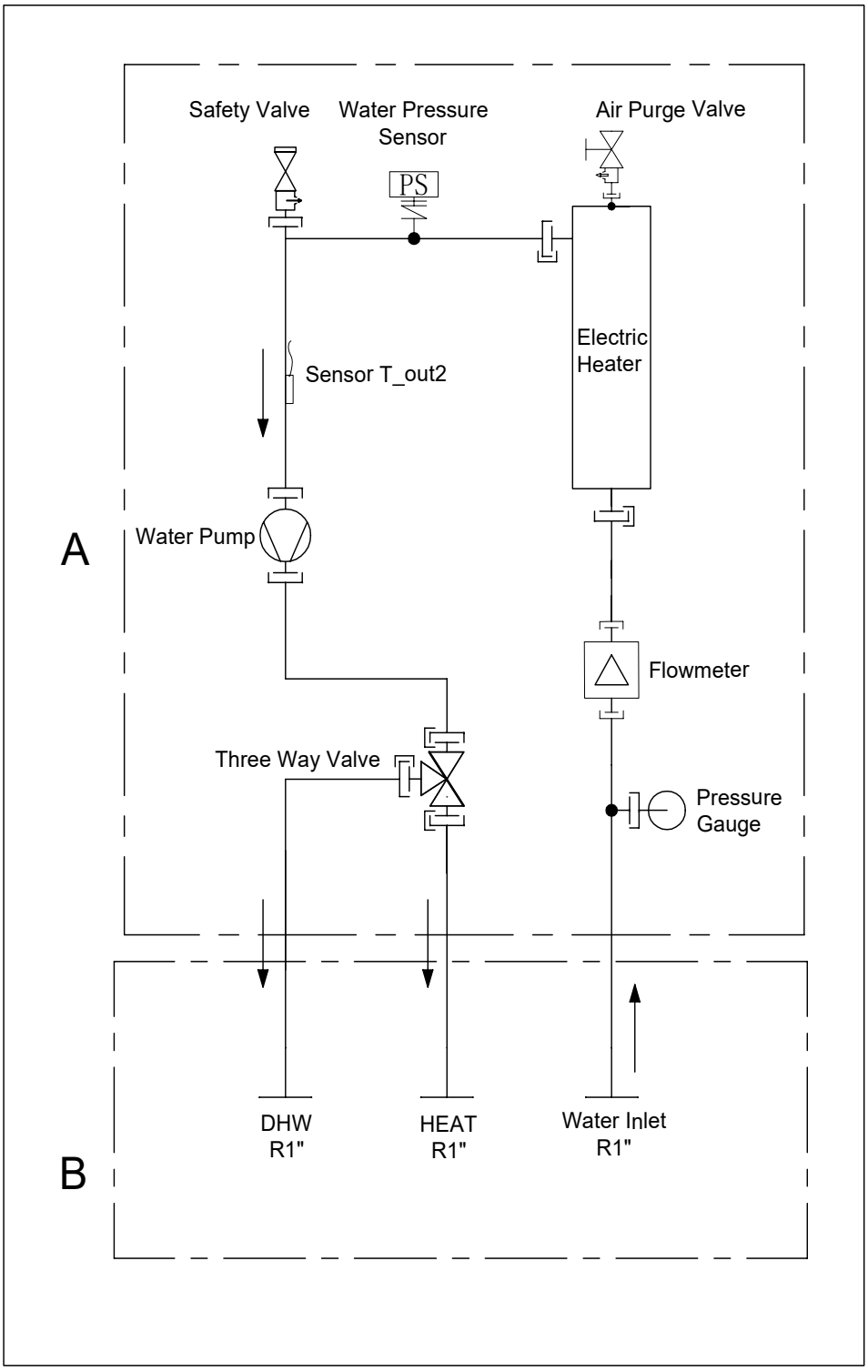
HU102WAHYA HU162WAHYA HU10NWAHYAE3 HU16NWAHYAE3



A Split
B Field installed

Screw connection
Brazed connection
Quick coupling

HU102WAHYB HU162WAHYB HU16NWAHYBE3



A Split
B Field installed

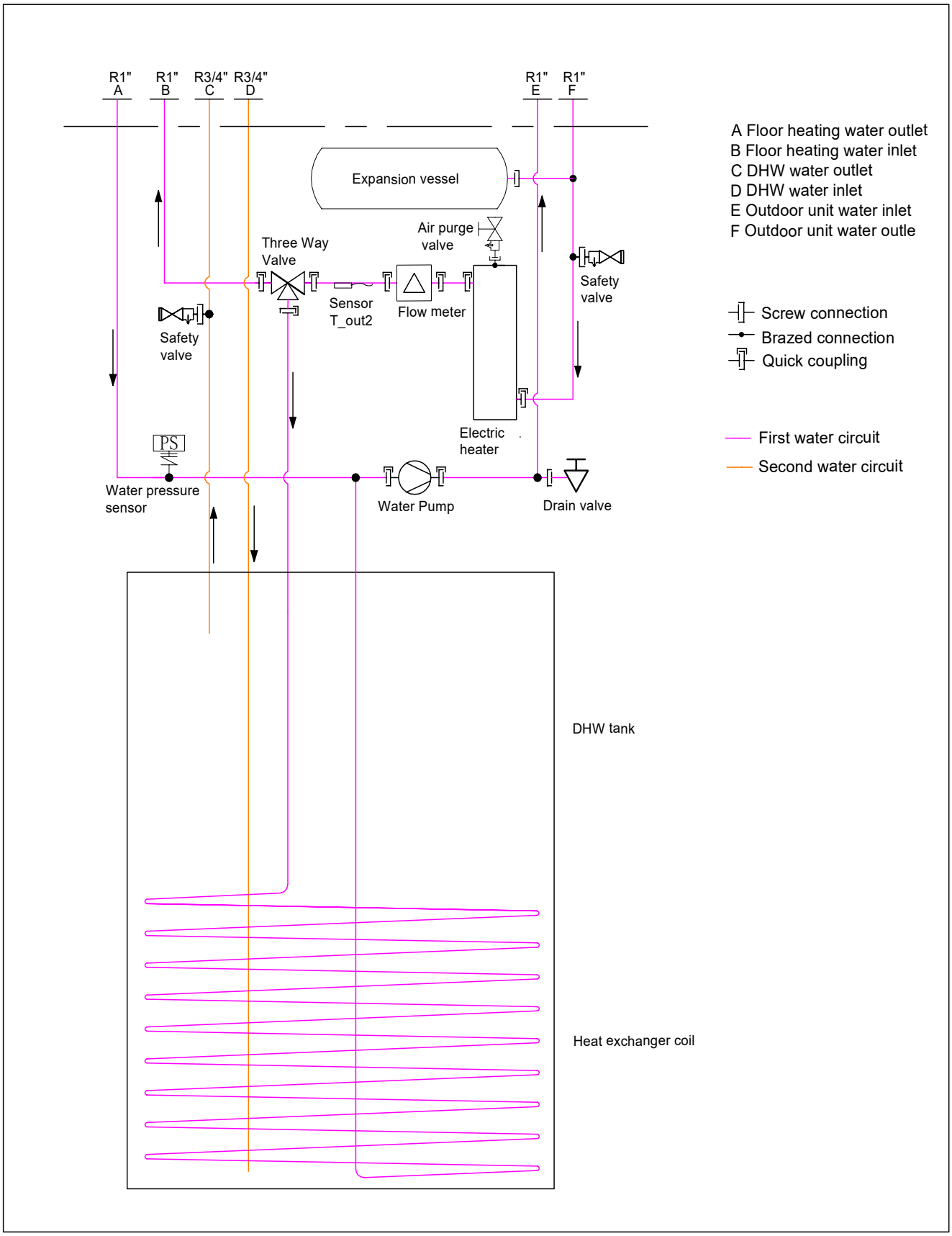
Screw connection
Brazed connection
Quick coupling

Note: Heat/DHW outlet can't be switched.

Part name	Model	abbr.	Function	Characteristics
Water Pump	HU102WAHYA HU102WAHYAE3 HU102WAHYB	Pump	Transport water.	Pumping head:9m
	HU162WAHYA HU162WAHYAE3 HU162WAHYB HU162WAHYBE3			Pumping head:12m
Low Pressure Sensor	All	Ps	Low pressure detection.	Pressure range: 0 to 10barG
Safety Valve 3Ber	All	/	High pressure protection.	Operation pressure:3ber.
Three Way Valve	HU102WAHYB HU162WAHYB HU162WAHYBE3	/	Change over between room temperature control and Domestic water tank control.	AC220V, electrified in Domestic water tank control; not electrified in room temperature control.
Flowmeter	All	/	Detect water flow.	5~80 L/min
Air Purge Valve	All	/	Release gas from heating system and water supply pipeline.	\
Expansion Vessel	HU102WAHYA HU162WAHYA HU10NWAHYA HU16NWAHYA	/	Pressure fluctuation of buffer system.	8L
Electric Heater	HU102WAHYA HU102WAHYAE3 HU102WAHYB	/	Auxiliary heating at low temperature.	1+2kW
	HU162WAHYA HU162WAHYAE3 HU162WAHYB HU162WAHYBE3			2+4kW

7.4 Indoor Unit - Hydro All in One

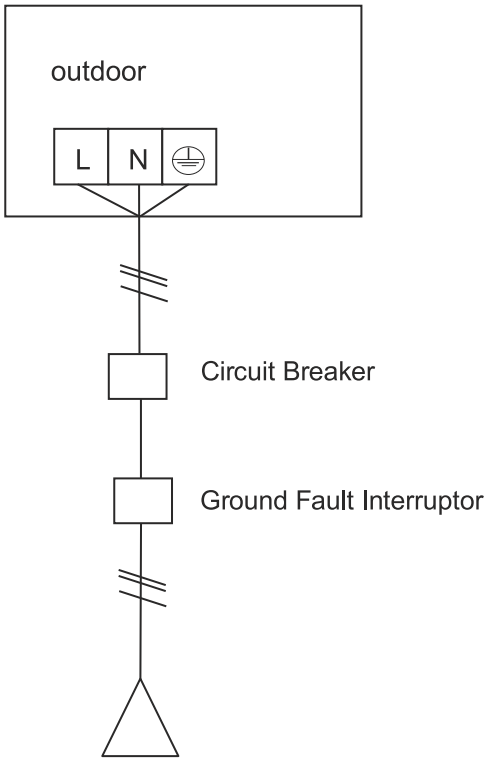
HU102F16AHYA HU102F20AHYA HU102F24AHYA HU162F20AHYA HU162F24AHYA HU102F16AHYAE3 HU102F20AHYAE3 HU102F24AHYAE3 HU162F20AHYAE3 HU162F24AHYAE3



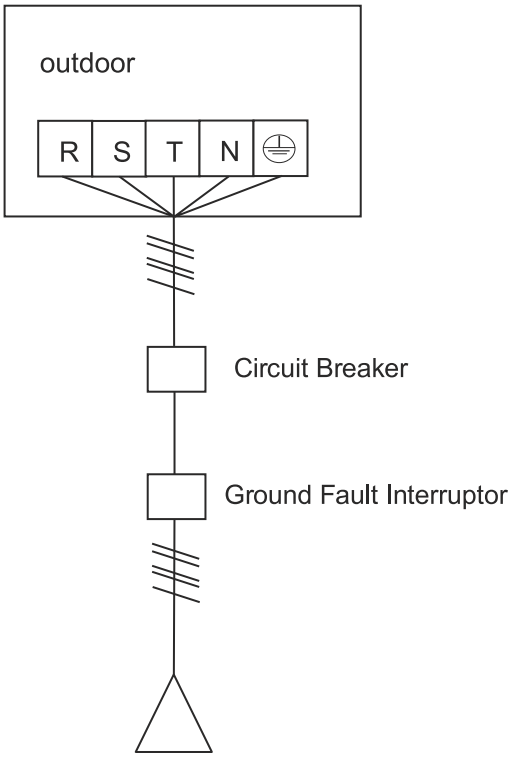
Part name	Model	abbr.	Function	Characteristics
Water Pump	HU102F16AHYA HU102F20AHYA HU102F24AHYA HU102F16AHYAE3 HU102F20AHYAE3 HU102F24AHYAE3	Pump	Transport water.	Pumping head:9m
	HU162F20AHYA HU162F24AHYA HU162F20AHYAE3 HU162F24AHYAE3			Pumping head:12m
Low Pressure Sensor	All	Ps	Low pressure detection.	Pressure range: 0 to 10barG
Drain Valve	All	/	Drain the liquid from the system loop.	\
Safety Valve 3bar	All	/	High pressure protection.	Operation pressure:3bar.
Safety Valve 7bar	All	/	High pressure protection.	Operation pressure:7bar.
Three Way Valve	3WV	/	Change over between room temperature control and Domestic water tank control.	AC220V, electrified in Domestic water tank control; not electrified in room temperature control.
Flowmeter	All	/	Detect water flow.	5~80 L/min
Air Purge Valve	All	/	Release gas from heating system and water supply pipeline.	\
Expansion Vessel	All	/	Pressure fluctuation of buffer system.	8L
Electric Heater	HU102F16AHYA HU102F20AHYA HU102F24AHYA HU102F16AHYAE3 HU102F20AHYAE3 HU102F24AHYAE3	/	Auxiliary heating at low temperature.	1+2kW
	HU162F20AHYA HU162F24AHYA HU162F20AHYAE3 HU162F24AHYAE3			2+4kW
Domestic Water Tank	All	/	Provision of domestic water0	160/200/240L

8. Wiring Diagrams

8.1 Power Wring Figure



power source: 1PH, 220-240V~, 50Hz



power source: 3N~,380-415V,50Hz

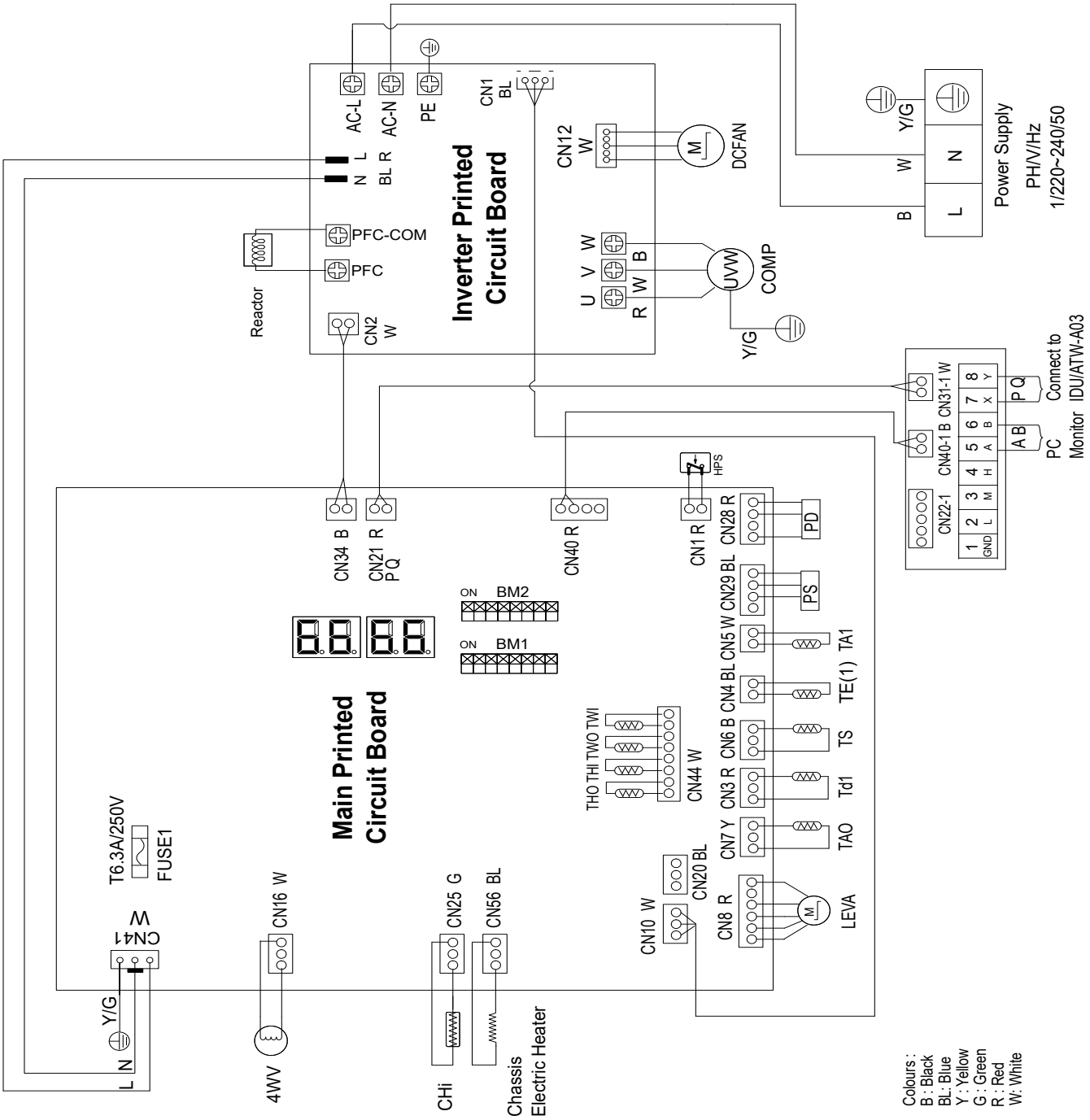
Communication wire to HU indoor unit

Length of Signal Line (m)	Wiring Dimensions
≤1000	0.75mm^2 × 2 core shielding line

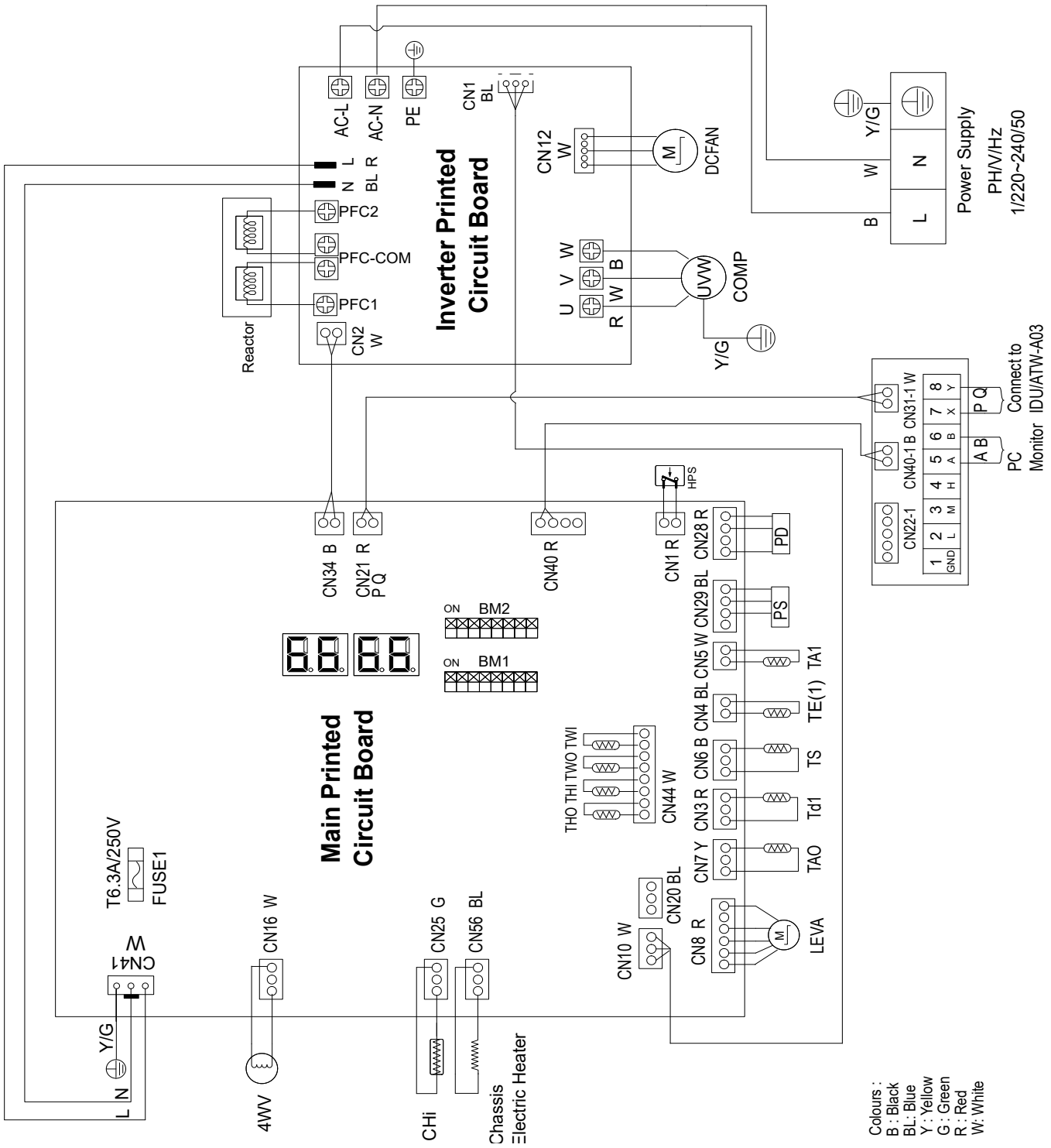
• The shielding lay of the signal line must be grounded at two side.

8.2 Outdoor Units

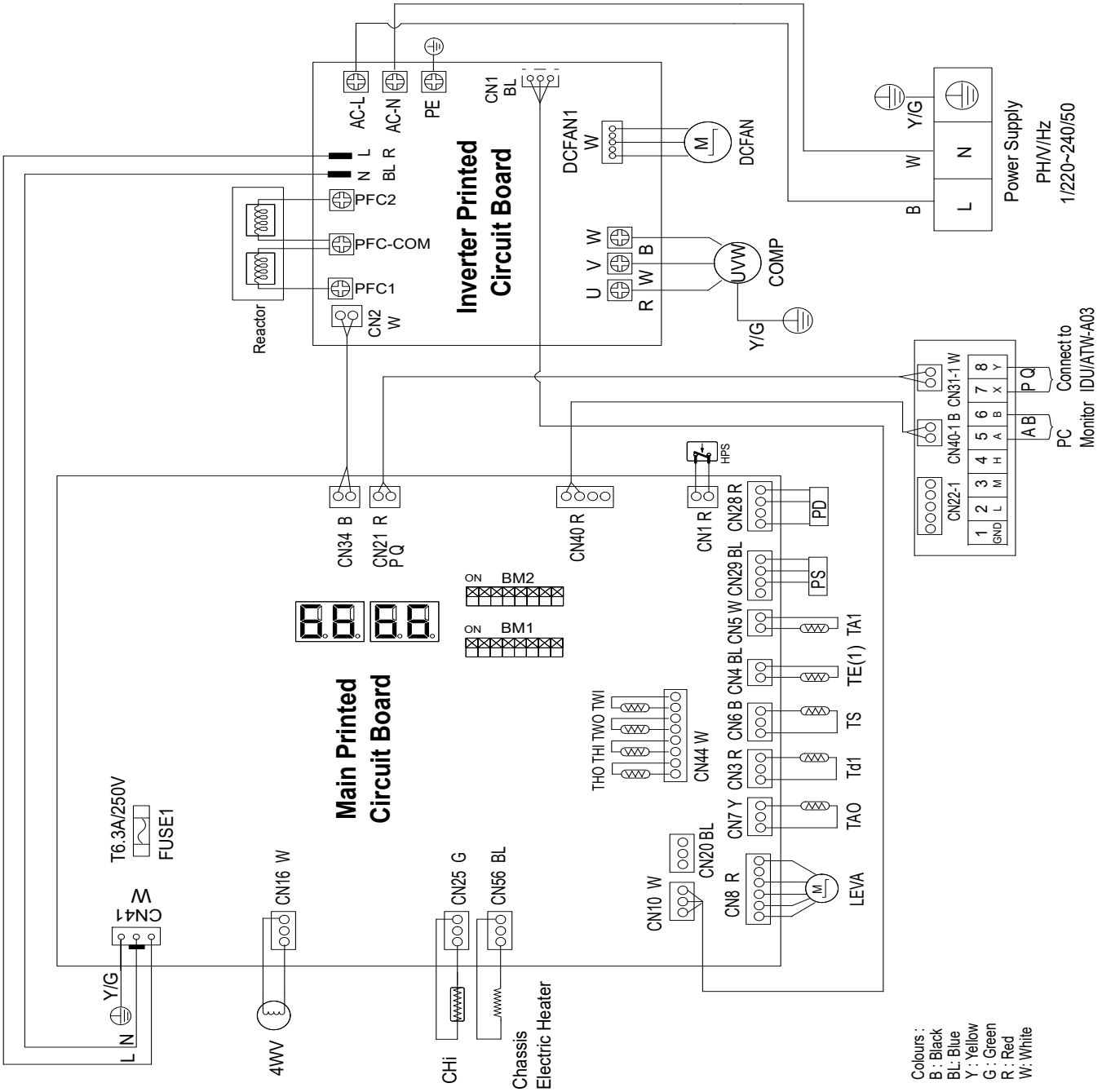
AW042HUGHA AW062HUGHA



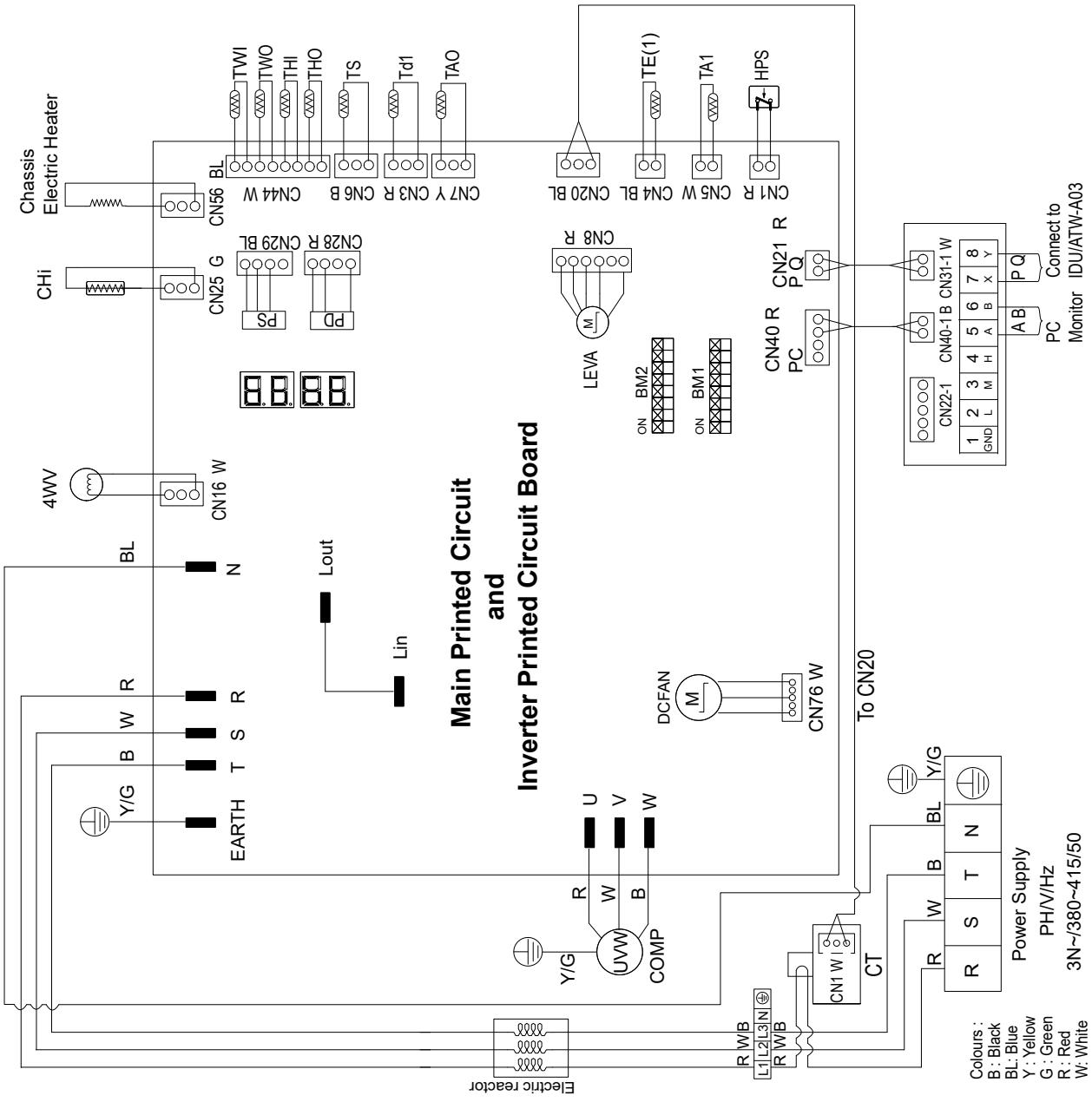
AW082HUGHA AW102HUGHA AW162HVGHA



AW122HVGHA AW142HVGHA



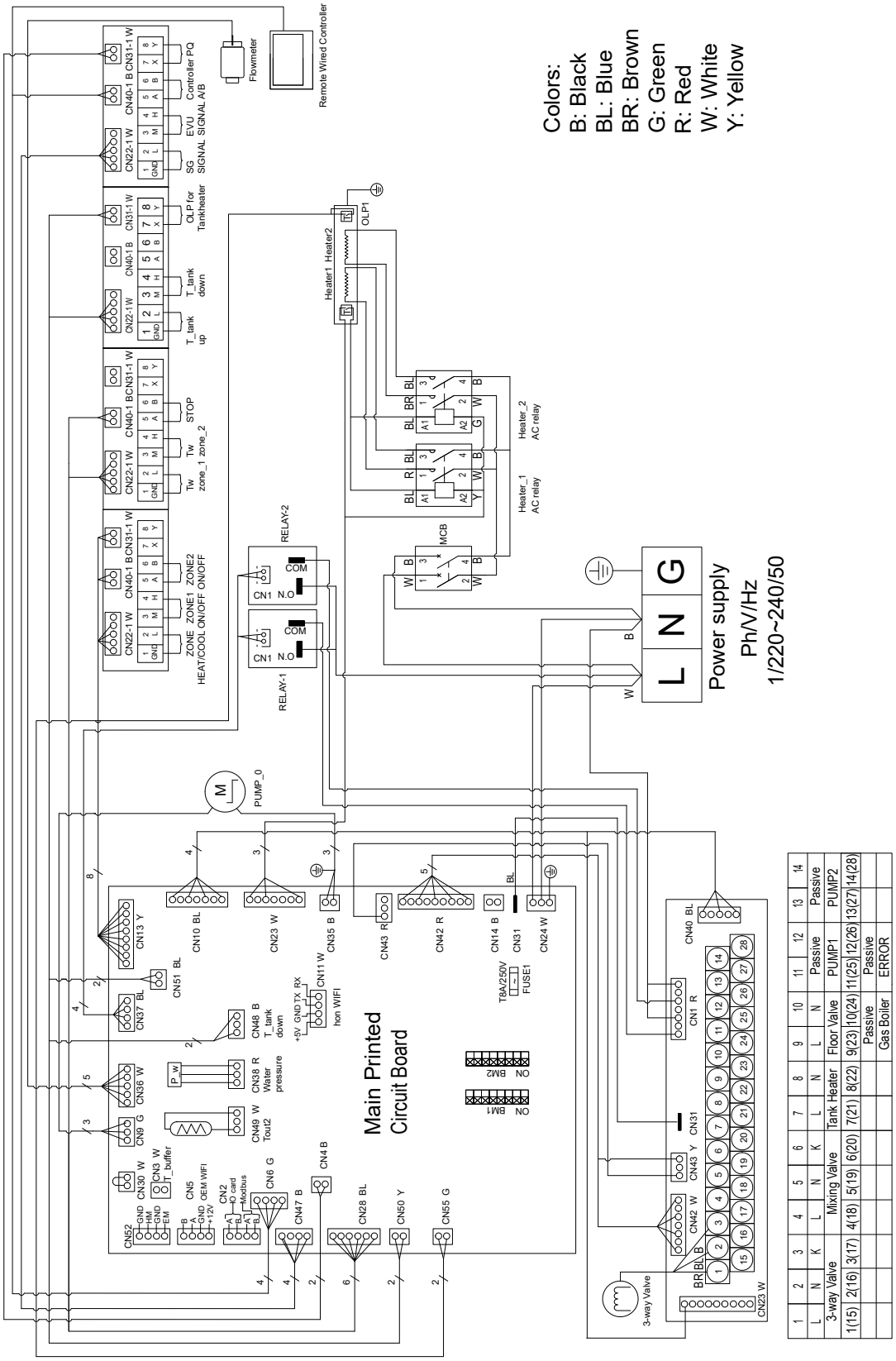
AW10NHUGHA AW12NHVGHA AW14NHVGHA AW16NHVGHA



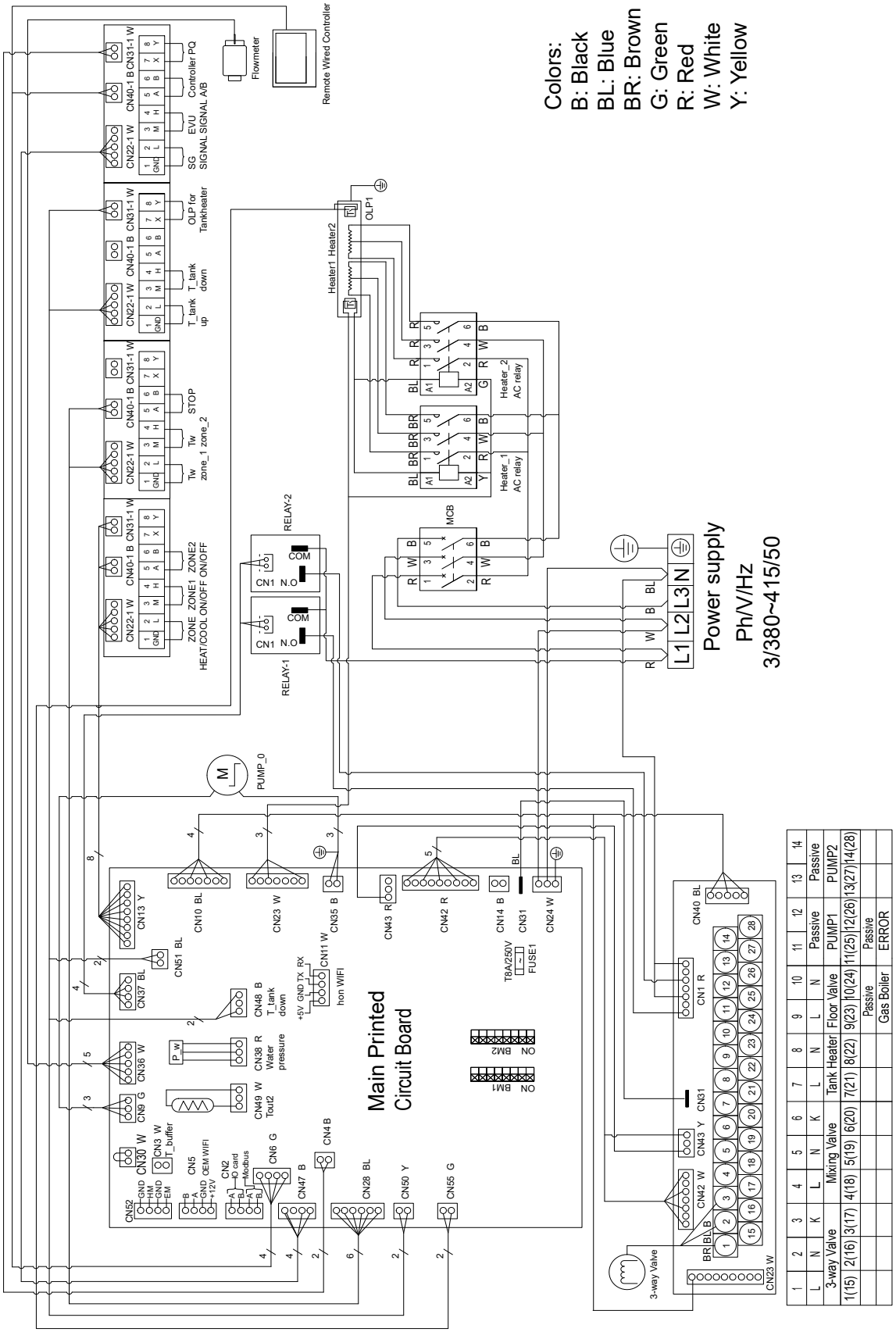
Port	Port Definition	Function Description
CN1	HPS	High Pressure Switch
CN3	Td1	Compressor Discharge Sensor
CN4	TE(1)	Defrost Detection Sensor
CN5	TA1	Internal Temperature Sensor of Electric Control Box
CN6	TS	Compressor Suction Sensor
CN7	TAO	Ambient Temperature Sensor
CN8	LEVA	Electronic Expansion Valve Control
CN10	INV-COM	INV Module Communication Port\C7(Single Phase Unit)
CN16	4WV	Four Way Valve
CN20	CT1	Input Current Detection(Three Phase Unit)
CN21	PQ	Internal and External Communication Wires
CN25	HEATER1	Compressor Crankcase Heater
CN28	PD	High Pressure Sensor
CN29	PS	Low Pressure Sensor
CN34	low-power consumption	Low-Power Consumption\C7(Single Phase Unit)
CN39	FM	Flowmeter
CN40	PC A/B	PC Communication Interface
CN41	Power Input	220V/50Hz Input
CN42	Wateroutlet	Water Pressure Sensor
CN44	TWO	Water Outlet Sensor of Plate Heat Exchanger
	TWI	Water Inlet Sensor of Plate Heat Exchanger
	THI	Liquid Tube of Plate Heat Exchanger
	THO	Gas Tube of Plate Heat Exchanger
CN55	Pump2	Built-in Water Pump Power
CN56	B-HEATER	Anti-Freezing Electric Heater of Chassis
CN71	DCPUMP	Built-in Water Pump Control Signal
CN76	DCFAN	Fan power output

8.3 Indoor Units - Hydro Split

HU102WAHYA HU102WAHYB HU162WAHYA HU162WAHYB

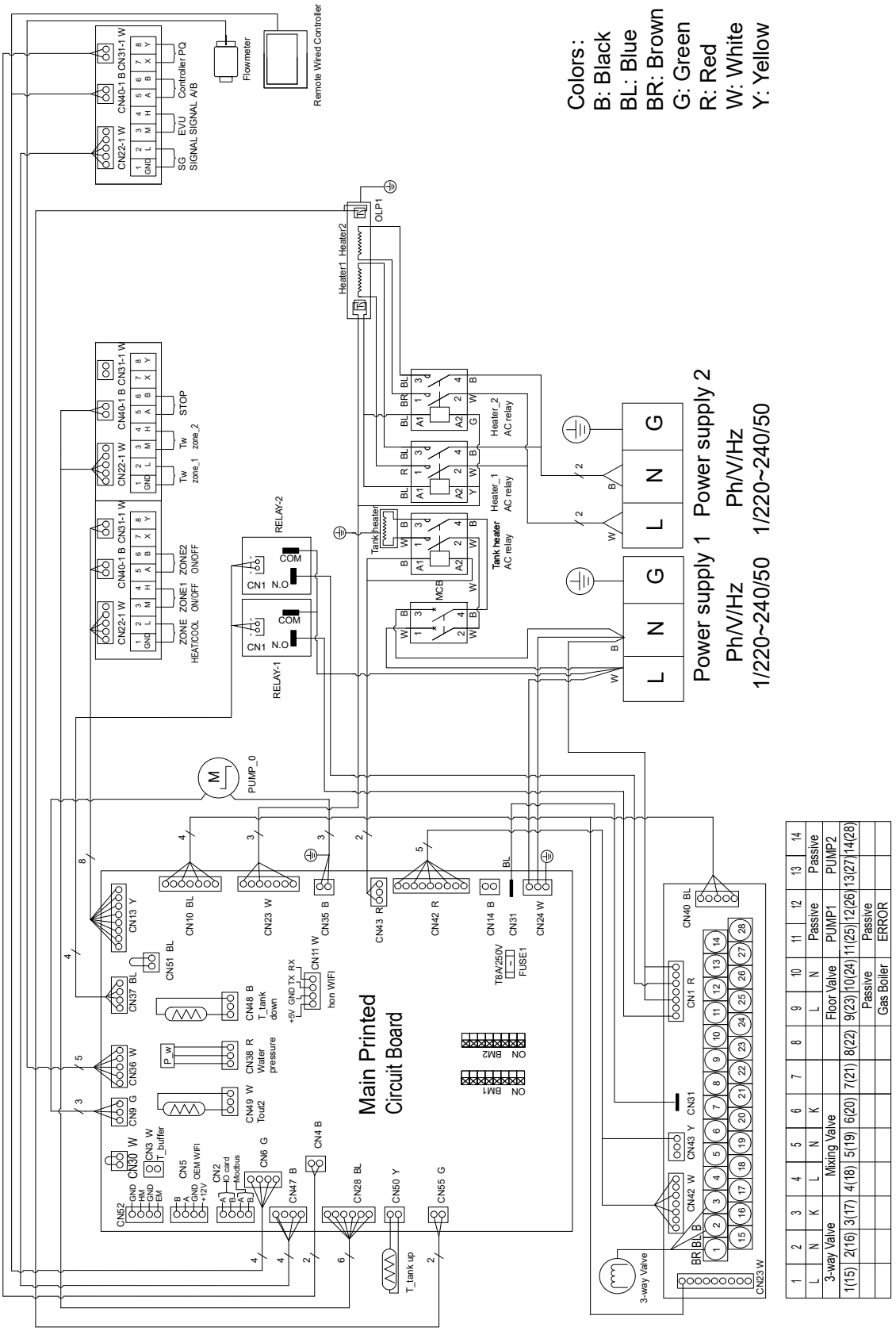


HU10NWAHYAE3 HU16NWAHYAE3 HU16NWAHYBE3

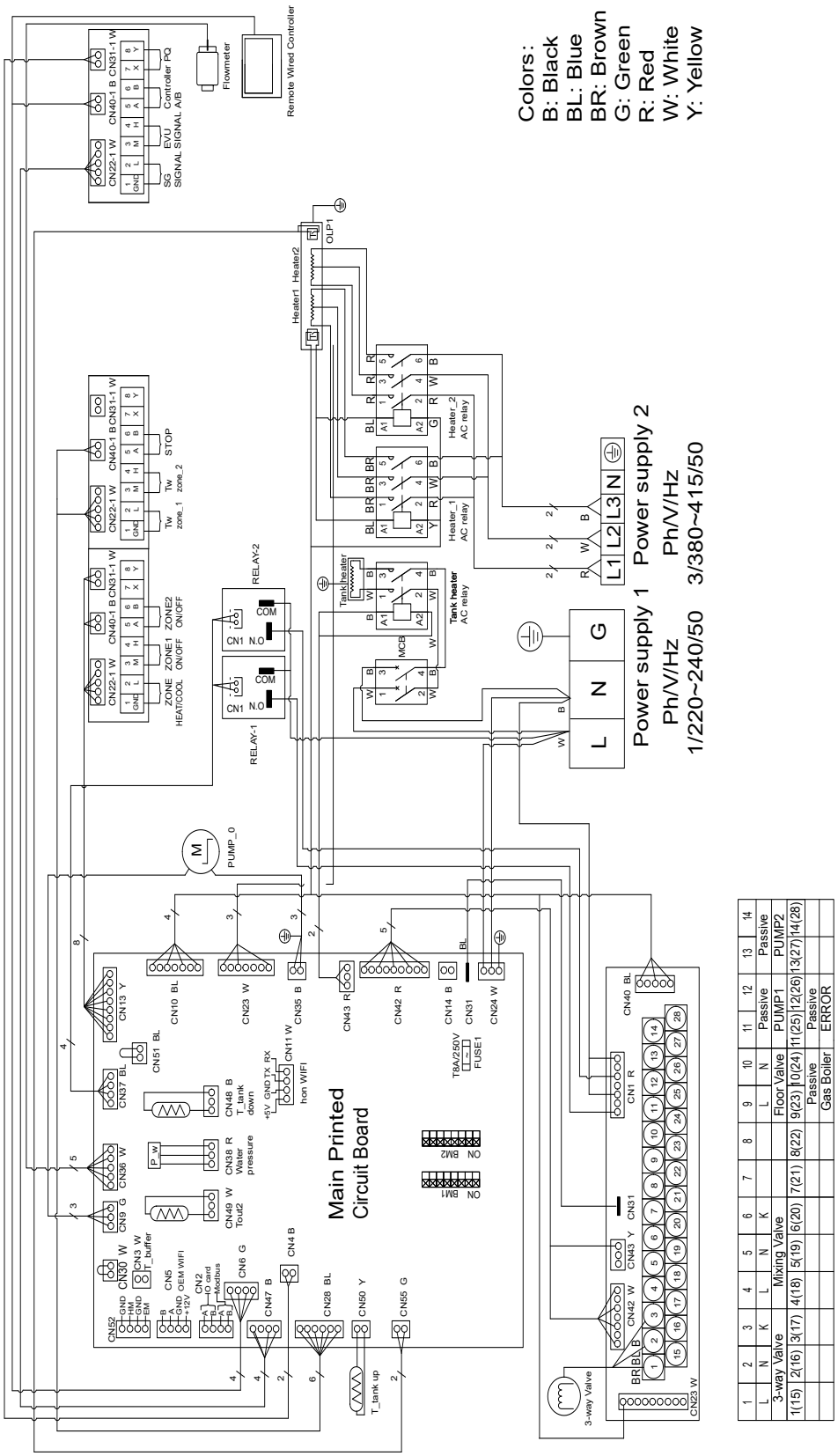


8.4 Indoor Units - Hydro All in One

HU102F16AHYA HU102F20AHYA HU102F24AHYA HU162F20AHYA HU162F24AHYA



HU102F16AHYAE3 HU102F20AHYAE3 HU102F24AHYAE3 HU162F20AHYAE3 HU162F24AHYAE3



The wires that have already been connected in the factory

Port	Port Definition	Function Description
CN35	PUMP_0	HU Built-in Pump 220V Output
CN42	3 way valve	Zone1 Three Way Valve Control Output(220V)
CN16	Antifreeze Heater	Antifreezing Electric Heating of Plate Heat Exchanger Control Signal Output(220V)
CN43	Tank Heater	DHW Heater Control Signal Output(220V)
CN23	Backupheater1	Auxiliary Heating 1 Control Signal Output(220V)
CN23	Backupheater2	Auxiliary Heating 2 Control Signal Output(220V)
CN50	T_tank up	Temperature Sensor on Upper Part of Tank
CN48	T_tank down	Temperature Sensor on Lower Part of Tank
CN34	Tz	Outlet Temperature Sensor
CN49	Tout2	Afterheat Temperature Sensor
CN38	P_w	Water Pressure Sensor
CN36	FM	Flowmeter
CN55	OLP for Backupheater	Auxiliary Electric Heater Protection Signal Feedback Port
CN51	OLP for Tankheater	DHW Auxiliary Electric Heater Protection Signal Feedback Port

The wires that need to be connected on site

Port	Port Definition	Function Description
CN37	PUMP1	Zone1 Pump Control Signal Output(220V)
CN37	PUMP2	Zone2 Pump Control Signal Output(220V)
CN10	Gas Boiler	Gas Boiler Pump Control Signal Output(220V)
CN42	Mixing valve	Zone2 Mixing Valve Control Output(220V)
CN42	Floor Valve	Floor Heating Valve Control Signal Output(220V)
CN10	ERROR	Fault Output Signal(Passive)
CN28	Twzone_1	Zone1 Water Temperature Behind Water Mixing Valve
CN28	Twzone_2	Zone2 Water Temperature Behind Water Mixing Valve
CN3	T_buffer	Buffer Water Tank Temperature Sensor
CN13	ZONE HEAT/COOL	Zone HEAT/COOL Switch Signal
CN13	ZONE1 ON/OFF	Zone1 ON/OFF Switch Signal
CN13	ZONE2 ON/OFF	Zone2 ON/OFF Switch Signal
CN28	STOP	Externally Controlled Stop
CN47	SG SIGNAL	SG READY 1 Signal
CN47	EVU SIGNAL	SG READY 2 Signal
CN6	controller A/B	Wired Controller A/B
CN4	PQ	Indoor Unit Communication With Outdoor Unit
CN2	Modbus	Third Party Agreement
CN2	IO card	The Indoor Unit Communicates With The I/O Board
CN52	EM	Energy Meter Interface
CN52	HM	Heat Meter Interface
CN5	OEM WIFI	TUYA WIFI Interface
CN11	hon WIFI	CANDY WIFI Interface

9. Electric Characteristics

Hydro ODU	Power Supply					MCA (A)	MFA (A)	MSC(A)	OFM	
	Hz	Voltage	Phase	Min	Max				Kw	FLA (A)
AW042HUGHA	50Hz	220-240V	1Ph	198V	264V	13.5	16	2	0.16	1.1
AW062HUGHA	50Hz	220-240V	1Ph	198V	264V	13.5	16	2	0.16	1.1
AW082HUGHA	50Hz	220-240V	1Ph	198V	264V	18.6	20	2	0.16	1.1
AW102HUGHA	50Hz	220-240V	1Ph	198V	264V	18.6	20	2	0.16	1.1
AW122HVGHA	50Hz	220-240V	1Ph	198V	264V	30.6	32	2	0.375	2.3
AW142HVGHA	50Hz	220-240V	1Ph	198V	264V	30.6	32	2	0.375	2.3
AW162HVGHA	50Hz	220-240V	1Ph	198V	264V	34.8	40	2	0.375	2.3
AW10NHUGHA	50Hz	380-415V	3Ph	342V	456.5V	6.2	16	2	0.375	0.8
AW12NHVGHA	50Hz	380-415V	3Ph	342V	456.5V	10.2	16	2	0.375	0.8
AW14NHVGHA	50Hz	380-415V	3Ph	342V	456.5V	10.2	16	2	0.375	0.8
AW16NHVGHA	50Hz	380-415V	3Ph	342V	456.5V	11.6	16	2	0.375	0.8

Remark:

MCA: Min. Circuit Amps. (A)
MFA: Max. Fuse Amps. (A)
MSC: Max. Starting Amps. (A)
OFM: Outdoor Fan Motor
FLA: Full Load Amps. (A)
kW: Rated Motor Output (kW)

10. Capacity Tables

10.1 Cooling capacity

AW042										
Water Out(°C)		5		7		14		18		25	
Ambient Temperature(°C)		Capacity	EER	Capacity	EER	Capacity	EER	Capacity	EER	Capacity	EER
Max.	10	2701	2.83	3859	4.64	4350	6.04	4631	7.06	4769	7.74
	15	2585	2.66	3822	4.37	4282	5.58	4544	6.43	4464	7.20
	25	2353	2.34	3749	3.92	4145	4.80	4372	5.41	3854	6.12
	35	2121	2.03	3675	3.53	4009	4.18	4200	4.61	3244	5.08
	48	1819	1.67	2021	2.43	2249	3.03	2379	3.44	2451	3.77
Nom.	10	2573	3.24	3675	4.86	4143	6.49	4410	7.73	4542	8.85
	15	2462	3.04	3640	4.58	4078	6.00	4328	7.04	4252	8.22
	25	2241	2.67	3570	4.10	3948	5.17	4164	5.92	3671	7.00
	35	2020	2.32	3500	3.70	3818	4.50	4000	5.05	3089	5.81
	48	1733	1.91	1925	2.54	2142	3.25	2266	3.76	2334	4.31
Mid.	10	1405	3.43	1929	5.45	2175	7.16	2315	8.41	2385	9.33
	15	1344	3.22	1911	5.14	2141	6.61	2272	7.65	2232	8.67
	25	1224	2.82	1874	4.61	2073	5.69	2186	6.43	1927	7.38
	35	1103	2.46	1838	4.16	2005	4.96	2100	5.49	1622	6.12
	48	946	2.02	1011	2.86	1125	3.59	1190	4.09	1225	4.54
Min.	10	675	3.54	965	6.10	1087	7.95	1158	9.29	1216	10.67
	15	646	3.33	956	5.75	1070	7.34	1136	8.46	1138	9.92
	25	588	2.92	937	5.15	1036	6.32	1093	7.11	983	8.44
	35	530	2.54	919	4.65	1002	5.51	1050	6.07	827	7.00
	48	455	2.09	505	3.19	562	3.98	595	4.52	625	5.20

AW062										
Water Out(°C)		5		7		14		18		25	
Ambient Temperature(°C)		Capacity	EER	Capacity	EER	Capacity	EER	Capacity	EER	Capacity	EER
Max.	10	3859	2.79	5513	4.57	6425	6.00	6946	6.99	7154	7.67
	15	3693	2.63	5460	4.31	6323	5.54	6817	6.37	6696	7.12
	25	3361	2.30	5355	3.86	6121	4.77	6558	5.35	5781	6.06
	35	3030	2.01	5250	3.48	5918	4.15	6300	4.57	4866	5.03
	48	2599	1.65	2888	2.40	3321	3.00	3569	3.40	3676	3.73
Nom.	10	3675	3.19	5250	4.79	6119	6.45	6615	7.66	6813	8.76
	15	3517	3.00	5200	4.52	6022	5.96	6492	6.97	6378	8.14
	25	3201	2.63	5100	4.05	5829	5.13	6246	5.86	5506	6.93
	35	2886	2.29	5000	3.65	5636	4.47	6000	5.00	4634	5.75
	48	2475	1.88	2750	2.51	3163	3.23	3399	3.73	3501	4.27
Mid.	10	2007	3.38	2756	5.38	3212	7.11	3473	8.32	3577	9.24
	15	1920	3.17	2730	5.07	3162	6.56	3408	7.58	3348	8.58
	25	1748	2.79	2678	4.54	3060	5.65	3279	6.37	2891	7.30
	35	1575	2.43	2625	4.10	2959	4.92	3150	5.43	2433	6.06
	48	1351	1.99	1444	2.82	1661	3.56	1784	4.05	1838	4.50
Min.	10	965	3.49	1378	6.02	1606	7.90	1736	9.20	1824	10.57
	15	923	3.28	1365	5.68	1581	7.29	1704	8.38	1708	9.82
	25	840	2.88	1339	5.08	1530	6.27	1640	7.04	1474	8.36
	35	757	2.51	1313	4.58	1480	5.46	1575	6.01	1241	6.93
	48	650	2.06	722	3.15	830	3.95	892	4.48	937	5.14

AW082											
Water Out(°C)		5		7		14		18		25	
Ambient Temperature(°C)		Capacity	EER	Capacity	EER	Capacity	EER	Capacity	EER	Capacity	EER
Max.	10	5248	2.64	7497	4.32	8251	5.64	8682	6.64	8943	7.28
	15	5022	2.48	7426	4.08	8123	5.21	8521	6.05	8371	6.77
	25	4571	2.18	7283	3.65	7865	4.49	8198	5.08	7226	5.76
	35	4121	1.90	7140	3.29	7608	3.91	7875	4.34	6082	4.78
	48	3534	1.56	3927	2.26	4267	2.83	4461	3.23	4595	3.55
Nom.	10	4998	3.02	7140	4.53	7858	6.06	8269	7.27	8517	8.32
	15	4783	2.84	7072	4.27	7736	5.60	8115	6.62	7972	7.74
	25	4354	2.49	6936	3.83	7491	4.83	7808	5.57	6882	6.58
	35	3924	2.17	6800	3.45	7245	4.21	7500	4.75	5793	5.46
	48	3366	1.78	3740	2.37	4064	3.04	4249	3.54	4376	4.05
Mid.	10	2729	3.19	3749	5.09	4126	6.68	4341	7.91	4471	8.78
	15	2612	3.00	3713	4.80	4061	6.17	4260	7.20	4185	8.15
	25	2377	2.63	3641	4.30	3933	5.32	4099	6.05	3613	6.94
	35	2143	2.29	3570	3.87	3804	4.64	3938	5.16	3041	5.76
	48	1838	1.88	1964	2.66	2133	3.35	2231	3.85	2298	4.27
Min.	10	1312	3.30	1874	5.69	2063	7.42	2171	8.74	2280	10.04
	15	1256	3.10	1856	5.36	2031	6.86	2130	7.96	2135	9.33
	25	1143	2.72	1821	4.80	1966	5.91	2049	6.69	1843	7.94
	35	1030	2.37	1785	4.33	1902	5.15	1969	5.71	1551	6.59
	48	884	1.95	982	2.98	1067	3.72	1115	4.25	1172	4.89

AW102/10N											
Water Out(°C)		5		7		14		18		25	
Ambient Temperature(°C)		Capacity	EER	Capacity	EER	Capacity	EER	Capacity	EER	Capacity	EER
Max.	10	6560	2.49	9371	4.07	10406	5.20	10997	6.01	11327	6.59
	15	6278	2.34	9282	3.84	10244	4.80	10793	5.47	10603	6.13
	25	5714	2.05	9104	3.44	9918	4.14	10384	4.60	9154	5.21
	35	5151	1.79	8925	3.10	9593	3.60	9975	3.93	7704	4.33
	48	4418	1.47	4909	2.13	5381	2.60	5651	2.93	5820	3.21
Nom.	10	6248	2.84	8925	4.27	9911	5.59	10474	6.58	10788	7.54
	15	5979	2.67	8840	4.02	9756	5.16	10279	6.00	10098	7.00
	25	5442	2.34	8670	3.60	9446	4.45	9890	5.04	8718	5.96
	35	4905	2.04	8500	3.25	9136	3.88	9500	4.30	7337	4.94
	48	4208	1.68	4675	2.23	5125	2.80	5382	3.21	5543	3.67
Mid.	10	3411	3.01	4686	4.79	5203	6.16	5499	7.16	5664	7.94
	15	3265	2.83	4641	4.52	5122	5.69	5396	6.52	5301	7.38
	25	2971	2.48	4552	4.05	4959	4.90	5192	5.48	4577	6.28
	35	2678	2.16	4463	3.65	4797	4.27	4988	4.67	3852	5.21
	48	2297	1.77	2454	2.51	2690	3.09	2825	3.48	2910	3.87
Min.	10	1640	3.11	2343	5.36	2602	6.84	2749	7.91	2888	9.09
	15	1570	2.92	2321	5.05	2561	6.32	2698	7.20	2704	8.45
	25	1429	2.56	2276	4.53	2480	5.44	2596	6.06	2334	7.19
	35	1288	2.23	2231	4.08	2398	4.74	2494	5.17	1965	5.96
	48	1104	1.83	1227	2.81	1345	3.43	1413	3.85	1484	4.42

AW122/12N											
Water Out(°C)		5		7		14		18		25	
Ambient Temperature(°C)		Capacity	EER	Capacity	EER	Capacity	EER	Capacity	EER	Capacity	EER
Max.	10	7718	2.56	11025	4.20	12481	5.42	13313	6.29	13712	6.90
	15	7386	2.41	10920	3.96	12285	5.01	13065	5.73	12835	6.41
	25	6723	2.11	10710	3.55	11894	4.31	12570	4.82	11081	5.46
	35	6060	1.84	10500	3.20	11502	3.75	12075	4.11	9326	4.53
	48	5198	1.51	5775	2.20	6453	2.72	6840	3.06	7046	3.36
Nom.	10	7350	2.93	10500	4.40	11886	5.83	12679	6.89	13059	7.89
	15	7034	2.75	10400	4.15	11700	5.38	12443	6.27	12224	7.33
	25	6403	2.42	10200	3.71	11327	4.64	11972	5.28	10553	6.24
	35	5771	2.10	10000	3.35	10955	4.04	11500	4.50	8882	5.17
	48	4950	1.73	5500	2.30	6146	2.92	6515	3.35	6710	3.84
Mid.	10	4013	3.10	5513	4.94	6240	6.42	6656	7.49	6856	8.31
	15	3841	2.91	5460	4.66	6143	5.93	6533	6.82	6417	7.73
	25	3496	2.56	5355	4.17	5947	5.11	6285	5.73	5540	6.57
	35	3151	2.23	5250	3.76	5751	4.45	6038	4.89	4663	5.46
	48	2703	1.83	2888	2.59	3227	3.22	3420	3.65	3523	4.05
Min.	10	1929	3.21	2756	5.52	3120	7.13	3328	8.28	3497	9.51
	15	1846	3.01	2730	5.21	3071	6.59	3266	7.54	3273	8.84
	25	1681	2.64	2678	4.66	2973	5.67	3143	6.34	2826	7.52
	35	1515	2.30	2625	4.21	2876	4.94	3019	5.41	2378	6.24
	48	1299	1.89	1444	2.89	1613	3.57	1710	4.03	1797	4.63

AW142/14N											
Water Out(°C)		5		7		14		18		25	
Ambient Temperature(°C)		Capacity	EER	Capacity	EER	Capacity	EER	Capacity	EER	Capacity	EER
Max.	10	9261	2.45	13230	4.01	14756	5.17	15628	6.01	16097	6.59
	15	8863	2.30	13104	3.78	14525	4.77	15337	5.47	15067	6.13
	25	8067	2.02	12852	3.39	14064	4.11	14756	4.60	13008	5.21
	35	7272	1.76	12600	3.05	13602	3.58	14175	3.93	10948	4.33
	48	6237	1.44	6930	2.10	7630	2.59	8030	2.93	8271	3.21
Nom.	10	8820	2.80	12600	4.20	14053	5.56	14884	6.58	15330	7.54
	15	8441	2.63	12480	3.96	13834	5.13	14607	6.00	14350	7.00
	25	7683	2.31	12240	3.55	13394	4.42	14054	5.04	12388	5.96
	35	6925	2.01	12000	3.20	12955	3.85	13500	4.30	10427	4.94
	48	5940	1.65	6600	2.20	7267	2.78	7648	3.21	7877	3.67
Mid.	10	4816	2.96	6615	4.72	7378	6.12	7814	7.16	8048	7.94
	15	4609	2.78	6552	4.45	7263	5.65	7669	6.52	7534	7.38
	25	4195	2.44	6426	3.98	7032	4.87	7378	5.48	6504	6.28
	35	3781	2.13	6300	3.59	6801	4.24	7088	4.67	5474	5.21
	48	3243	1.75	3465	2.47	3815	3.07	4015	3.48	4136	3.87
Min.	10	2315	3.06	3308	5.28	3689	6.80	3907	7.91	4105	9.09
	15	2216	2.88	3276	4.98	3631	6.28	3834	7.20	3842	8.45
	25	2017	2.53	3213	4.46	3516	5.41	3689	6.06	3317	7.19
	35	1818	2.20	3150	4.02	3401	4.71	3544	5.17	2792	5.96
	48	1559	1.80	1733	2.76	1908	3.41	2008	3.85	2109	4.42

AW162/16N											
Water Out(°C)		5		7		14		18		25	
Ambient Temperature(°C)		Capacity	EER	Capacity	EER	Capacity	EER	Capacity	EER	Capacity	EER
Max.	10	10805	2.37	15435	3.88	17031	4.88	17943	5.59	18481	6.13
	15	10340	2.23	15288	3.66	16765	4.51	17610	5.09	17299	5.70
	25	9412	1.96	14994	3.28	16234	3.88	16942	4.28	14935	4.85
	35	8483	1.70	14700	2.96	15702	3.38	16275	3.65	12570	4.02
	48	7277	1.40	8085	2.03	8807	2.45	9220	2.72	9496	2.99
Nom.	10	10290	2.71	14700	4.07	16220	5.25	17089	6.13	17601	7.01
	15	9848	2.55	14560	3.84	15967	4.85	16771	5.58	16475	6.51
	25	8964	2.24	14280	3.44	15461	4.18	16136	4.69	14224	5.54
	35	8079	1.95	14000	3.10	14955	3.64	15500	4.00	11972	4.60
	48	6930	1.60	7700	2.13	8388	2.63	8781	2.98	9044	3.41
Mid.	10	5618	2.87	7718	4.57	8516	5.79	8972	6.66	9241	7.39
	15	5377	2.70	7644	4.31	8383	5.34	8805	6.06	8650	6.87
	25	4894	2.37	7497	3.86	8117	4.60	8471	5.10	7467	5.84
	35	4411	2.06	7350	3.48	7851	4.01	8138	4.35	6285	4.85
	48	3784	1.69	4043	2.39	4404	2.90	4610	3.24	4748	3.60
Min.	10	2701	2.97	3859	5.11	4258	6.43	4486	7.36	4713	8.45
	15	2585	2.79	3822	4.82	4191	5.93	4402	6.70	4411	7.86
	25	2353	2.45	3749	4.32	4058	5.11	4236	5.63	3808	6.69
	35	2121	2.13	3675	3.89	3926	4.45	4069	4.81	3205	5.55
	48	1819	1.75	2021	2.68	2202	3.22	2305	3.58	2422	4.12

10.2 Heating capacity

	AW042																															
Water Out(°C)		20		25		30		35		40		45		50		55		60		65		70		75		80	
	Ambient Temperature(°C)	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP
Max.	-25	2465	2.17	2449	2.07	2433	1.96	2417	1.86	2153	1.74	1889	1.61	1626	1.49	1362	1.36	1225	1.23	1087	1.12	——	——	——	——	——	——
	-20	3003	2.66	2984	2.56	2964	2.45	2944	2.34	2653	2.17	2362	2.00	2071	1.83	1780	1.65	1590	1.47	1399	1.36	1209	1.16	——	——	——	——
	-15	3542	3.16	3519	3.04	3495	2.93	3472	2.82	3154	2.60	2836	2.39	2517	2.17	2199	1.95	1955	1.71	1711	1.58	1468	1.32	——	——	——	——
	-10	4080	3.65	4053	3.53	4027	3.42	4000	3.30	3654	3.04	3309	2.77	2963	2.51	2617	2.24	2320	1.94	2023	1.77	1727	1.47	1430	1.19	——	——
	-7	4153	3.95	4122	3.83	4091	3.71	4060	3.59	3762	3.30	3464	3.01	3166	2.71	2868	2.42	2540	2.09	2211	1.88	1882	1.56	1553	1.25	1224	1.01
	-2	4274	4.44	4236	4.32	4198	4.19	4160	4.07	3942	3.73	3723	3.39	3505	3.05	3287	2.72	2905	2.33	2523	2.04	2141	1.68	1759	1.34	1377	1.02
	2	4371	4.84	4327	4.71	4284	4.58	4240	4.46	4085	4.08	3931	3.70	3776	3.33	3622	2.95	3197	2.52	2772	2.16	2348	1.77	1923	1.41	1499	1.06
	7	4492	5.34	4441	5.20	4391	5.07	4340	4.94	4265	4.51	4190	4.09	4115	3.67	4040	3.25	3562	2.76	3085	2.30	2607	1.88	2129	1.48	1651	1.11
	12	4613	5.45	4555	5.31	4498	5.17	4440	5.04	4226	4.47	4012	3.91	3798	3.34	3584	2.78	3228	2.40	2872	2.05	2516	1.73	2160	1.44	1804	1.16
	15	4685	5.52	4624	5.38	4562	5.23	4500	5.10	4317	4.54	4135	3.98	3952	3.42	3769	2.86	3394	2.47	3020	2.11	2645	1.78	2270	1.47	1896	1.18
	20	4807	5.64	4738	5.49	4669	5.34	4600	5.20	4470	4.64	4339	4.09	4209	3.54	4078	2.99	3672	2.57	3266	2.19	2860	1.84	2454	1.52	2048	1.22
	25	——	——	4852	5.60	4776	5.44	4700	5.29	4622	4.75	4544	4.20	4465	3.65	4387	3.11	3950	2.67	3513	2.27	3075	1.90	2638	1.57	——	——
	30	——	——	——	——	4883	5.55	4800	5.39	4774	4.85	4748	4.31	4722	3.76	4696	3.22	4228	2.76	3759	2.34	3291	1.96	——	——	——	——
	35	——	——	——	——	——	——	4900	5.49	4926	4.95	4953	4.41	4979	3.87	5005	3.33	4312	2.35	3797	1.85	——	——	——	——	——	——
Nom.	-25	2280	2.26	2244	2.16	2208	2.06	2171	1.96	1966	1.83	1760	1.70	1554	1.57	1349	1.44	1210	1.31	1071	1.20	——	——	——	——	——	——
	-20	2580	2.86	2539	2.74	2498	2.63	2457	2.51	2284	2.32	2110	2.12	1936	1.93	1763	1.73	1568	1.56	1373	1.46	1179	1.25	——	——	——	——
	-15	2880	3.46	2834	3.32	2789	3.19	2743	3.07	2601	2.81	2460	2.55	2319	2.29	2177	2.03	1927	1.82	1676	1.70	1426	1.44	——	——	——	——
	-10	3180	4.05	3130	3.90	3079	3.76	3029	3.62	2919	3.30	2810	2.98	2701	2.65	2591	2.33	2285	2.07	1979	1.91	1673	1.61	1367	1.31	——	——
	-7	3360	4.41	3307	4.25	3253	4.10	3200	3.95	3110	3.59	3020	3.23	2930	2.87	2840	2.51	2500	2.22	2161	2.03	1821	1.70	1482	1.38	1142	1.06
	-2	3660	5.01	3602	4.83	3544	4.67	3486	4.50	3428	4.08	3370	3.66	3312	3.23	3254	2.81	2859	2.47	2464	2.21	2069	1.85	1673	1.49	1278	1.13
	2	3900	5.48	3838	5.30	3776	5.12	3714	4.95	3682	4.47	3650	4.00	3618	3.52	3586	3.05	3146	2.67	2706	2.34	2266	1.95	1826	1.57	1387	1.18
	7	4200	6.08	4133	5.88	4067	5.69	4000	5.50	4000	4.96	4000	4.43	4000	3.89	4000	3.35	3504	2.92	3009	2.50	2513	2.08	2018	1.66	1522	1.25
	12	4288	6.10	4219	5.91	4151	5.72	4083	5.54	4097	5.00	4111	4.47	4125	3.93	4139	3.40	3643	2.96	3147	2.54	2650	2.12	2154	1.71	1658	1.31
	15	4340	6.11	4271	5.92	4202	5.74	4133	5.56	4156	5.03	4178	4.49	4200	3.96	4222	3.42	3726	2.99	3229	2.56	2733	2.15	2236	1.74	1740	1.34
	20	4428	6.13	4357	5.95	4287	5.77	4217	5.60	4253	5.06	4289	4.53	4325	4.00	4361	3.46	3864	3.03	3367	2.60	2870	2.18	2373	1.78	1875	**1.39**
	25	——	——	4443	5.97	4372	5.80	4300	5.63	4350	5.10	4400	4.57	4450	4.04	4500	3.51	4002	3.06	3504	2.63	3007	2.22	2509	1.82	——	——
	30	——	——	——	——	4456	5.83	4383	5.67	4447	5.14	4511	4.61	4575	4.08	4639	3.55	4141	3.10	3642	2.67	3144	2.26	——	——	——	——
	35	——	——	——	——	——	——	4467	5.70	4544	5.17	4622	4.64	4700	4.11	4778	3.58	4223	2.63	3679	2.11	——	——	——	——	——	——

	AW042																															
Water Out(°C)		20		25		30		35		40		45		50		55		60		65		70		75		80							
	Ambient Temperature(°C)	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP						
Mid.	-25	1150	2.23	1134	2.15	1117	2.06	1101	1.98	987	1.87	873	1.77	759	1.67	645	1.57	580	1.48	515	1.43	——	——	——	——	——	——						
	-20	1283	2.71	1262	2.61	1242	2.51	1221	2.40	1119	2.26	1016	2.12	914	1.98	812	1.83	729	1.72	646	1.70	564	1.56	——	——	——	——						
	-15	1415	3.19	1390	3.07	1366	2.95	1341	2.83	1250	2.65	1160	2.47	1069	2.28	978	2.10	878	1.96	777	1.94	677	1.77	——	——	——	——						
	-10	1547	3.67	1519	3.53	1490	3.40	1461	3.26	1382	3.04	1303	2.81	1224	2.59	1145	2.36	1027	2.20	909	2.15	790	1.95	672	1.74	——	——						
	-7	1627	3.96	1595	3.81	1564	3.66	1533	3.52	1461	3.27	1389	3.02	1317	2.77	1246	2.52	1116	2.34	987	2.27	858	2.06	729	1.82	600	1.57						
	-2	1759	4.44	1724	4.27	1688	4.11	1653	3.95	1593	3.66	1533	3.37	1473	3.07	1413	2.78	1265	2.58	1118	2.45	971	2.21	824	1.95	677	1.67						
	2	1865	4.83	1826	4.64	1787	4.47	1749	4.29	1698	3.97	1647	3.64	1597	3.32	1546	2.99	1385	2.77	1223	2.59	1062	2.33	901	2.05	739	1.75						
	7	1997	5.31	1954	5.10	1912	4.91	1869	4.72	1830	4.36	1791	3.99	1752	3.62	1713	3.25	1534	3.01	1355	2.74	1175	2.46	996	2.16	817	1.84						
	12	2130	5.57	2083	5.36	2036	5.15	1989	4.95	1961	4.57	1934	4.19	1907	3.82	1880	3.44	1683	3.17	1486	2.89	1289	2.58	1091	2.26	894	1.91						
	15	2209	5.73	2160	5.50	2110	5.29	2061	5.08	2041	4.70	2020	4.31	2000	3.93	1980	3.54	1772	3.26	1564	2.97	1357	2.65	1149	2.31	941	1.96						
	20	2341	5.98	2288	5.75	2234	5.52	2181	5.30	2172	4.90	2164	4.51	2155	4.11	2147	3.71	1921	3.41	1696	3.09	1470	2.76	1244	2.40	1018	**2.02**						
	25	——	——	2416	5.98	2358	5.74	2301	5.51	2304	5.10	2307	4.69	2311	4.28	2314	3.86	2070	3.54	1827	3.21	1583	2.85	1340	2.48	——	——						
	30	——	——	——	——	2482	5.96	2421	5.72	2436	5.29	2451	4.86	2466	4.44	2481	4.01	2219	3.67	1958	3.32	1696	2.94	——	——	——	——						
	35	——	——	——	——	——	——	2540	5.92	2567	5.47	2594	5.03	2621	4.59	2648	4.14	2264	3.12	1978	2.62	——	——	——	——	——	——						
Min.	-25	598	2.37	586	2.30	574	2.24	563	2.17	502	2.07	442	1.97	381	1.88	320	1.78	289	1.71	257	1.69	——	——	——	——	——	——						
	-20	665	3.02	652	2.93	639	2.84	625	2.75	572	2.58	518	2.41	464	2.24	410	2.07	368	1.97	326	1.99	283	1.85	——	——	——	——						
	-15	733	3.67	718	3.55	703	3.44	688	3.32	641	3.08	594	2.84	547	2.60	500	2.35	447	2.23	394	2.26	341	2.08	——	——	——	——						
	-10	801	4.31	784	4.17	768	4.04	751	3.90	711	3.59	670	3.27	630	2.96	589	2.64	526	2.49	462	2.49	399	2.28	335	2.05	——	——						
	-7	841	4.70	824	4.55	806	4.40	789	4.25	752	3.89	716	3.53	680	3.17	643	2.81	573	2.65	503	2.62	434	2.39	364	2.14	294	1.85						
	-2	909	5.35	890	5.17	871	5.00	852	4.83	822	4.39	792	3.96	763	3.53	733	3.10	652	2.91	572	2.81	491	2.56	411	2.28	330	1.95						
	2	963	5.86	943	5.67	922	5.48	902	5.29	878	4.80	853	4.31	829	3.82	805	3.33	716	3.11	627	2.95	538	2.68	449	2.37	360	2.03						
	7	1031	6.51	1009	6.29	987	6.08	965	5.87	947	5.30	929	4.74	912	4.18	894	3.62	795	3.38	695	3.11	596	2.81	496	2.48	396	2.11						
	12	1098	6.79	1075	6.56	1051	6.34	1027	6.13	1017	5.54	1006	4.96	995	4.38	984	3.80	874	3.54	764	3.25	653	2.94	543	2.58	433	2.18						
	15	1139	6.95	1114	6.72	1090	6.50	1065	6.28	1058	5.68	1051	5.09	1045	4.49	1038	3.90	921	3.63	805	3.33	688	3.00	572	2.64	455	2.22						
	20	1207	7.21	1180	6.98	1154	6.75	1128	6.52	1128	5.90	1128	5.29	1128	4.67	1128	4.06	1000	3.77	873	3.46	746	3.11	619	2.72	492	**2.29**						
	25	——	——	1246	——	——	——	1197	6.12	1204	5.48	1211	4.84	1217	4.20	1079	3.90	942	3.57	804	3.20	666	2.80	——	——	——	——						
	30	——	——	——	——	1283	——	1254	6.98	1267	6.32	1280	5.66	1294	5.00	1307	4.34	1158	4.02	1010	3.67	862	3.29	——	——	——	——						
	35	——	——	——	——	——	——	1316	7.20	1336	6.51	1356	5.83	1376	5.15	1397	4.46	1182	3.42	1020	2.90	——	——	——	——	——	——						

	Water Out(°C)	AW062																													
		20		25		30		35		40		45		50		55		60		65		70		75		80	
	Ambient Temperature(°C)	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP
Max.	-25	3805	2.16	3780	2.05	3755	1.95	3730	1.84	3316	1.70	2903	1.57	2489	1.44	2075	1.30	1865	1.17	1654	1.04	——	——	——	——	——	——
	-20	4576	2.68	4546	2.57	4517	2.46	4487	2.35	4039	2.16	3592	1.98	3145	1.80	2698	1.61	2406	1.43	2114	1.28	1823	1.08	——	——	——	——
	-15	5348	3.20	5313	3.09	5278	2.97	5243	2.85	4763	2.62	4282	2.39	3801	2.16	3320	1.93	2947	1.69	2574	1.52	2201	1.27	——	——	——	——
	-10	6120	3.72	6080	3.60	6040	3.48	6000	3.36	5486	3.08	4972	2.80	4457	2.52	3943	2.24	3489	1.95	3034	1.73	2580	1.44	2125	1.16	——	——
	-7	6288	4.04	6241	3.91	6193	3.78	6146	3.66	5689	3.35	5231	3.04	4774	2.73	4317	2.43	3813	2.10	3310	1.86	2807	1.54	2304	1.24	1801	1.01
	-2	6569	4.56	6509	4.42	6449	4.29	6389	4.17	6027	3.81	5664	3.45	5302	3.09	4939	2.74	4355	2.36	3770	2.06	3186	1.70	2601	1.36	2017	1.03
	2	6794	4.97	6724	4.84	6654	4.70	6584	4.57	6297	4.18	6011	3.78	5724	3.38	5437	2.99	4788	2.57	4138	2.21	3489	1.82	2839	1.45	2189	1.09
	7	7074	5.50	6992	5.35	6910	5.21	6828	5.08	6636	4.63	6444	4.19	6252	3.74	6060	3.30	5329	2.83	4598	2.39	3867	1.97	3136	1.56	2405	1.17
	12	7355	5.68	7260	5.53	7166	5.38	7071	5.24	6604	4.62	6138	4.00	5671	3.38	5205	2.76	4688	2.43	4171	2.11	3655	1.81	3138	1.52	2621	1.24
	15	7523	5.79	7421	5.63	7319	5.48	7217	5.34	6780	4.71	6342	4.09	5905	3.47	5468	2.85	4924	2.51	4381	2.18	3838	1.87	3294	1.57	2751	1.29
	20	7804	5.97	7689	5.81	7575	5.65	7460	5.49	7072	4.87	6683	4.25	6294	3.62	5906	3.00	5318	2.64	4730	2.30	4142	1.97	3554	1.65	2967	1.35
	25	——	——	7958	5.98	7831	5.81	7704	5.65	7364	5.02	7024	4.40	6684	3.77	6344	3.14	5711	2.77	5079	2.41	4447	2.06	3815	1.73	——	——
	30	——	——	——	——	8086	5.98	7947	5.81	7656	5.18	7364	4.54	7073	3.91	6781	3.28	6105	2.89	5428	2.51	4752	2.15	——	——	——	——
	35	——	——	——	——	——	——	8191	5.96	7948	5.32	7705	4.69	7462	4.05	7219	3.41	6227	2.45	5483	1.98	——	——	——	——	——	——
Nom.	-25	3535	2.23	3479	2.12	3423	2.01	3367	1.90	3039	1.76	2711	1.63	2383	1.49	2055	1.35	1842	1.22	1629	1.07	——	——	——	——	——	——
	-20	3967	2.81	3904	2.68	3841	2.56	3778	2.44	3501	2.24	3225	2.05	2948	1.85	2671	1.66	2374	1.47	2076	1.32	1778	1.09	——	——	——	——
	-15	4399	3.38	4329	3.25	4260	3.11	4190	2.98	3964	2.72	3739	2.47	3513	2.21	3288	1.96	2905	1.72	2522	1.55	2140	1.28	——	——	——	——
	-10	4831	3.96	4755	3.81	4678	3.66	4601	3.52	4427	3.20	4253	2.89	4078	2.58	3904	2.26	3437	1.98	2969	1.76	2502	1.45	2034	1.15	——	——
	-7	5090	4.30	5010	4.15	4929	3.99	4848	3.84	4704	3.49	4561	3.14	4417	2.80	4274	2.45	3755	2.13	3237	1.88	2719	1.54	2200	1.22	1682	0.91
	-2	5522	4.88	5435	4.71	5347	4.54	5259	4.38	5167	3.97	5075	3.57	4983	3.16	4890	2.75	4287	2.38	3684	2.07	3080	1.70	2477	1.34	1874	0.99
	2	5868	5.34	5775	5.16	5682	4.98	5589	4.81	5537	4.36	5486	3.90	5435	3.45	5384	3.00	4712	2.58	4041	2.22	3370	1.82	2698	1.43	2027	1.05
	7	6300	5.91	6200	5.72	6100	5.53	6000	5.35	6000	4.84	6000	4.33	6000	3.81	6000	3.30	5244	2.84	4488	2.39	3731	1.95	2975	1.53	2219	1.13
	12	6563	6.05	6458	5.86	6354	5.68	6250	5.50	6229	4.96	6208	4.42	6188	3.88	6167	3.35	5415	2.88	4664	2.44	3913	2.01	3162	1.60	2411	1.20
	15	6720	6.14	6613	5.95	6507	5.76	6400	5.58	6367	5.03	6333	4.48	6300	3.92	6267	3.37	5518	2.91	4770	2.47	4022	2.04	3274	1.63	2526	1.24
	20	6983	6.27	6872	6.08	6761	5.90	6650	5.72	6596	5.15	6542	4.57	6488	3.99	6433	3.42	5690	2.96	4947	2.52	4204	2.09	3461	1.69	2718	**1.30**
	25	——	——	7130	6.21	7015	6.03	6900	5.86	6825	5.26	6750	4.66	6675	4.06	6600	3.46	5862	3.00	5124	2.56	4386	2.14	3648	1.75	——	——
	30	——	——	——	——	7269	6.16	7150	5.99	7054	5.37	6958	4.75	6863	4.12	6767	3.50	6034	3.04	5301	2.61	4567	2.19	——	——	——	——
	35	——	——	——	——	——	——	7400	6.12	7283	5.48	7167	4.83	7050	4.18	6933	3.54	6154	2.59	5354	2.06	——	——	——	——	——	——

		AW062																													
	Water Out(°C)	20		25		30		35		40		45		50		55		60		65		70		75		80	
	Ambient Temperature(°C)	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP
Mid.	-25	1812	2.25	1785	2.16	1759	2.08	1733	1.99	1544	1.87	1355	1.74	1165	1.62	976	1.50	878	1.40	780	1.33	—	—	—	—	—	—
	-20	2046	2.78	2013	2.70	1980	2.61	1946	2.53	1763	2.34	1580	2.14	1396	1.95	1213	1.76	1089	1.65	966	1.59	843	1.45	—	—	—	—
	-15	2281	3.32	2240	3.23	2200	3.14	2160	3.06	1982	2.80	1805	2.54	1627	2.29	1450	2.03	1301	1.90	1152	1.84	1003	1.67	—	—	—	—
	-10	2515	3.85	2468	3.77	2420	3.68	2373	3.59	2201	3.27	2030	2.94	1858	2.62	1687	2.30	1512	2.15	1338	2.07	1164	1.88	990	1.68	—	—
	-7	2656	4.17	2604	4.09	2553	4.00	2501	3.91	2333	3.55	2165	3.19	1997	2.82	1829	2.46	1639	2.30	1450	2.20	1260	2.00	1071	1.78	881	1.54
	-2	2891	4.71	2832	4.62	2773	4.53	2714	4.44	2552	4.01	2390	3.59	2228	3.16	2066	2.73	1851	2.55	1636	2.41	1421	2.19	1206	1.95	991	1.69
	2	3078	5.14	3014	5.05	2949	4.96	2885	4.87	2727	4.39	2570	3.91	2413	3.42	2255	2.94	2020	2.75	1785	2.57	1550	2.34	1314	2.08	1079	1.80
	7	3313	5.67	3241	5.58	3170	5.49	3098	5.40	2946	4.85	2795	4.31	2643	3.76	2492	3.21	2231	3.00	1971	2.76	1710	2.51	1450	2.24	1189	1.93
	12	3548	5.99	3469	5.87	3390	5.75	3311	5.63	3166	5.08	3020	4.52	2874	3.97	2729	3.42	2443	3.19	2157	2.95	1871	2.68	1585	2.38	1299	2.05
	15	3688	6.17	3605	6.04	3522	5.90	3439	5.77	3297	5.21	3155	4.65	3013	4.09	2871	3.54	2570	3.30	2269	3.05	1967	2.77	1666	2.46	1365	2.13
	20	3923	6.47	3833	6.31	3743	6.14	3652	5.98	3516	5.42	3380	4.85	3244	4.29	3108	3.73	2781	3.48	2455	3.21	2128	2.92	1801	2.60	1475	**2.24**
	25	—	—	4060	6.57	3963	6.37	3866	6.18	3735	5.61	3605	5.05	3475	4.48	3345	3.91	2993	3.65	2641	3.37	2289	3.06	1937	2.73	—	—
	30	—	—	—	—	4183	6.60	4079	6.38	3955	5.80	3830	5.23	3706	4.65	3582	4.08	3204	3.81	2827	3.52	2449	3.20	—	—	—	—
	35	—	—	—	—	—	—	4292	6.56	4174	5.98	4055	5.40	3937	4.82	3819	4.24	3268	3.24	2855	2.78	—	—	—	—	—	—
Min.	-25	941	2.39	923	2.33	904	2.26	886	2.19	786	2.07	685	1.94	585	1.82	485	1.69	437	1.62	389	1.57	—	—	—	—	—	—
	-20	1061	3.11	1040	3.04	1019	2.97	997	2.90	901	2.67	805	2.44	709	2.22	612	1.99	549	1.89	486	1.87	423	1.73	—	—	—	—
	-15	1181	3.82	1157	3.75	1133	3.67	1109	3.60	1017	3.27	924	2.94	832	2.61	740	2.28	662	2.17	583	2.15	505	1.98	—	—	—	—
	-10	1301	4.53	1274	4.46	1247	4.38	1220	4.31	1132	3.87	1044	3.44	955	3.01	867	2.58	774	2.44	681	2.41	587	2.21	494	1.99	—	—
	-7	1373	4.96	1345	4.88	1316	4.81	1287	4.73	1201	4.23	1115	3.74	1029	3.25	944	2.75	841	2.61	739	2.55	637	2.35	534	2.11	432	1.83
	-2	1493	5.68	1462	5.59	1430	5.51	1399	5.43	1317	4.84	1235	4.24	1153	3.64	1071	3.05	954	2.88	836	2.78	719	2.55	601	2.29	484	1.98
	2	1589	6.25	1556	6.16	1522	6.08	1488	5.99	1409	5.32	1330	4.64	1252	3.96	1173	3.29	1043	3.10	914	2.95	784	2.70	655	2.42	525	2.10
	7	1709	6.96	1673	6.87	1636	6.79	1600	6.70	1525	5.92	1450	5.14	1375	4.36	1300	3.58	1156	3.38	1011	3.15	866	2.88	722	2.58	577	2.23
	12	1829	7.30	1790	7.19	1750	7.07	1711	6.96	1640	6.16	1569	5.37	1499	4.58	1428	3.79	1268	3.57	1108	3.33	949	3.05	789	2.73	629	2.36
	15	1901	7.49	1860	7.37	1819	7.24	1778	7.10	1709	6.30	1641	5.50	1573	4.70	1504	3.90	1335	3.68	1167	3.43	998	3.15	829	2.82	660	2.43
	20	2021	7.81	1977	7.65	1933	7.50	1889	7.34	1825	6.53	1760	5.72	1696	4.90	1632	4.09	1448	3.86	1264	3.60	1080	3.30	896	2.95	712	**2.55**
	25	—	—	2095	7.93	2048	7.75	2001	7.57	1940	6.74	1880	5.91	1819	5.09	1759	4.26	1560	4.02	1361	3.75	1162	3.44	963	3.08	—	—
	30	—	—	—	—	2162	7.99	2112	7.78	2056	6.94	1999	6.10	1943	5.26	1886	4.42	1672	4.18	1458	3.90	1244	3.57	—	—	—	—
	35	—	—	—	—	—	—	2224	7.98	2171	7.13	2119	6.28	2066	5.43	2014	4.58	1706	3.55	1473	3.08	—	—	—	—	—	—

AW082																											
Water Out(°C)		20		25		30		35		40		45		50		55		60		65		70		75		80	
Ambient Temperature(°C)		Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP
Max.	-25	5144	2.16	5111	2.08	5077	1.99	5043	1.91	4395	1.80	3747	1.69	3099	1.57	2451	1.46	2198	1.35	1946	0.97	——	——	——	——	——	——
	-20	6149	2.69	6109	2.59	6069	2.50	6029	2.41	5353	2.24	4677	2.08	4000	1.91	3324	1.75	2956	1.59	2587	1.24	2219	1.07	——	——	——	——
	-15	7155	3.21	7108	3.11	7061	3.01	7014	2.91	6310	2.69	5606	2.47	4902	2.25	4198	2.03	3713	1.82	3229	1.50	2745	1.27	——	——	——	——
	-10	8160	3.74	8107	3.62	8053	3.51	8000	3.40	7268	3.13	6535	2.86	5803	2.59	5071	2.32	4471	2.06	3870	1.74	3270	1.46	2670	1.19	——	——
	-7	8385	4.05	8321	3.93	8258	3.82	8195	3.70	7545	3.40	6895	3.10	6245	2.79	5595	2.49	4925	2.20	4255	1.87	3586	1.57	2916	1.28	2246	1.03
	-2	8759	4.58	8679	4.45	8599	4.32	8519	4.20	8006	3.84	7494	3.49	6981	3.13	6468	2.77	5682	2.44	4897	2.09	4111	1.74	3325	1.41	2540	1.07
	2	9058	4.99	8965	4.86	8872	4.73	8779	4.60	8376	4.20	7973	3.80	7570	3.40	7167	3.00	6288	2.62	5410	2.25	4532	1.87	3653	1.50	2775	1.14
	7	9432	5.52	9323	5.38	9213	5.24	9103	5.10	8838	4.65	8572	4.19	8306	3.74	8040	3.28	7046	2.86	6051	2.44	5057	2.03	4063	1.62	3069	1.22
	12	9806	5.70	9680	5.55	9554	5.40	9428	5.26	8769	4.62	8109	3.98	7450	3.34	6791	2.70	6105	2.41	5419	2.12	4734	1.84	4048	1.56	3362	1.29
	15	10031	5.81	9895	5.65	9759	5.50	9623	5.35	9006	4.72	8389	4.08	7772	3.44	7155	2.80	6432	2.50	5709	2.20	4985	1.91	4262	1.62	3539	1.33
	20	10405	5.98	10252	5.82	10100	5.66	9947	5.51	9401	4.87	8855	4.24	8309	3.60	7763	2.96	6977	2.64	6191	2.32	5405	2.01	4619	1.70	3833	1.40
	25	——	——	10610	5.99	10441	5.82	10272	5.66	9797	5.03	9322	4.39	8846	3.75	8371	3.12	7522	2.77	6673	2.43	5824	2.10	4975	1.78	——	——
	30	——	——	——	——	10782	5.98	10596	5.82	10192	5.18	9788	4.54	9384	3.90	8979	3.26	8067	2.90	7156	2.54	6244	2.19	——	——	——	——
	35	——	——	——	——	——	——	10921	5.97	10587	5.33	10254	4.69	9921	4.04	9587	3.40	8229	2.46	7227	2.01	——	——	——	——	——	——
Nom.	-25	4790	2.23	4714	2.14	4638	2.05	4562	1.97	4029	1.85	3496	1.74	2963	1.62	2430	1.51	2175	1.40	1919	1.01	——	——	——	——	——	——
	-20	5354	2.81	5269	2.70	5184	2.60	5099	2.49	4650	2.32	4200	2.15	3750	1.98	3300	1.80	2925	1.64	2549	1.29	2173	1.09	——	——	——	——
	-15	5918	3.38	5824	3.26	5731	3.14	5637	3.02	5270	2.79	4904	2.56	4537	2.33	4171	2.10	3674	1.88	3178	1.55	2682	1.30	——	——	——	——
	-10	6482	3.96	6380	3.82	6277	3.68	6174	3.55	5891	3.26	5607	2.97	5324	2.68	5041	2.39	4424	2.12	3808	1.79	3191	1.49	2574	1.20	——	——
	-7	6821	4.30	6713	4.15	6604	4.01	6496	3.87	6263	3.54	6030	3.22	5796	2.90	5563	2.57	4874	2.27	4185	1.93	3496	1.60	2807	1.28	2118	0.96
	-2	7385	4.88	7268	4.71	7150	4.55	7033	4.40	6883	4.02	6733	3.63	6583	3.25	6433	2.87	5624	2.51	4815	2.14	4005	1.77	3196	1.41	2387	1.04
	2	7836	5.34	7712	5.16	7587	4.99	7463	4.82	7380	4.39	7296	3.96	7213	3.53	7130	3.10	6224	2.70	5318	2.31	4413	1.90	3507	1.50	2601	1.11
	7	8400	5.91	8267	5.72	8133	5.53	8000	5.35	8000	4.86	8000	4.38	8000	3.89	8000	3.40	6974	2.95	5948	2.50	4922	2.06	3895	1.62	2869	1.18
	12	8750	6.05	8611	5.86	8472	5.68	8333	5.50	8306	4.98	8278	4.47	8250	3.96	8222	3.45	7205	2.99	6188	2.55	5171	2.11	4154	1.68	3137	1.26
	15	8960	6.14	8818	5.95	8676	5.76	8533	5.58	8489	5.06	8444	4.53	8400	4.00	8356	3.47	7344	3.02	6333	2.57	5321	2.14	4310	1.71	3298	1.30
	20	9310	6.27	9162	6.08	9014	5.90	8867	5.72	8794	5.17	8722	4.62	8650	4.07	8578	3.52	7576	3.06	6573	2.62	5571	2.19	4569	1.77	3566	**1.36**
	25	——	——	9507	6.21	9353	6.03	9200	5.86	9100	5.29	9000	4.71	8900	4.14	8800	3.56	7807	3.10	6814	2.66	5821	2.23	4828	1.82	——	——
	30	——	——	——	——	9692	6.16	9533	5.99	9406	5.40	9278	4.80	9150	4.20	9022	3.60	8038	3.14	7054	2.70	6071	2.28	——	——	——	——
	35	——	——	——	——	——	——	9867	6.12	9711	5.50	9556	4.88	9400	4.26	9244	3.65	8199	2.67	7125	2.13	——	——	——	——	——	——

	Water Out(°C)	20		25		30		35		40		45		50		55		60		65		70		75		80	
	Ambient Temperature(°C)	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP
Mid.	-25	2456	2.25	2421	2.18	2386	2.11	2350	2.04	2048	1.92	1746	1.81	1443	1.70	1141	1.58	1026	1.51	911	1.21	——	——	——	——	——	——
	-20	2766	2.79	2721	2.71	2677	2.64	2632	2.57	2341	2.38	2050	2.20	1759	2.01	1468	1.83	1318	1.73	1167	1.50	1016	1.40	——	——	——	——
	-15	3076	3.33	3022	3.25	2967	3.17	2913	3.10	2634	2.84	2355	2.58	2075	2.32	1796	2.07	1610	1.96	1423	1.77	1236	1.64	——	——	——	——
	-10	3386	3.87	3322	3.79	3258	3.71	3195	3.63	2927	3.30	2659	2.97	2391	2.64	2124	2.31	1901	2.18	1679	2.02	1457	1.87	1235	1.70	——	——
	-7	3572	4.19	3502	4.11	3433	4.03	3363	3.95	3103	3.57	2842	3.20	2581	2.83	2320	2.45	2077	2.32	1833	2.16	1589	2.00	1345	1.82	1102	1.60
	-2	3881	4.73	3803	4.65	3724	4.56	3645	4.48	3396	4.03	3146	3.58	2897	3.14	2648	2.69	2369	2.55	2089	2.39	1810	2.20	1530	2.00	1251	1.76
	2	4129	5.16	4043	5.07	3956	4.99	3870	4.90	3630	4.40	3390	3.89	3150	3.39	2910	2.89	2602	2.73	2294	2.56	1986	2.36	1678	2.13	1370	1.87
	7	4439	5.70	4343	5.61	4247	5.52	4151	5.43	3923	4.86	3695	4.28	3466	3.70	3238	3.13	2894	2.95	2550	2.76	2206	2.54	1863	2.29	1519	2.01
	12	4749	6.01	4643	5.89	4538	5.78	4433	5.66	4216	5.08	3999	4.50	3782	3.93	3565	3.35	3186	3.16	2806	2.95	2427	2.71	2047	2.44	1668	2.13
	15	4935	6.19	4824	6.06	4713	5.92	4602	5.79	4392	5.21	4182	4.63	3972	4.06	3762	3.48	3361	3.28	2960	3.06	2559	2.81	2158	2.53	1757	2.20
	20	5244	6.49	5124	6.32	5004	6.16	4883	6.00	4685	5.42	4486	4.84	4288	4.26	4090	3.68	3653	3.47	3216	3.23	2780	2.96	2343	2.66	1906	**2.32**
	25	——	——	5424	6.58	5294	6.39	5164	6.20	4978	5.62	4791	5.04	4604	4.46	4417	3.88	3945	3.65	3473	3.40	3000	3.11	2528	2.79	——	——
	30	——	——	——	——	5585	6.61	5446	6.39	5271	5.81	5095	5.22	4920	4.64	4745	4.06	4237	3.82	3729	3.55	3221	3.25	——	——	——	——
	35	——	——	——	——	——	——	5727	6.57	5564	5.99	5400	5.40	5236	4.82	5073	4.24	4322	3.25	3766	2.81	——	——	——	——	——	——
Min.	-25	1276	2.39	1251	2.34	1226	2.28	1201	2.22	1043	2.10	885	1.97	726	1.85	568	1.73	511	1.67	455	1.43	——	——	——	——	——	——
	-20	1434	3.11	1406	3.05	1377	2.99	1349	2.92	1197	2.69	1046	2.46	895	2.24	744	2.01	666	1.93	588	1.77	511	1.67	——	——	——	——
	-15	1593	3.83	1560	3.76	1528	3.70	1496	3.63	1352	3.29	1207	2.96	1063	2.62	919	2.28	821	2.19	722	2.07	623	1.95	——	——	——	——
	-10	1751	4.55	1715	4.48	1679	4.41	1643	4.33	1506	3.89	1369	3.45	1232	3.00	1095	2.56	975	2.45	856	2.35	736	2.20	616	2.01	——	——
	-7	1846	4.98	1808	4.91	1770	4.83	1731	4.76	1598	4.25	1466	3.74	1333	3.23	1200	2.72	1068	2.60	936	2.50	804	2.34	671	2.14	539	1.90
	-2	2005	5.70	1963	5.62	1921	5.54	1878	5.46	1753	4.85	1627	4.23	1502	3.62	1376	3.00	1223	2.86	1069	2.75	916	2.56	763	2.33	610	2.06
	2	2132	6.28	2087	6.19	2041	6.11	1996	6.03	1876	5.32	1756	4.62	1636	3.92	1516	3.22	1346	3.07	1176	2.93	1006	2.72	836	2.47	666	2.18
	7	2290	6.99	2241	6.91	2192	6.82	2143	6.73	2031	5.92	1918	5.11	1805	4.30	1692	3.50	1501	3.33	1310	3.14	1119	2.91	928	2.64	736	2.31
	12	2449	7.33	2396	7.21	2343	7.10	2291	6.98	2185	6.17	2079	5.35	1973	4.54	1868	3.72	1656	3.54	1443	3.33	1231	3.08	1019	2.79	807	2.44
	15	2544	7.52	2489	7.39	2434	7.26	2379	7.13	2277	6.31	2176	5.49	2075	4.67	1973	3.85	1748	3.66	1524	3.44	1299	3.18	1074	2.88	849	2.51
	20	2703	7.83	2644	7.68	2585	7.52	2526	7.36	2432	6.53	2337	5.70	2243	4.88	2149	4.05	1903	3.85	1657	3.61	1411	3.34	1166	3.02	920	**2.63**
	25	——	——	2798	7.95	2736	7.76	2673	7.58	2586	6.74	2499	5.91	2412	5.07	2324	4.23	2058	4.02	1791	3.78	1524	3.49	1257	3.15	——	——
	30	——	——	——	——	2887	8.00	2820	7.79	2740	6.94	2660	6.10	2580	5.25	2500	4.41	2212	4.18	1924	3.93	1637	3.62	——	——	——	——
	35	——	——	——	——	——	——	2968	7.98	2895	7.13	2822	6.28	2749	5.43	2676	4.57	2256	3.56	1944	3.10	——	——	——	——	——	——

AW102/AW10N																											
Water Out(°C)		20		25		30		35		40		45		50		55		60		65		70		75		80	
Ambient Temperature(°C)		Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP
Max.	-25	6609	2.12	6566	2.05	6522	1.98	6479	1.91	5622	1.82	4764	1.72	3907	1.63	3050	1.53	2736	1.44	2422	0.99	——	——	——	——	——	——
	-20	7806	2.62	7755	2.54	7704	2.46	7653	2.38	6777	2.23	5902	2.09	5027	1.94	4151	1.80	3692	1.65	3233	1.26	2775	1.08	——	——	——	——
	-15	9003	3.11	8944	3.02	8885	2.93	8826	2.84	7933	2.65	7040	2.45	6146	2.26	5253	2.06	4649	1.87	4045	1.51	3441	1.28	——	——	——	——
	-10	10200	3.61	10133	3.51	10067	3.41	10000	3.31	9089	3.07	8177	2.82	7266	2.58	6354	2.33	5606	2.08	4857	1.74	4108	1.47	3359	1.19	——	——
	-7	10481	3.91	10402	3.80	10322	3.70	10243	3.59	9436	3.32	8629	3.04	7822	2.76	7015	2.49	6179	2.21	5343	1.87	4507	1.57	3671	1.27	2835	1.02
	-2	10948	4.41	10849	4.29	10749	4.17	10649	4.06	10016	3.73	9383	3.41	8750	3.08	8117	2.75	7136	2.43	6155	2.07	5174	1.73	4193	1.39	3212	1.06
	2	11323	4.81	11206	4.68	11090	4.56	10974	4.43	10480	4.07	9986	3.70	9492	3.33	8998	2.97	7901	2.60	6804	2.22	5707	1.85	4610	1.48	3513	1.12
	7	11790	5.30	11653	5.17	11516	5.03	11379	4.90	11059	4.48	10740	4.07	10420	3.65	10100	3.23	8858	2.81	7616	2.40	6374	1.99	5132	1.59	3890	1.20
	12	12258	5.47	12100	5.33	11943	5.19	11785	5.05	10874	4.42	9963	3.78	9052	3.15	8142	2.52	7366	2.26	6591	2.00	5816	1.75	5041	1.51	4266	1.26
	15	12539	5.57	12369	5.42	12198	5.28	12028	5.14	11164	4.50	10301	3.87	9437	3.24	8573	2.60	7757	2.33	6941	2.07	6124	1.81	5308	1.55	4492	1.30
	20	13006	5.73	12816	5.58	12625	5.43	12434	5.28	11648	4.64	10863	4.01	10078	3.37	9292	2.73	8407	2.45	7523	2.17	6638	1.89	5753	1.62	4868	1.36
	25	——	——	13263	5.73	13051	5.58	12840	5.42	12133	4.78	11425	4.14	10718	3.50	10011	2.86	9058	2.56	8105	2.26	7151	1.97	6198	1.69	——	——
	30	——	——	——	——	13477	5.72	13245	5.56	12617	4.91	11988	4.27	11359	3.62	10730	2.97	9708	2.66	8687	2.35	7665	2.05	——	——	——	——
	35	——	——	——	——	——	——	13651	5.70	13101	5.05	12550	4.39	12000	3.74	11449	3.08	9903	2.26	8774	1.86	——	——	——	——	——	——
Nom.	-25	6180	2.18	6082	2.11	5984	2.03	5886	1.96	5169	1.86	4453	1.76	3736	1.66	3019	1.56	2702	1.46	2384	1.00	——	——	——	——	——	——
	-20	6855	2.72	6746	2.63	6637	2.54	6529	2.45	5924	2.29	5319	2.13	4715	1.97	4110	1.81	3642	1.67	3173	1.27	2704	1.08	——	——	——	——
	-15	7530	3.26	7410	3.15	7291	3.04	7171	2.94	6679	2.72	6186	2.51	5694	2.29	5201	2.07	4581	1.88	3962	1.51	3342	1.27	——	——	——	——
	-10	8205	3.80	8075	3.67	7945	3.55	7814	3.43	7434	3.15	7053	2.88	6672	2.60	6292	2.33	5521	2.08	4751	1.74	3980	1.45	3210	1.17	——	——
	-7	8610	4.12	8473	3.99	8337	3.85	8200	3.73	7887	3.41	7573	3.10	7260	2.79	6946	2.48	6085	2.21	5224	1.86	4363	1.55	3502	1.24	2641	0.93
	-2	9285	4.66	9138	4.51	8990	4.36	8843	4.22	8641	3.85	8440	3.48	8238	3.11	8037	2.74	7025	2.41	6013	2.06	5001	1.71	3989	1.36	2977	1.01
	2	9825	5.10	9669	4.93	9513	4.77	9357	4.61	9245	4.19	9133	3.78	9021	3.36	8909	2.94	7777	2.58	6644	2.20	5511	1.82	4378	1.45	3245	1.07
	7	10500	5.64	10333	5.45	10167	5.27	10000	5.10	10000	4.63	10000	4.15	10000	3.68	10000	3.20	8716	2.79	7433	2.37	6149	1.96	4865	1.55	3581	1.14
	12	10938	5.77	10764	5.59	10590	5.41	10417	5.24	10382	4.74	10347	4.24	10313	3.74	10278	3.24	9006	2.83	7734	2.41	6461	2.01	5189	1.60	3917	1.20
	15	11200	5.85	11022	5.67	10844	5.49	10667	5.32	10611	4.81	10556	4.30	10500	3.78	10444	3.27	9179	2.85	7914	2.44	6649	2.03	5384	1.63	4119	1.24
	20	11638	5.97	11453	5.80	11268	5.62	11083	5.46	10993	4.92	10903	4.38	10813	3.85	10722	3.31	9469	2.89	8215	2.48	6962	2.07	5708	1.68	4455	**1.30**
	25	——	——	11883	5.92	11692	5.75	11500	5.59	11375	5.03	11250	4.47	11125	3.91	11000	3.35	9758	2.93	8516	2.51	7274	2.11	6033	1.73	——	——
	30	——	——	——	——	12115	5.88	11917	5.71	11757	5.13	11597	4.55	11438	3.97	11278	3.39	10048	2.96	8817	2.55	7587	2.15	——	——	——	——
	35	——	——	——	——	——	——	12333	5.84	12139	5.23	11944	4.63	11750	4.03	11556	3.43	10248	2.52	8905	2.01	——	——	——	——	——	——

AW102/AW10N

	Water Out(°C)	20		25		30		35		40		45		50		55		60		65		70		75		80	
	Ambient Temperature(°C)	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP
Mid.	-25	3173	2.20	3128	2.17	3082	2.14	3036	2.12	2628	2.05	2220	1.98	1811	1.91	1403	1.84	1263	1.80	1124	1.23	——	——	——	——	——	——
	-20	3553	2.71	3496	2.68	3438	2.64	3381	2.60	2983	2.45	2586	2.31	2189	2.16	1791	2.01	1612	1.96	1433	1.50	1253	1.40	——	——	——	——
	-15	3932	3.23	3863	3.18	3794	3.14	3726	3.09	3339	2.86	2952	2.64	2566	2.41	2179	2.18	1960	2.11	1742	1.75	1523	1.63	——	——	——	——
	-10	4312	3.74	4231	3.69	4151	3.63	4070	3.58	3694	3.27	3318	2.96	2943	2.66	2567	2.35	2309	2.26	2051	1.97	1793	1.84	1535	1.68	——	——
	-7	4540	4.05	4452	3.99	4364	3.93	4277	3.87	3907	3.51	3538	3.16	3169	2.81	2799	2.46	2518	2.36	2236	2.10	1955	1.95	1673	1.79	1391	1.60
	-2	4920	4.56	4820	4.49	4721	4.42	4621	4.35	4263	3.92	3904	3.49	3546	3.06	3187	2.63	2866	2.51	2545	2.30	2224	2.14	1903	1.95	1582	1.74
	2	5223	4.97	5115	4.90	5006	4.82	4897	4.74	4547	4.25	4197	3.75	3847	3.26	3498	2.77	3145	2.63	2792	2.45	2440	2.27	2087	2.08	1735	1.85
	7	5603	5.49	5483	5.40	5362	5.32	5241	5.23	4902	4.66	4563	4.08	4224	3.51	3885	2.94	3493	2.79	3102	2.62	2710	2.43	2318	2.22	1926	1.97
	12	5983	5.77	5851	5.66	5718	5.55	5586	5.44	5258	4.86	4930	4.28	4601	3.70	4273	3.12	3842	2.96	3411	2.78	2979	2.58	2548	2.35	2117	2.09
	15	6211	5.94	6071	5.81	5932	5.69	5793	5.56	5471	4.97	5149	4.39	4828	3.81	4506	3.23	4051	3.06	3596	2.87	3141	2.66	2686	2.43	2231	2.16
	20	6590	6.22	6439	6.06	6288	5.90	6137	5.75	5826	5.16	5516	4.57	5205	3.98	4894	3.40	4399	3.22	3905	3.02	3411	2.80	2916	2.54	2422	**2.26**
	25	——	——	6807	6.30	6644	6.11	6482	5.93	6182	5.34	5882	4.74	5582	4.15	5282	3.55	4748	3.36	4214	3.15	3680	2.92	3147	2.65	——	——
	30	——	——	——	——	7001	6.32	6826	6.10	6537	5.50	6248	4.90	5959	4.30	5670	3.70	5096	3.50	4523	3.28	3950	3.04	——	——	——	——
	35	——	——	——	——	——	——	7171	6.27	6892	5.66	6614	5.06	6336	4.45	6057	3.84	5198	2.98	4568	2.59	——	——	——	——	——	——
Min.	-25	1648	2.34	1616	2.32	1584	2.29	1552	2.26	1338	2.17	1125	2.09	912	2.00	698	1.91	630	1.88	561	1.45	——	——	——	——	——	——
	-20	1842	3.03	1806	2.99	1769	2.96	1732	2.92	1526	2.72	1319	2.52	1113	2.32	906	2.12	814	2.07	722	1.76	630	1.67	——	——	——	——
	-15	2037	3.72	1995	3.67	1954	3.63	1913	3.58	1713	3.27	1513	2.96	1314	2.65	1114	2.34	999	2.27	883	2.04	767	1.92	——	——	——	——
	-10	2231	4.40	2185	4.35	2139	4.29	2093	4.24	1900	3.82	1708	3.39	1515	2.97	1322	2.55	1183	2.47	1044	2.29	905	2.15	766	1.99	——	——
	-7	2347	4.81	2299	4.75	2250	4.70	2201	4.63	2013	4.15	1824	3.66	1636	3.17	1447	2.68	1294	2.58	1141	2.42	987	2.28	834	2.10	681	1.89
	-2	2542	5.50	2488	5.43	2435	5.36	2381	5.29	2200	4.69	2018	4.09	1837	3.49	1655	2.89	1478	2.78	1302	2.64	1125	2.47	948	2.27	771	2.04
	2	2697	6.05	2640	5.97	2583	5.90	2526	5.82	2350	5.13	2174	4.44	1998	3.75	1822	3.06	1626	2.94	1430	2.79	1235	2.61	1039	2.40	843	2.15
	7	2891	6.73	2829	6.65	2768	6.57	2706	6.48	2537	5.68	2368	4.88	2199	4.08	2030	3.27	1811	3.13	1591	2.97	1372	2.78	1153	2.55	933	2.27
	12	3085	7.04	3019	6.93	2953	6.82	2886	6.71	2724	5.90	2562	5.08	2400	4.27	2238	3.46	1995	3.31	1752	3.13	1509	2.93	1267	2.68	1024	2.39
	15	3202	7.22	3133	7.09	3064	6.97	2994	6.84	2836	6.02	2679	5.20	2521	4.38	2363	3.56	2106	3.40	1849	3.22	1592	3.01	1335	2.76	1078	2.45
	20	3396	7.51	3322	7.36	3248	7.21	3175	7.06	3024	6.22	2873	5.39	2722	4.56	2571	3.72	2290	3.56	2010	3.37	1729	3.14	1449	2.88	1168	**2.56**
	25	——	——	3512	7.61	3433	7.43	3355	7.25	3211	6.41	3067	5.56	2923	4.72	2779	3.87	2475	3.70	2171	3.50	1867	3.26	1563	2.98	——	——
	30	——	——	——	——	3618	7.64	3535	7.44	3398	6.59	3261	5.73	3124	4.87	2987	4.01	2659	3.83	2332	3.62	2004	3.38	——	——	——	——
	35	——	——	——	——	——	——	3716	7.62	3585	6.75	3455	5.88	3325	5.01	3195	4.14	2713	3.25	2355	2.86	——	——	——	——	——	——

AW122/AW12N																											
Water Out(°C)		20		25		30		35		40		45		50		55		60		65		70		75		80	
Ambient Temperature(°C)		Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP
Max.	-25	7395	2.05	7347	1.98	7298	1.91	7250	1.84	6549	1.75	5848	1.66	5148	1.57	4447	1.48	4007	1.38	3567	1.13	——	——	——	——	——	——
	-20	9010	2.51	8951	2.42	8892	2.34	8833	2.27	8017	2.14	7200	2.01	6384	1.88	5567	1.75	4984	1.60	4402	1.36	3820	1.17	——	——	——	——
	-15	10625	2.96	10556	2.87	10486	2.78	10417	2.69	9484	2.52	8552	2.36	7619	2.19	6687	2.02	5962	1.83	5237	1.57	4513	1.35	——	——	——	——
	-10	12240	3.41	12160	3.31	12080	3.22	12000	3.12	10952	2.91	9903	2.71	8855	2.50	7807	2.29	6940	2.05	6073	1.78	5205	1.51	4338	1.25	——	——
	-7	12577	3.68	12482	3.58	12387	3.48	12292	3.38	11339	3.15	10386	2.92	9432	2.68	8479	2.45	7526	2.18	6574	1.90	5621	1.61	4668	1.33	3716	1.05
	-2	13138	4.14	13018	4.02	12899	3.91	12779	3.81	11984	3.53	11189	3.26	10394	2.99	9599	2.72	8504	2.40	7409	2.08	6314	1.76	5219	1.44	4124	1.13
	2	13587	4.50	13447	4.38	13308	4.26	13168	4.15	12500	3.85	11832	3.54	11163	3.24	10495	2.94	9286	2.58	8077	2.23	6868	1.87	5659	1.53	4450	1.19
	7	14148	4.95	13984	4.82	13820	4.70	13655	4.57	13145	4.23	12635	3.89	12125	3.55	11615	3.21	10264	2.80	8912	2.40	7561	2.01	6210	1.63	4859	1.26
	12	14710	5.16	14520	5.02	14331	4.89	14142	4.76	13156	4.26	12171	3.76	11186	3.26	10200	2.76	9214	2.46	8227	2.17	7240	1.88	6253	1.60	5267	1.33
	15	15046	5.28	14842	5.14	14638	5.00	14434	4.87	13496	4.37	12558	3.86	11620	3.36	10682	2.86	9648	2.54	8614	2.24	7580	1.94	6546	1.65	5512	1.37
	20	15608	5.49	15379	5.34	15150	5.19	14921	5.05	14062	4.54	13203	4.03	12344	3.53	11485	3.02	10372	2.68	9259	2.35	8146	2.04	7033	1.73	5920	1.43
	25	——	——	15915	5.54	15661	5.39	15408	5.24	14628	4.72	13848	4.20	13068	3.69	12289	3.17	11096	2.81	9904	2.46	8712	2.13	7520	1.80	——	——
	30	——	——	——	——	16173	5.58	15894	5.42	15194	4.90	14493	4.37	13792	3.84	13092	3.31	11821	2.93	10549	2.57	9278	2.21	——	——	——	——
	35	——	——	——	——	——	——	16381	5.61	15760	5.07	15138	4.53	14516	3.99	13895	3.45	12057	2.49	10655	2.03	——	——	——	——	——	——
Nom.	-25	6840	2.14	6731	2.06	6623	1.99	6514	1.91	5986	1.81	5459	1.71	4931	1.61	4403	1.51	3953	1.41	3503	1.15	——	——	——	——	——	——
	-20	7740	2.69	7617	2.59	7494	2.50	7371	2.41	6907	2.25	6442	2.10	5977	1.94	5512	1.79	4910	1.63	4308	1.38	3706	1.18	——	——	——	——
	-15	8640	3.23	8503	3.12	8366	3.01	8229	2.91	7827	2.70	7425	2.49	7023	2.28	6621	2.07	5867	1.86	5113	1.59	4359	1.35	——	——	——	——
	-10	9540	3.78	9389	3.65	9237	3.53	9086	3.41	8747	3.14	8408	2.88	8069	2.61	7730	2.35	6824	2.08	5918	1.80	5012	1.51	4106	1.22	——	——
	-7	10080	4.11	9920	3.97	9760	3.84	9600	3.70	9299	3.41	8998	3.11	8696	2.81	8395	2.52	7398	2.22	6401	1.92	5404	1.60	4407	1.29	3410	0.99
	-2	10980	4.65	10806	4.50	10631	4.35	10457	4.20	10219	3.85	9981	3.50	9742	3.15	9504	2.80	8355	2.45	7206	2.10	6057	1.75	4908	1.40	3759	1.06
	2	11700	5.09	11514	4.92	11329	4.76	11143	4.60	10955	4.21	10767	3.81	10579	3.42	10391	3.02	9120	2.63	7850	2.25	6579	1.86	5308	1.48	4038	1.12
	7	12600	5.64	12400	5.45	12200	5.27	12000	5.10	11875	4.65	11750	4.20	11625	3.75	11500	3.30	10077	2.85	8655	2.42	7232	2.00	5809	1.58	4387	1.18
	12	13350	5.87	13067	5.65	12783	5.44	12500	5.24	12330	4.77	12160	4.29	11990	3.82	11819	3.35	10403	2.90	8986	2.47	7569	2.05	6153	1.64	4736	1.24
	15	13800	6.01	13467	5.77	13133	5.54	12800	5.32	12603	4.83	12406	4.35	12208	3.86	12011	3.37	10598	2.92	9185	2.49	7772	2.08	6358	1.67	4945	1.28
	20	14550	6.23	14133	5.96	13717	5.70	13300	5.46	13058	4.95	12815	4.44	12573	3.93	12331	3.42	10923	2.97	9516	2.54	8109	2.12	6702	1.72	5294	**1.34**
	25	——	——	14800	6.15	14300	5.86	13800	5.59	13513	5.05	13225	4.52	12938	3.99	12650	3.46	11249	3.01	9847	2.58	8446	2.17	7045	1.77	——	——
	30	——	——	——	——	14883	6.02	14300	5.71	13967	5.16	13635	4.61	13302	4.05	12969	3.50	11574	3.05	10179	2.62	8783	2.21	——	——	——	——
	35	——	——	——	——	——	——	14800	5.84	14422	5.26	14044	4.69	13667	4.11	13289	3.54	11806	2.59	10280	2.07	——	——	——	——	——	——

		AW122/AW12N																													
	Water Out(°C)	20		25		30		35		40		45		50		55		60		65		70		75		80	
	Ambient Temperature(°C)	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP
Mid.	-25	3500	2.15	3449	2.07	3399	1.99	3348	1.91	3039	1.82	2730	1.72	2421	1.63	2111	1.53	1902	1.46	1693	1.44	——	——	——	——	——	——
	-20	3978	2.65	3913	2.55	3848	2.45	3783	2.36	3474	2.22	3166	2.08	2857	1.94	2548	1.80	2293	1.70	2038	1.69	1784	1.58	——	——	——	——
	-15	4456	3.15	4377	3.03	4298	2.91	4218	2.80	3910	2.61	3601	2.43	3293	2.24	2984	2.06	2684	1.95	2383	1.92	2083	1.79	——	——	——	——
	-10	4935	3.65	4841	3.51	4747	3.37	4654	3.24	4345	3.01	4037	2.78	3729	2.55	3420	2.32	3074	2.19	2729	2.15	2383	1.99	2037	1.82	——	——
	-7	5222	3.95	5119	3.80	5017	3.65	4915	3.50	4607	3.25	4298	2.99	3990	2.73	3682	2.47	3309	2.34	2936	2.28	2562	2.11	2189	1.92	1816	1.70
	-2	5700	4.45	5583	4.28	5467	4.11	5350	3.95	5042	3.64	4734	3.34	4426	3.04	4119	2.74	3700	2.58	3281	2.48	2862	2.29	2443	2.08	2024	1.84
	2	6083	4.85	5954	4.66	5826	4.48	5698	4.30	5390	3.96	5083	3.62	4775	3.28	4468	2.94	4012	2.78	3557	2.64	3101	2.44	2646	2.21	2191	1.95
	7	6561	5.35	6418	5.14	6276	4.94	6133	4.74	5826	4.36	5519	3.97	5211	3.59	4904	3.21	4403	3.03	3902	2.83	3401	2.61	2900	2.36	2399	2.08
	12	7039	5.66	6882	5.44	6725	5.22	6568	5.01	6261	4.61	5954	4.21	5647	3.82	5340	3.42	4794	3.22	4247	3.01	3700	2.77	3154	2.50	2607	2.19
	15	7326	5.84	7161	5.61	6995	5.38	6829	5.17	6523	4.76	6216	4.36	5909	3.95	5602	3.54	5028	3.34	4454	3.11	3880	2.86	3306	2.58	2732	2.26
	20	7804	6.14	7624	5.89	7445	5.65	7265	5.42	6958	5.00	6651	4.58	6345	4.16	6038	3.74	5419	3.52	4799	3.28	4180	3.01	3560	2.71	2940	**2.37**
	25	——	——	8088	6.16	7894	5.92	7700	5.67	7394	5.24	7087	4.81	6781	4.37	6475	3.94	5809	3.70	5144	3.44	4479	3.15	3814	2.83	——	——
	30	——	——	——	——	8344	6.17	8135	5.92	7829	5.47	7523	5.02	7217	4.57	6911	4.12	6200	3.87	5489	3.59	4779	3.29	——	——	——	——
	35	——	——	——	——	——	——	8570	6.16	8264	5.69	7959	5.23	7653	4.76	7347	4.30	6324	3.29	5544	2.84	——	——	——	——	——	——
Min.	-25	1818	2.29	1782	2.21	1747	2.13	1711	2.06	1545	1.95	1379	1.84	1213	1.73	1047	1.63	946	1.55	844	1.53	——	——	——	——	——	——
	-20	2063	2.96	2021	2.86	1980	2.76	1939	2.66	1775	2.48	1611	2.30	1447	2.11	1283	1.93	1154	1.84	1025	1.82	895	1.78	——	——	——	——
	-15	2307	3.63	2260	3.50	2213	3.38	2166	3.26	2004	3.00	1842	2.75	1680	2.49	1518	2.24	1362	2.14	1205	2.10	1048	2.08	——	——	——	——
	-10	2552	4.30	2499	4.15	2447	4.00	2394	3.86	2234	3.53	2074	3.20	1914	2.87	1754	2.55	1570	2.43	1386	2.40	1201	2.34	1017	2.16	——	——
	-7	2699	4.70	2643	4.53	2587	4.37	2530	4.22	2372	3.84	2213	3.47	2054	3.10	1895	2.73	1694	2.60	1494	2.58	1293	2.47	1092	2.27	892	2.03
	-2	2944	5.37	2882	5.18	2820	4.99	2758	4.81	2601	4.37	2444	3.92	2287	3.48	2131	3.03	1903	2.89	1674	2.86	1446	2.66	1218	2.44	990	2.17
	2	3140	5.90	3073	5.69	3006	5.49	2940	5.29	2785	4.79	2629	4.29	2474	3.78	2319	3.28	2069	3.12	1819	3.02	1569	2.81	1318	2.57	1068	2.28
	7	3385	6.57	3312	6.34	3240	6.11	3167	5.89	3014	5.32	2861	4.74	2708	4.16	2555	3.59	2277	3.41	1999	3.22	1721	2.99	1444	2.72	1166	2.40
	12	3630	6.90	3551	6.66	3473	6.43	3395	6.20	3243	5.60	3092	5.00	2941	4.40	2790	3.80	2485	3.61	2180	3.40	1874	3.15	1569	2.86	1264	2.52
	15	3776	7.09	3695	6.85	3613	6.61	3531	6.38	3381	5.77	3231	5.15	3081	4.54	2931	3.92	2610	3.73	2288	3.50	1966	3.25	1645	2.95	1323	2.59
	20	4021	7.41	3934	7.16	3846	6.91	3759	6.67	3611	6.03	3463	5.40	3315	4.76	3167	4.12	2818	3.91	2468	3.67	2119	3.40	1770	3.08	1421	**2.69**
	25	——	——	4173	7.45	4079	7.20	3986	6.96	3840	6.29	3694	5.63	3548	4.97	3403	4.30	3026	4.08	2649	3.83	2272	3.54	1895	3.20	——	——
	30	——	——	——	——	4313	7.48	4213	7.23	4070	6.54	3926	5.85	3782	5.16	3638	4.48	3234	4.24	2829	3.98	2425	3.67	——	——	——	——
	35	——	——	——	——	——	——	4441	7.49	4299	6.78	4157	6.07	4015	5.35	3874	4.64	3298	3.61	2858	3.14	——	——	——	——	——	——

AW142/AW14N																											
Water Out(°C)		20		25		30		35		40		45		50		55		60		65		70		75		80	
Ambient Temperature(°C)		Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP
Max.	-25	8628	1.99	8571	1.92	8515	1.84	8458	1.76	7685	1.67	6912	1.58	6139	1.48	5366	1.39	4827	1.29	4289	1.17	——	——	——	——	——	——
	-20	10512	2.43	10443	2.35	10374	2.27	10306	2.18	9394	2.05	8482	1.92	7570	1.79	6658	1.66	5953	1.51	5248	1.39	4543	1.20	——	——	——	——
	-15	12396	2.87	12315	2.78	12234	2.69	12153	2.60	11102	2.43	10051	2.27	9001	2.10	7950	1.93	7078	1.74	6206	1.59	5334	1.36	——	——	——	——
	-10	14280	3.31	14187	3.21	14093	3.11	14000	3.02	12810	2.81	11621	2.61	10431	2.41	9242	2.20	8203	1.96	7165	1.78	6126	1.51	5088	1.25	——	——
	-7	14673	3.58	14562	3.47	14451	3.37	14341	3.27	13260	3.04	12179	2.82	11098	2.59	10017	2.37	8879	2.10	7740	1.88	6602	1.60	5463	1.32	4325	1.04
	-2	15328	4.02	15188	3.90	15048	3.79	14909	3.69	14009	3.43	13109	3.16	12209	2.90	11309	2.64	10004	2.32	8699	2.05	7394	1.73	6088	1.42	4783	1.10
	2	15852	4.37	15689	4.25	15526	4.13	15363	4.02	14608	3.73	13853	3.44	13098	3.15	12343	2.86	10904	2.50	9466	2.18	8027	1.84	6589	1.49	5150	1.16
	7	16506	4.81	16315	4.68	16123	4.56	15931	4.44	15357	4.11	14783	3.79	14209	3.46	13635	3.13	12030	2.73	10424	2.34	8819	1.96	7214	1.58	5609	1.22
	12	17161	5.01	16940	4.87	16720	4.74	16499	4.62	15499	4.16	14499	3.71	13500	3.26	12500	2.80	11213	2.48	9927	2.17	8640	1.86	7354	1.56	6067	1.27
	15	17554	5.13	17316	4.99	17078	4.85	16840	4.72	15903	4.27	14966	3.81	14030	3.35	13093	2.89	11743	2.56	10393	2.23	9043	1.91	7692	1.60	6342	1.30
	20	18209	5.33	17942	5.18	17675	5.04	17408	4.90	16576	4.44	15745	3.97	14913	3.51	14082	3.04	12626	2.68	11169	2.34	9713	2.00	8257	1.67	6801	1.36
	25	——	——	18568	5.38	18272	5.23	17975	5.08	17249	4.61	16523	4.13	15797	3.66	15071	3.19	13508	2.80	11946	2.43	10384	2.08	8822	1.73	——	——
	30	——	——	——	——	18868	5.42	18543	5.27	17922	4.78	17301	4.29	16680	3.81	16059	3.32	14391	2.92	12723	2.53	11054	2.15	——	——	——	——
	35	——	——	——	——	——	——	19111	5.45	18596	4.95	18080	4.45	17564	3.95	17048	3.45	14679	2.48	12850	2.00	——	——	——	——	——	——
Nom.	-25	7980	2.07	7853	1.98	7727	1.89	7600	1.80	7023	1.69	6446	1.58	5869	1.47	5292	1.35	4753	1.24	4213	1.23	——	——	——	——	——	——
	-20	9030	2.60	8887	2.50	8743	2.39	8600	2.29	8094	2.13	7587	1.97	7081	1.81	6575	1.64	5859	1.49	5144	1.45	4429	1.24	——	——	——	——
	-15	10080	3.13	9920	3.01	9760	2.90	9600	2.79	9164	2.57	8729	2.36	8293	2.14	7857	1.93	6966	1.73	6076	1.65	5185	1.40	——	——	——	——
	-10	11130	3.66	10953	3.53	10777	3.40	10600	3.28	10235	3.01	9870	2.75	9505	2.48	9140	2.22	8073	1.97	7007	1.84	5941	1.55	4875	1.26	——	——
	-7	11760	3.98	11573	3.84	11387	3.71	11200	3.57	10877	3.28	10555	2.98	10232	2.69	9909	2.39	8738	2.11	7566	1.94	6395	1.63	5223	1.33	4052	1.02
	-2	12810	4.51	12607	4.36	12403	4.21	12200	4.06	11948	3.72	11696	3.37	11444	3.03	11192	2.68	9845	2.35	8498	2.11	7151	1.76	5804	1.42	4457	1.09
	2	13650	4.94	13433	4.77	13217	4.61	13000	4.46	12804	4.07	12609	3.68	12413	3.30	12218	2.91	10730	2.55	9243	2.23	7755	1.86	6268	1.50	4781	1.14
	7	14700	5.47	14467	5.29	14233	5.12	14000	4.95	13875	4.51	13750	4.08	13625	3.64	13500	3.20	11837	2.79	10174	2.38	8511	1.98	6848	1.59	5185	1.19
	12	15575	5.70	15244	5.49	14914	5.28	14583	5.09	14406	4.63	14229	4.16	14052	3.70	13875	3.24	12218	2.83	10561	2.42	8904	2.02	7247	1.63	5590	1.25
	15	16100	5.83	15711	5.60	15322	5.38	14933	5.17	14725	4.69	14517	4.22	14308	3.74	14100	3.27	12447	2.85	10793	2.45	9140	2.05	7486	1.66	5833	1.28
	20	16975	6.04	16489	5.79	16003	5.54	15517	5.30	15256	4.80	14996	4.30	14735	3.81	14475	3.31	12828	2.89	11180	2.48	9533	2.09	7885	1.70	6238	**1.33**
	25	——	——	17267	5.97	16683	5.69	16100	5.42	15788	4.90	15475	4.39	15163	3.87	14850	3.35	13209	2.93	11567	2.52	9926	2.12	8284	1.74	——	——
	30	——	——	——	——	17364	5.84	16683	5.54	16319	5.01	15954	4.47	15590	3.93	15225	3.39	13589	2.96	11954	2.55	10318	2.16	——	——	——	——
	35	——	——	——	——	——	——	17267	5.66	16850	5.11	16433	4.55	16017	3.99	15600	3.43	13861	2.52	12074	2.02	——	——	——	——	——	——

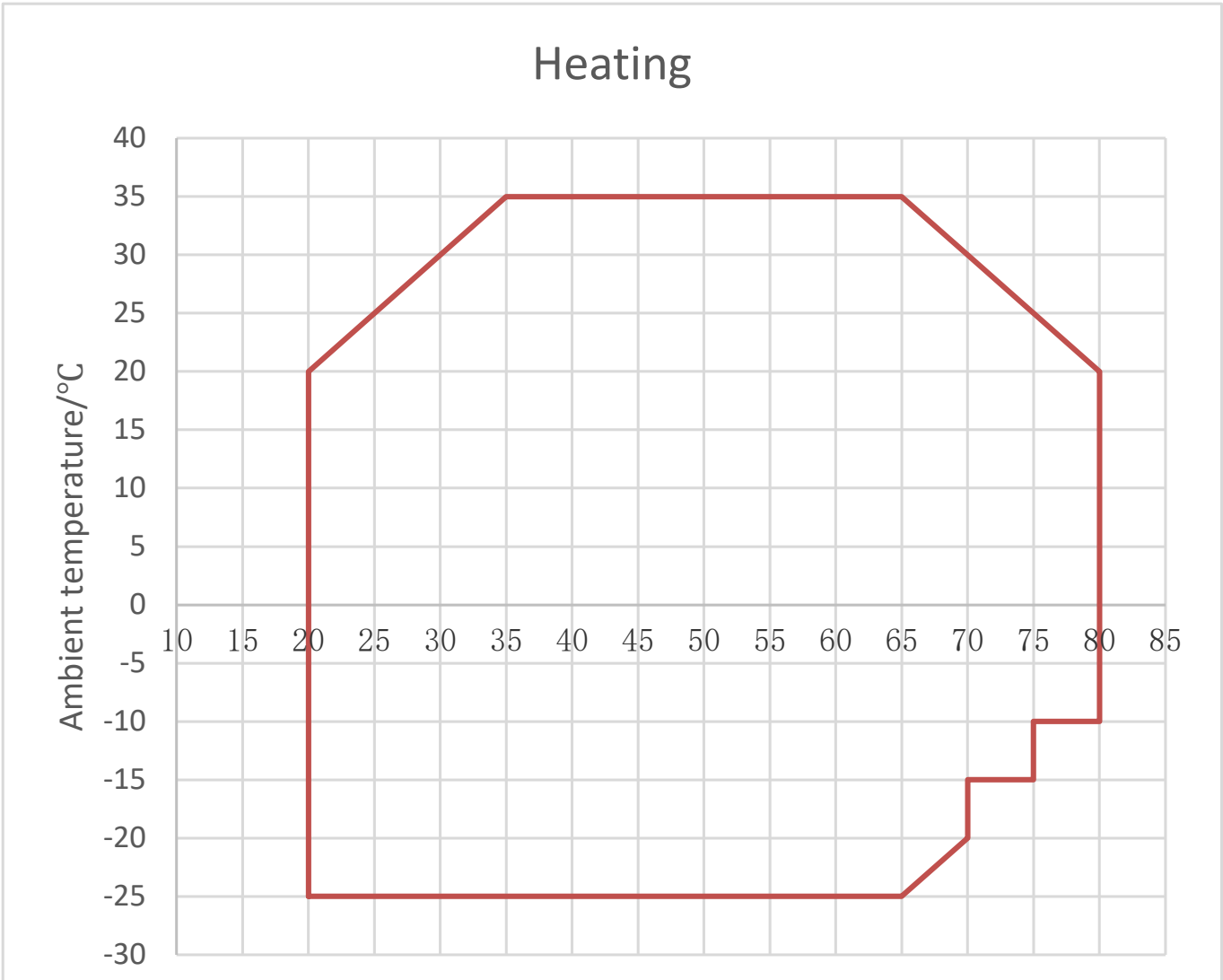
AW142/AW14N

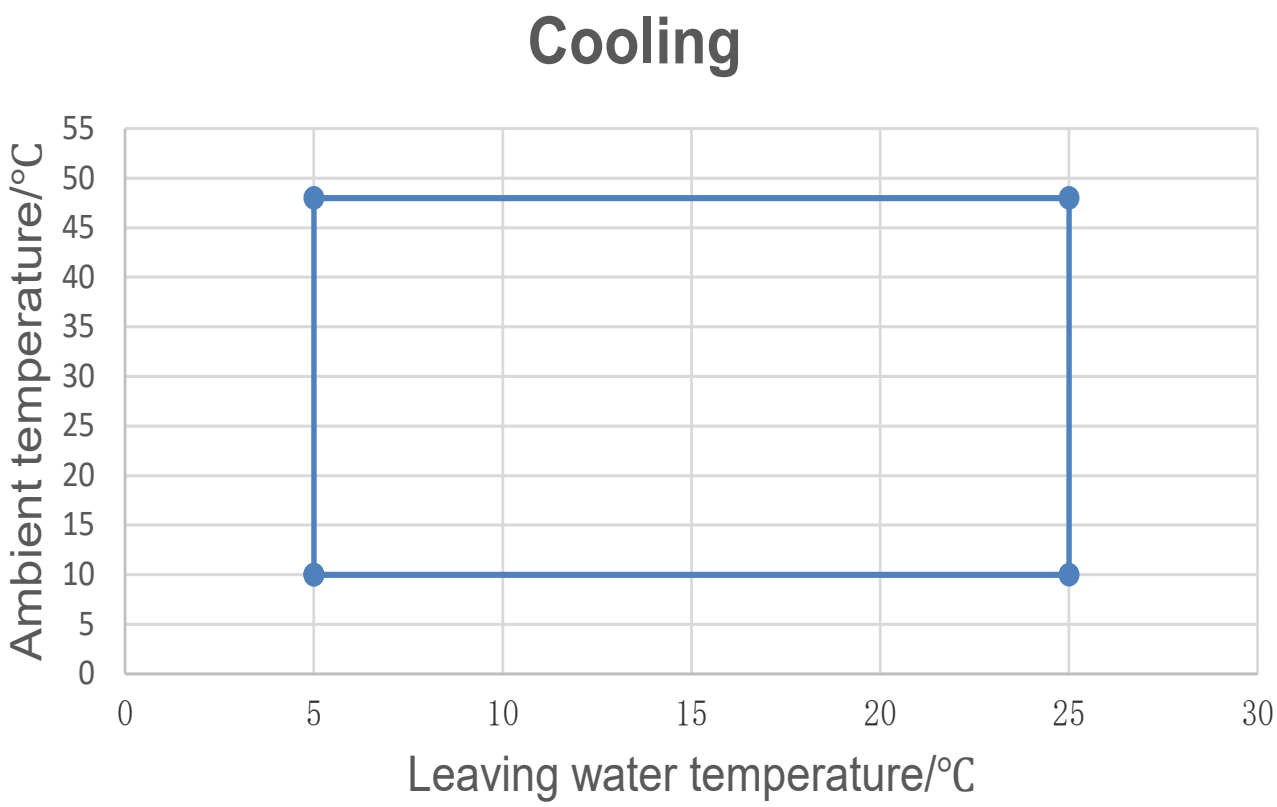
	Water Out(°C)	20		25		30		35		40		45		50		55		60		65		70		75		80	
	Ambient Temperature(°C)	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP
Mid.	-25	4083	2.08	4024	2.00	3965	1.93	3906	1.85	3572	1.77	3239	1.68	2905	1.59	2571	1.51	2311	1.43	2050	1.41	——	——	——	——	——	——
	-20	4641	2.56	4565	2.47	4490	2.38	4414	2.28	4087	2.16	3761	2.03	3435	1.91	3108	1.78	2787	1.69	2466	1.67	2145	1.63	——	——	——	——
	-15	5199	3.05	5107	2.94	5014	2.82	4922	2.71	4602	2.55	4283	2.38	3964	2.22	3645	2.06	3264	1.94	2882	1.98	2500	1.83	——	——	——	——
	-10	5757	3.54	5648	3.40	5539	3.27	5429	3.14	5117	2.94	4806	2.74	4494	2.53	4182	2.33	3740	2.20	3298	2.15	2856	2.03	2413	1.83	——	——
	-7	6092	3.83	5973	3.68	5853	3.54	5734	3.40	5426	3.17	5119	2.95	4812	2.72	4504	2.49	4026	2.35	3547	2.32	3069	2.14	2590	1.93	2112	1.69
	-2	6650	4.32	6514	4.15	6378	3.99	6242	3.83	5941	3.56	5641	3.30	5341	3.03	5041	2.77	4502	2.60	3963	2.51	3424	2.31	2885	2.07	2346	1.81
	2	7096	4.71	6947	4.52	6797	4.35	6648	4.17	6353	3.88	6059	3.58	5765	3.28	5471	2.99	4883	2.81	4296	2.66	3708	2.44	3121	2.18	2533	1.90
	7	7654	5.20	7488	4.99	7322	4.79	7155	4.60	6869	4.27	6582	3.93	6295	3.60	6008	3.26	5360	3.06	4712	2.84	4064	2.59	3416	2.32	2768	2.00
	12	8212	5.49	8029	5.28	7846	5.07	7663	4.86	7384	4.51	7104	4.16	6824	3.82	6545	3.47	5836	3.25	5128	3.01	4419	2.74	3711	2.44	3002	2.10
	15	8547	5.67	8354	5.44	8161	5.23	7968	5.02	7693	4.66	7417	4.30	7142	3.94	6867	3.59	6122	3.36	5377	3.10	4632	2.82	3888	2.51	3143	2.15
	20	9105	5.96	8895	5.72	8685	5.49	8475	5.26	8208	4.89	7940	4.52	7672	4.15	7404	3.78	6599	3.53	5793	3.26	4988	2.96	4182	2.62	3377	**2.24**
	25	——	——	9436	——	9210	5.74	8983	5.51	8723	5.12	8462	4.73	8201	4.35	7941	3.96	7075	3.69	6209	3.40	5343	3.08	4477	2.73	——	——
	30	——	——	——	——	9734	5.99	9491	5.74	9238	5.34	8984	4.94	8731	4.54	8478	4.13	7551	3.85	6625	3.54	5699	3.20	——	——	——	——
	35	——	——	——	——	——	——	9998	5.97	9753	5.56	9507	5.14	9261	4.72	9015	4.30	7702	3.27	6691	2.80	——	——	——	——	——	——
Min.	-25	2121	2.21	2079	2.14	2038	2.06	1997	1.99	1816	1.89	1636	1.79	1456	1.69	1276	1.59	1149	1.52	1022	1.50	——	——	——	——	——	——
	-20	2406	2.86	2358	2.76	2310	2.67	2262	2.57	2088	2.41	1914	2.24	1740	2.08	1565	1.91	1403	1.82	1240	1.78	1077	1.71	——	——	——	——
	-15	2692	3.51	2637	3.39	2582	3.27	2527	3.16	2359	2.92	2191	2.69	2023	2.46	1855	2.23	1656	2.12	1458	2.11	1259	2.07	——	——	——	——
	-10	2978	4.16	2916	4.02	2854	3.88	2793	3.74	2631	3.44	2469	3.15	2307	2.85	2145	2.55	1910	2.42	1676	2.41	1441	2.38	1206	2.17	——	——
	-7	3149	4.55	3083	4.39	3018	4.24	2952	4.09	2794	3.75	2635	3.42	2477	3.08	2319	2.74	2063	2.61	1806	2.58	1550	2.49	1294	2.27	1038	2.00
	-2	3435	5.20	3362	5.02	3290	4.84	3217	4.67	3065	4.27	2913	3.87	2761	3.47	2608	3.06	2316	2.91	2024	2.89	1732	2.68	1440	2.43	1148	2.12
	2	3663	5.73	3585	5.52	3507	5.33	3430	5.14	3282	4.68	3135	4.23	2988	3.78	2840	3.32	2519	3.15	2199	3.05	1878	2.81	1557	2.54	1236	2.21
	7	3949	6.38	3864	6.15	3780	5.93	3695	5.72	3554	5.20	3413	4.68	3271	4.16	3130	3.64	2773	3.45	2416	3.23	2060	2.97	1703	2.67	1346	2.31
	12	4235	6.70	4143	6.47	4052	6.24	3960	6.02	3825	5.48	3690	4.93	3555	4.39	3420	3.85	3027	3.64	2634	3.40	2242	3.12	1849	2.80	1456	2.41
	15	4406	6.89	4310	6.65	4215	6.42	4120	6.19	3988	5.64	3857	5.08	3725	4.52	3594	3.96	3179	3.74	2765	3.49	2351	3.20	1936	2.87	1522	2.46
	20	4692	7.19	4589	6.95	4487	6.71	4385	6.48	4260	5.90	4134	5.31	4009	4.73	3883	4.15	3433	3.91	2983	3.65	2533	3.34	2082	2.97	1632	**2.55**
	25	——	——	4868	7.23	4759	6.99	4650	6.75	4531	6.14	4412	5.54	4293	4.93	4173	4.32	3687	4.07	3201	3.79	2715	3.46	2228	3.08	——	——
	30	——	——	——	——	5031	7.26	4916	7.01	4802	6.38	4689	5.75	4576	5.12	4463	4.48	3941	4.22	3419	3.92	2897	3.58	——	——	——	——
	35	——	——	——	——	——	——	5181	7.27	5074	6.61	4967	5.95	4860	5.30	4753	4.64	4020	3.59	3453	3.10	——	——	——	——	——	——

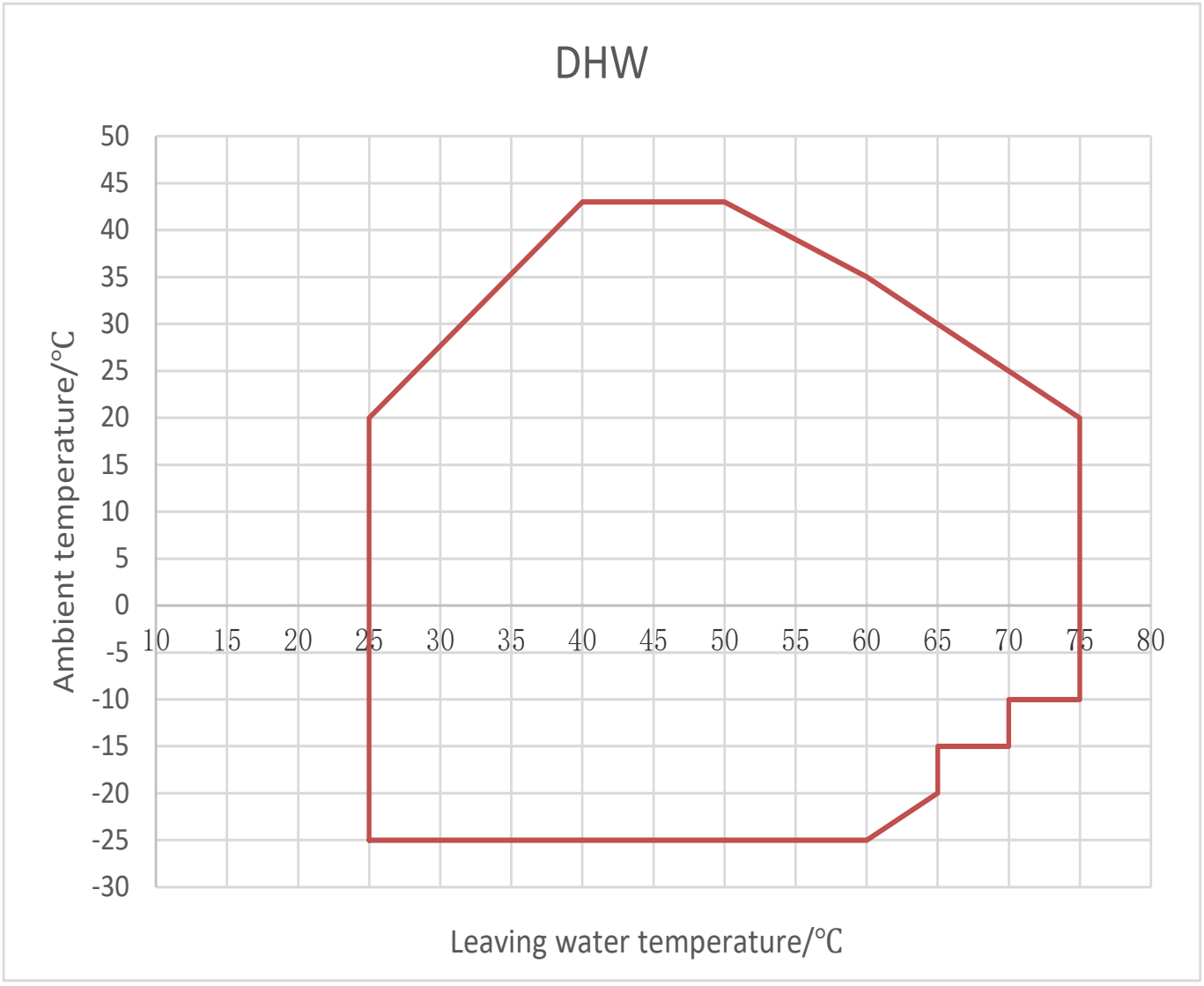
AW162/AW16N																											
Water Out(°C)		20		25		30		35		40		45		50		55		60		65		70		75		80	
Ambient Temperature(°C)		Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP
Max.	-25	9574	1.94	9512	1.87	9449	1.81	9387	1.74	8791	1.66	8195	1.58	7599	1.50	7003	1.42	6282	1.33	5560	1.34	——	——	——	——	——	——
	-20	11823	2.33	11746	2.26	11668	2.19	11591	2.11	10782	2.00	9973	1.90	9164	1.79	8355	1.68	7457	1.54	6559	1.52	5661	1.30	——	——	——	——
	-15	14071	2.73	13979	2.64	13888	2.57	13796	2.49	12773	2.35	11751	2.21	10729	2.07	9707	1.93	8633	1.75	7559	1.68	6484	1.43	——	——	——	——
	-10	16320	3.12	16213	3.03	16107	2.94	16000	2.86	14765	2.69	13529	2.52	12294	2.35	11059	2.19	9808	1.95	8558	1.83	7308	1.55	6057	1.27	——	——
	-7	16558	3.36	16435	3.26	16313	3.17	16190	3.08	15110	2.90	14030	2.71	12950	2.52	11870	2.34	10514	2.08	9158	1.92	7802	1.62	6446	1.32	5090	1.03
	-2	16954	3.75	16805	3.65	16656	3.55	16507	3.46	15686	3.24	14864	3.02	14043	2.81	13222	2.59	11690	2.28	10157	2.05	8625	1.72	7093	1.40	5561	1.09
	2	17271	4.07	17101	3.96	16931	3.86	16761	3.75	16146	3.52	15532	3.28	14918	3.04	14303	2.80	12630	2.45	10957	2.15	9284	1.80	7611	1.46	5937	1.13
	7	17668	4.46	17471	4.35	17274	4.24	17078	4.13	16722	3.86	16366	3.59	16011	3.32	15655	3.05	13806	2.66	11956	2.27	10107	1.90	8258	1.53	6408	1.18
	12	18064	4.58	17841	4.46	17618	4.34	17395	4.23	16995	3.92	16596	3.60	16197	3.29	15798	2.98	14014	2.61	12230	2.25	10447	1.90	8663	1.55	6879	1.22
	15	18302	4.65	18063	4.52	17824	4.40	17585	4.29	17160	3.95	16734	3.62	16309	3.28	15884	2.94	14139	2.59	12395	2.24	10651	1.90	8906	1.57	7162	1.24
	20	18698	4.76	18433	4.63	18167	4.51	17902	4.39	17433	4.01	16964	3.64	16495	3.26	16026	2.88	14348	2.55	12669	2.22	10990	1.90	9312	1.59	7633	1.28
	25	——	——	18803	4.74	18511	4.61	18219	4.49	17706	4.07	17194	3.66	16682	3.24	16169	2.83	14556	2.51	12943	2.20	11330	1.90	9717	1.61	——	——
	30	——	——	——	——	18854	4.72	18536	4.59	17980	4.14	17424	3.68	16868	3.23	16312	2.77	14765	2.47	13217	2.18	11670	1.90	——	——	——	——
	35	——	——	——	——	——	——	18853	4.69	18253	4.20	17654	3.71	17054	3.21	16455	2.72	15060	2.10	13349	1.72	——	——	——	——	——	——
Nom.	-25	8785	2.05	8655	1.98	8524	1.92	8393	1.86	8021	1.77	7650	1.67	7278	1.58	6906	1.49	6185	1.41	5463	1.36	——	——	——	——	——	——
	-20	9988	2.56	9852	2.49	9717	2.41	9582	2.34	9249	2.19	8915	2.04	8582	1.89	8249	1.74	7341	1.61	6434	1.54	5526	1.32	——	——	——	——
	-15	11190	3.08	11050	3.00	10910	2.91	10770	2.82	10476	2.61	10181	2.40	9887	2.19	9592	1.98	8498	1.80	7404	1.70	6311	1.44	——	——	——	——
	-10	12392	3.60	12248	3.50	12103	3.40	11959	3.31	11703	3.04	11447	2.76	11191	2.49	10935	2.22	9655	2.00	8375	1.85	7095	1.56	5815	1.28	——	——
	-7	13114	3.91	12966	3.81	12819	3.70	12672	3.60	12439	3.29	12206	2.98	11973	2.68	11740	2.37	10349	2.12	8957	1.94	7566	1.63	6175	1.33	4783	1.03
	-2	14316	4.43	14164	4.31	14012	4.19	13861	4.08	13666	3.71	13472	3.35	13277	2.98	13083	2.61	11506	2.31	9928	2.07	8351	1.74	6773	1.41	5196	1.08
	2	15278	4.85	15122	4.72	14967	4.59	14811	4.47	14648	4.05	14484	3.64	14321	3.22	14157	2.81	12431	2.47	10705	2.17	8978	1.82	7252	1.47	5526	1.11
	7	16480	5.37	16320	5.22	16160	5.08	16000	4.95	15875	4.48	15750	4.00	15625	3.53	15500	3.05	13588	2.67	11675	2.29	9763	1.91	7851	1.54	5938	1.16
	12	16831	5.39	16628	5.24	16425	5.09	16222	4.95	16066	4.46	15910	3.98	15753	3.49	15597	3.01	13748	2.64	11898	2.28	10049	1.92	8200	1.56	6351	1.20
	15	17042	5.40	16813	5.24	16584	5.09	16356	4.95	16180	4.46	16005	3.97	15830	3.47	15655	2.98	13844	2.62	12032	2.27	10221	1.92	8410	1.57	6598	1.22
	20	17393	5.42	17121	5.26	16849	5.10	16578	4.95	16371	4.45	16165	3.95	15958	3.44	15752	2.94	14004	2.60	12255	2.25	10507	1.92	8759	1.59	7011	**1.26**
	25	——	——	17429	5.27	17115	5.11	16800	4.95	16562	4.44	16324	3.93	16087	3.41	15849	2.90	14164	2.57	12479	2.24	10794	1.92	9109	1.61	——	——
	30	——	——	——	——	17380	5.11	17022	4.95	16753	4.43	16484	3.91	16215	3.38	15946	2.86	14324	2.54	12702	2.23	11080	1.92	——	——	——	——
	35	——	——	——	——	——	——	17244	4.95	16944	4.42	16643	3.89	16343	3.36	16043	2.83	14610	2.16	12829	1.76	——	——	——	——	——	——

AW162/AW16N																																			
Water Out(°C)		20		25		30		35		40		45		50		55		60		65		70		75		80										
	Ambient Temperature(°C)	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP	Capacity	COP									
Mid.	-25	4416	2.01	4353	1.96	4289	1.91	4226	1.86	3990	1.80	3753	1.74	3516	1.68	3280	1.62	2945	1.58	2611	1.55	——	——	——	——	——	——									
	-20	4921	2.40	4842	2.33	4763	2.27	4684	2.20	4435	2.10	4186	2.00	3938	1.89	3689	1.79	3321	1.73	2953	1.72	2585	1.71	——	——	——	——									
	-15	5426	2.80	5332	2.71	5237	2.62	5142	2.54	4881	2.40	4620	2.25	4359	2.11	4098	1.96	3696	1.89	3295	1.85	2894	1.80	——	——	——	——									
	-10	5931	3.20	5821	3.09	5710	2.98	5600	2.88	5327	2.69	5053	2.51	4780	2.32	4507	2.13	4072	2.05	3638	1.99	3203	1.96	2768	1.80	——	——									
	-7	6235	3.43	6115	3.31	5995	3.19	5875	3.08	5594	2.87	5313	2.66	5033	2.45	4752	2.24	4297	2.15	3843	2.09	3388	2.02	2934	1.86	2479	1.68									
	-2	6740	3.83	6604	3.69	6468	3.55	6333	3.42	6040	3.17	5747	2.91	5454	2.66	5161	2.41	4673	2.31	4185	2.28	3697	2.13	3209	1.96	2721	1.77									
	2	7144	4.15	6996	3.99	6847	3.84	6699	3.69	6396	3.40	6094	3.12	5791	2.83	5488	2.54	4974	2.43	4459	2.36	3944	2.21	3429	2.04	2915	1.85									
	7	7649	4.54	7485	4.37	7321	4.19	7157	4.03	6842	3.70	6527	3.37	6212	3.04	5897	2.72	5349	2.59	4801	2.45	4253	2.30	3705	2.13	3157	1.93									
	12	8154	4.77	7975	4.59	7795	4.40	7615	4.23	7288	3.87	6961	3.52	6634	3.17	6306	2.81	5725	2.69	5143	2.54	4562	2.39	3980	2.21	3399	2.01									
	15	8458	4.91	8268	4.71	8079	4.53	7890	4.35	7555	3.98	7221	3.61	6886	3.24	6552	2.87	5950	2.74	5349	2.59	4747	2.43	4146	2.26	3544	2.05									
	20	8963	5.13	8758	4.93	8553	4.73	8348	4.54	8001	4.14	7654	3.75	7308	3.35	6961	2.95	6326	2.82	5691	2.68	5056	2.51	4421	2.33	3786	**2.12**									
	25	——	——	9247	5.13	9027	4.92	8806	4.72	8447	4.30	8088	3.88	7729	3.46	7370	3.04	6701	2.90	6033	2.75	5365	2.59	4697	2.40	——	——									
	30	——	——	——	——	9500	5.11	9264	4.91	8892	4.46	8521	4.01	8150	3.56	7779	3.11	7077	2.98	6375	2.82	5674	2.65	——	——	——	——									
	35	——	——	——	——	——	——	9722	5.08	9338	4.61	8955	4.14	8571	3.66	8188	3.19	7219	2.53	6439	2.23	——	——	——	——	——	——									
Min.	-25	2294	2.13	2249	2.08	2204	2.04	2160	2.00	2025	1.93	1890	1.86	1756	1.79	1621	1.72	1460	1.68	1298	1.67	——	——	——	——	——	——									
	-20	2552	2.67	2501	2.60	2450	2.53	2400	2.47	2261	2.33	2122	2.19	1984	2.06	1845	1.92	1662	1.87	1478	1.85	1295	1.82	——	——	——	——									
	-15	2810	3.21	2753	3.11	2696	3.02	2639	2.94	2497	2.73	2354	2.53	2212	2.33	2069	2.12	1864	2.06	1658	2.02	1452	1.98	——	——	——	——									
	-10	3069	3.74	3006	3.63	2942	3.52	2879	3.41	2733	3.14	2586	2.86	2440	2.59	2294	2.32	2066	2.25	1838	2.22	1610	2.18	1382	2.13	——	——									
	-7	3224	4.07	3157	3.94	3090	3.81	3023	3.69	2874	3.38	2726	3.07	2577	2.75	2428	2.44	2187	2.36	1946	2.33	1704	2.28	1463	2.19	1221	2.00									
	-2	3482	4.61	3409	4.45	3336	4.30	3263	4.16	3110	3.78	2958	3.40	2805	3.02	2653	2.64	2389	2.55	2125	2.59	1862	2.45	1598	2.29	1335	2.09									
	2	3689	5.04	3611	4.87	3533	4.70	3455	4.53	3299	4.10	3143	3.67	2988	3.24	2832	2.80	2551	2.70	2269	2.67	1988	2.53	1706	2.36	1425	2.16									
	7	3947	5.58	3863	5.38	3779	5.19	3694	5.00	3535	4.50	3375	4.00	3216	3.50	3056	3.00	2753	2.89	2449	2.77	2145	2.62	1842	2.44	1538	2.24									
	12	4206	5.82	4115	5.62	4025	5.42	3934	5.23	3771	4.70	3607	4.16	3444	3.63	3281	3.10	2955	2.98	2629	2.85	2303	2.70	1977	2.52	1651	2.31									
	15	4361	5.96	4266	5.76	4172	5.56	4078	5.37	3912	4.81	3747	4.26	3581	3.70	3415	3.15	3076	3.03	2737	2.90	2397	2.75	2058	2.56	1719	2.35									
	20	4619	6.19	4519	5.98	4418	5.78	4318	5.58	4148	4.99	3979	4.40	3809	3.81	3640	3.23	3278	3.11	2916	2.97	2555	2.82	2193	2.63	1832	**2.41**									
	25	——	——	4771	6.20	4664	5.99	4558	5.79	4384	5.17	4211	4.54	4037	3.92	3864	3.30	3480	3.18	3096	3.04	2713	2.88	2329	2.70	——	——									
	30	——	——	——	——	4910	6.20	4797	5.99	4620	5.33	4443	4.68	4265	4.02	4088	3.37	3682	3.25	3276	3.11	2870	2.95	——	——	——	——									
	35	——	——	——	——	——	——	5037	6.18	4856	5.50	4675	4.81	4494	4.12	4312	3.43	3756	2.76	3309	2.45	——	——	——	——	——	——									

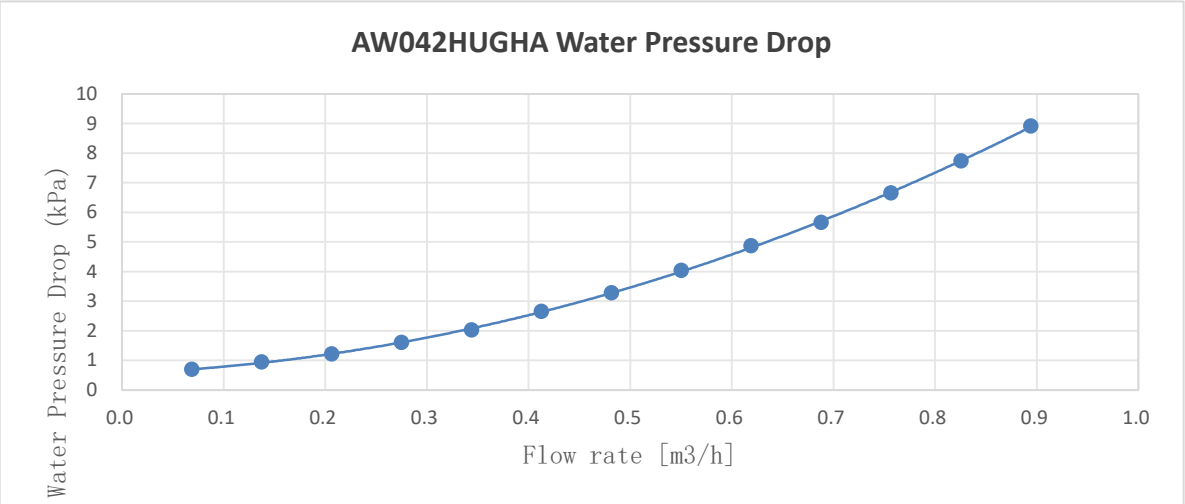
11. Operation Limits Delivery-Leaving

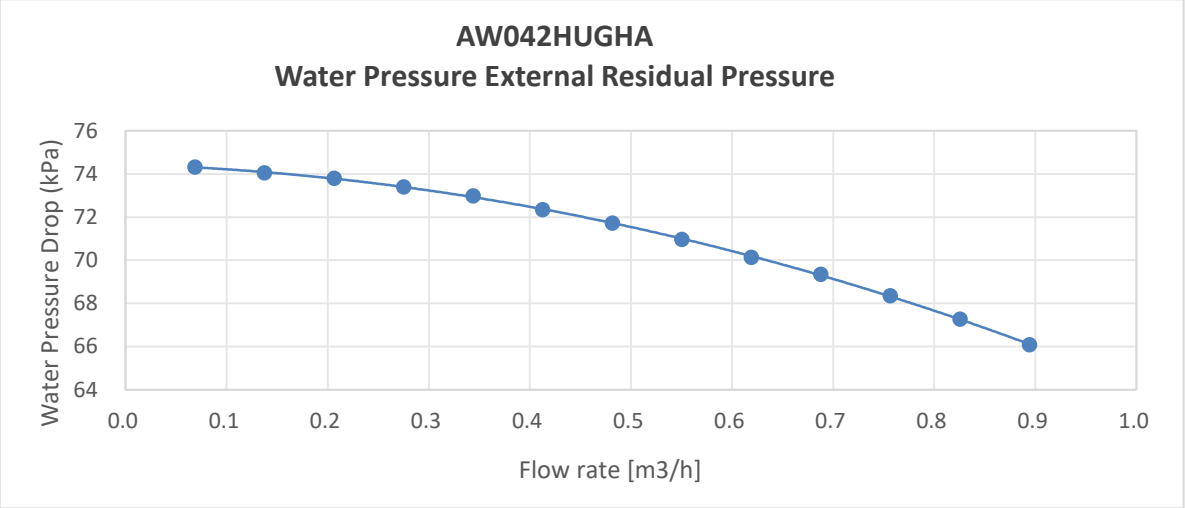



Cooling
Ambient temperature/°C
55
50
45
40
35
30
25
20
15
10
5
0
0
5
10
15
20
25
30
Leaving water temperature/°C

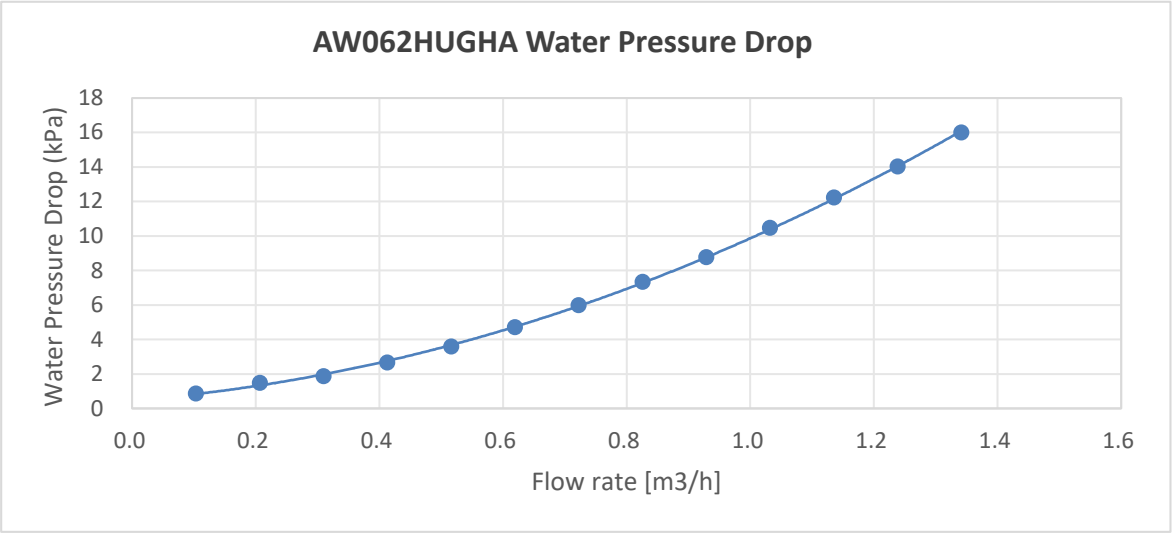

DHW
Ambient temperature/°C
50
45
40
35
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
Leaving water temperature/°C

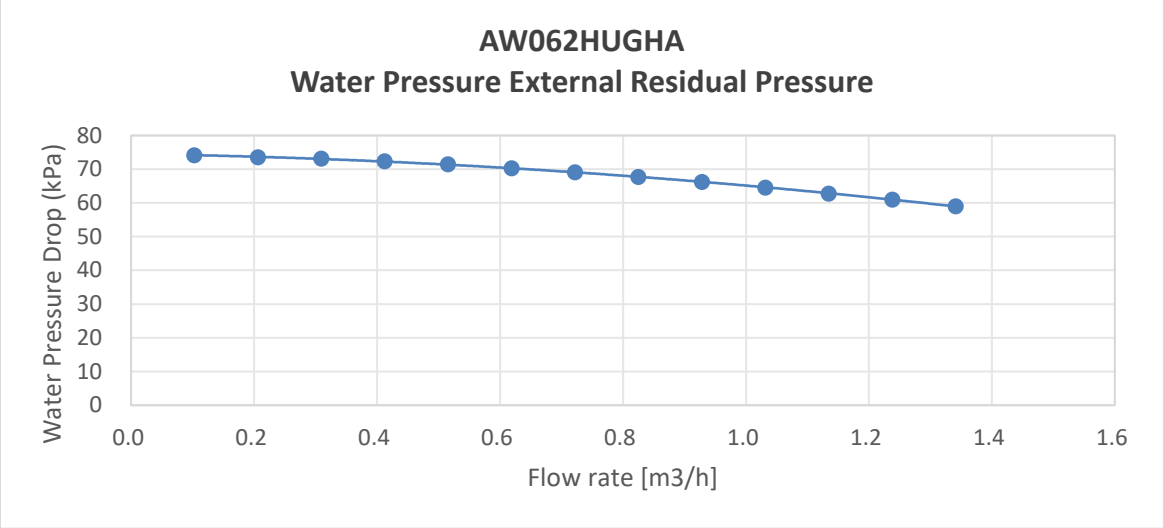
12. Water Pressure Drop



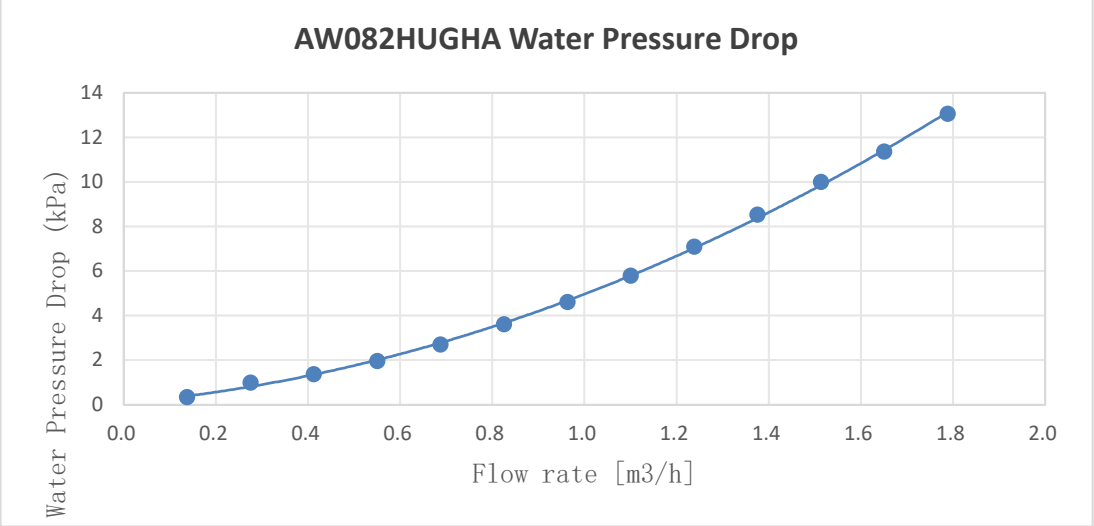


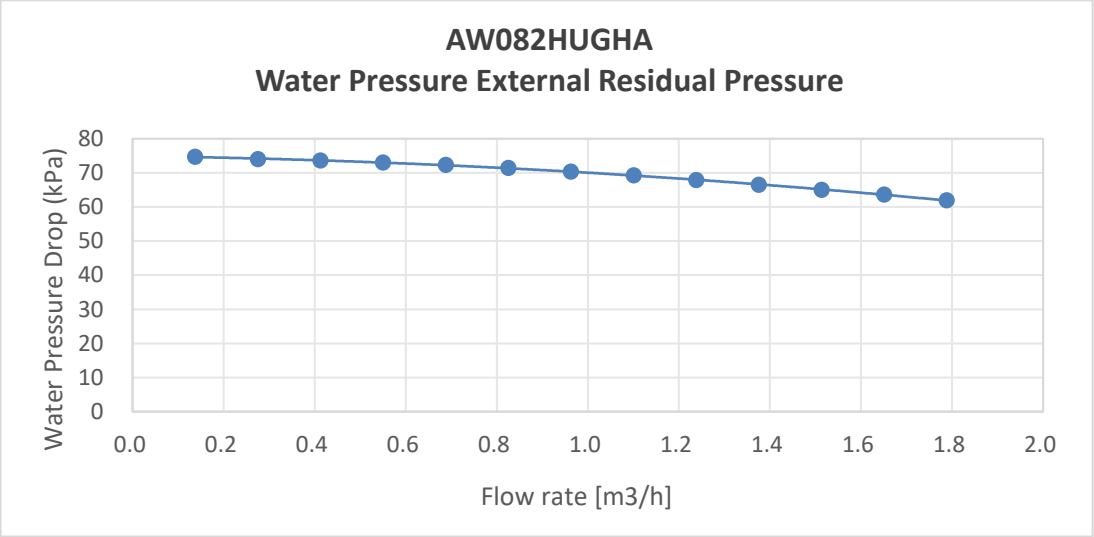
Water Flow (m³/h)			Water Pressure Drop (kPa)	Pump Head	External Residual Pressure
0.688	10%	0.1	1	75	74
0.688	20%	0.1	1	75	74
0.688	30%	0.2	1	75	74
0.688	40%	0.3	2	75	73
0.688	50%	0.3	2	75	73
0.688	60%	0.4	3	75	72
0.688	70%	0.5	3	75	72
0.688	80%	0.6	4	75	71
0.688	90%	0.6	5	75	70
0.688	100%	0.7	6	75	69
0.688	110%	0.8	7	75	68
0.688	120%	0.8	8	75	67
0.688	130%	0.9	9	75	66



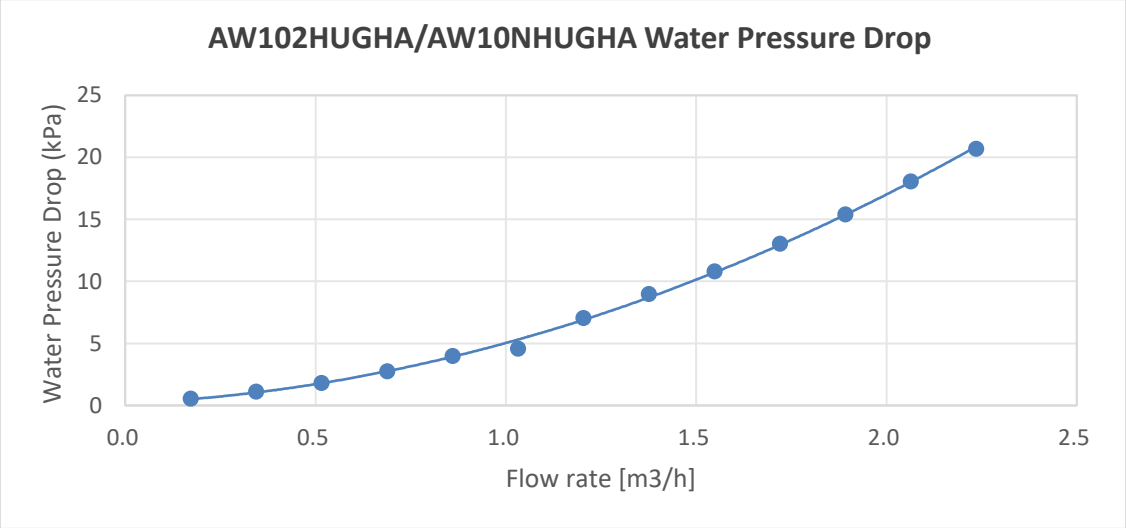


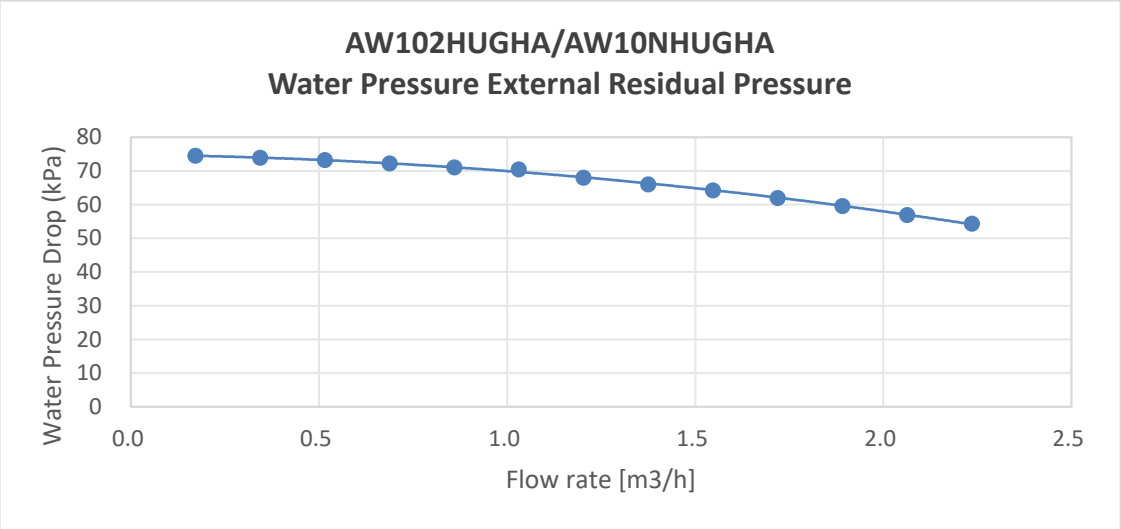
Water Flow (m³/h)			Water Pressure Drop (kPa)	Pump Head	External Residual Pressure
1.032	10%	0.1	1	75	74
1.032	20%	0.2	1	75	74
1.032	30%	0.3	2	75	73
1.032	40%	0.4	3	75	72
1.032	50%	0.5	4	75	71
1.032	60%	0.6	5	75	70
1.032	70%	0.7	6	75	69
1.032	80%	0.8	7	75	68
1.032	90%	0.9	9	75	66
1.032	100%	1.0	10	75	65
1.032	110%	1.1	12	75	63
1.032	120%	1.2	14	75	61
1.032	130%	1.3	16	75	59



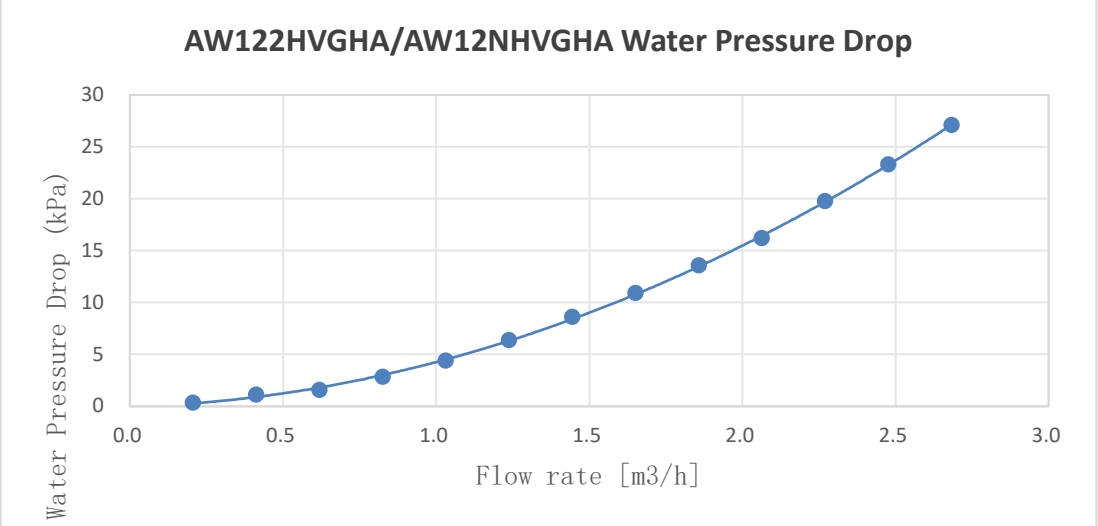


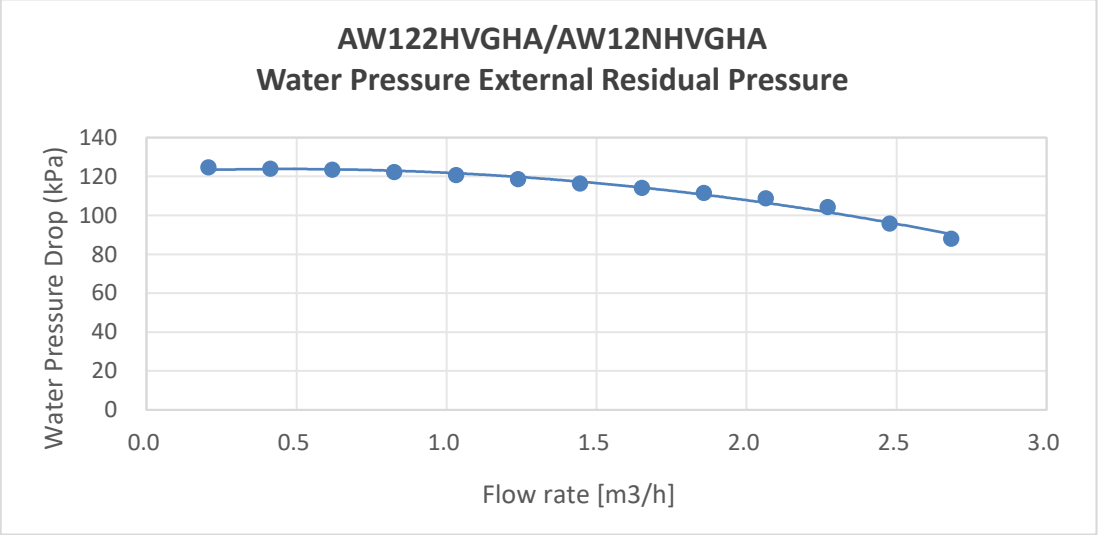
Water Flow (m³/h)			Water Pressure Drop (kPa)	Pump Head (kPa)	External Residual Pressure(kPa)
1.376	10%	0.1	0	75	75
1.376	20%	0.3	1	75	74
1.376	30%	0.4	1	75	74
1.376	40%	0.6	2	75	73
1.376	50%	0.7	3	75	72
1.376	60%	0.8	4	75	71
1.376	70%	1.0	5	75	70
1.376	80%	1.1	6	75	69
1.376	90%	1.2	7	75	68
1.376	100%	1.4	9	75	66
1.376	110%	1.5	10	75	65
1.376	120%	1.7	11	75	64
1.376	130%	1.8	13	75	62



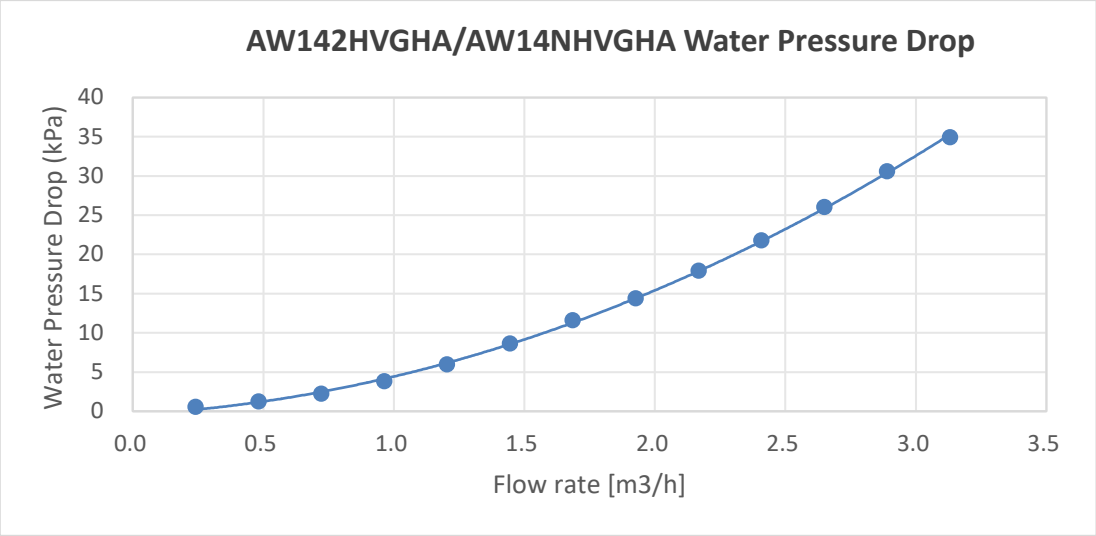


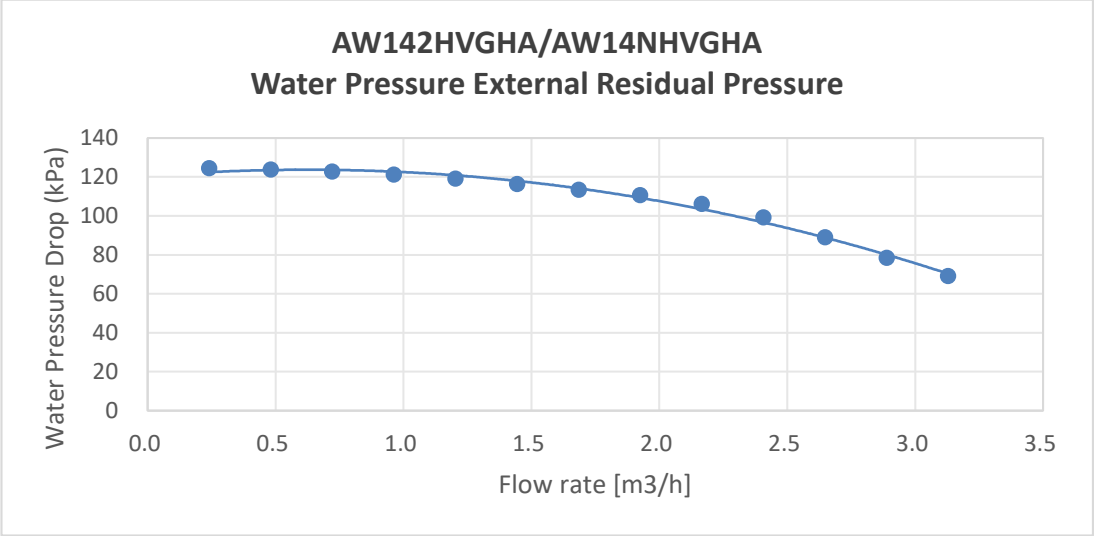
Water Flow (m³/h)			Water Pressure Drop (kPa)	Pump Head (kPa)	External Residual Pressure(kPa)
1.72	10%	0.2	1	75	74
1.72	20%	0.3	1	75	74
1.72	30%	0.5	2	75	73
1.72	40%	0.7	3	75	72
1.72	50%	0.9	4	75	71
1.72	60%	1.0	5	75	70
1.72	70%	1.2	7	75	68
1.72	80%	1.4	9	75	66
1.72	90%	1.5	11	75	64
1.72	100%	1.7	13	75	62
1.72	110%	1.9	15	75	60
1.72	120%	2.1	18	75	57
1.72	130%	2.2	21	75	54



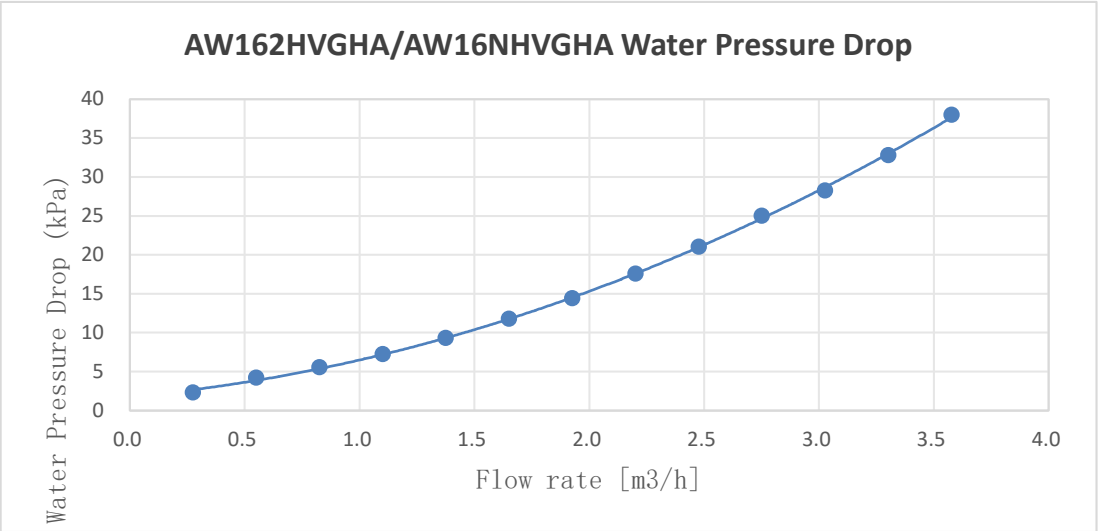


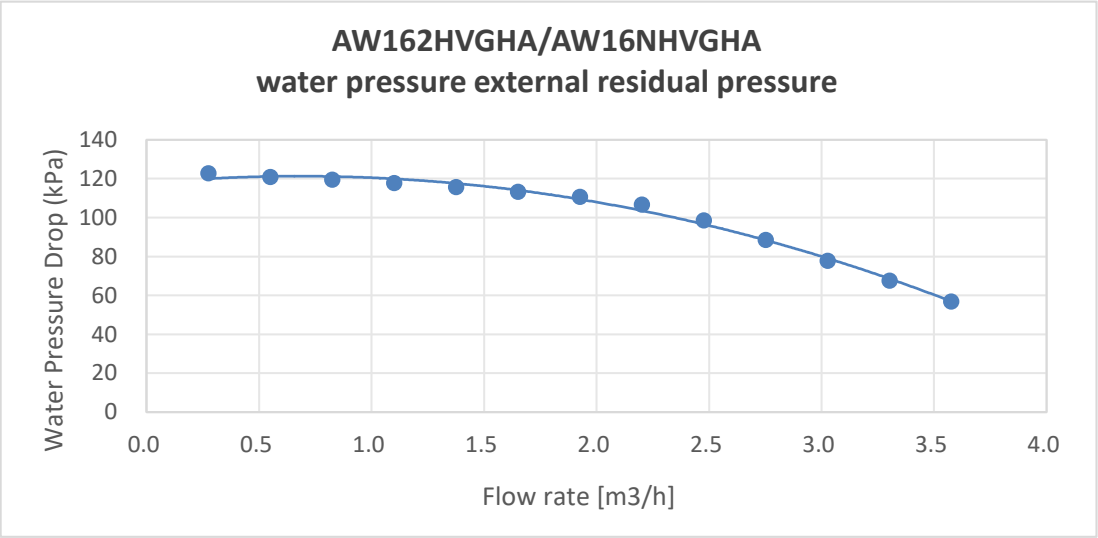
Water Flow (m³/h)			Water Pressure Drop (kPa)	Pump Head (kPa)	External Residual Pressure (kPa)
2.064	10%	0.2	0	125	125
2.064	20%	0.4	1	125	124
2.064	30%	0.6	2	125	123
2.064	40%	0.8	3	125	122
2.064	50%	1.0	4	125	121
2.064	60%	1.2	6	125	119
2.064	70%	1.4	9	125	116
2.064	80%	1.65	11	125	114
2.064	90%	1.86	14	125	111
2.064	100%	2.06	16	125	109
2.064	110%	2.27	20	124	104
2.064	120%	2.48	23	119	96
2.064	130%	2.68	27	115	88





Water Flow (m³/h)			Water Pressure Drop (kPa)	Pump Head(kPa)	External Residual Pressure(kPa)
2.408	10%	0.2	1	125	124
2.408	20%	0.5	1	125	124
2.408	30%	0.7	2	125	123
2.408	40%	1.0	4	125	121
2.408	50%	1.2	6	125	119
2.408	60%	1.4	9	125	116
2.408	70%	1.69	12	125	113
2.408	80%	1.93	14	125	111
2.408	90%	2.17	18	124	106
2.408	100%	2.41	22	121	99
2.408	110%	2.65	26	115	89
2.408	120%	2.89	31	109	78
2.408	130%	3.13	35	104	69



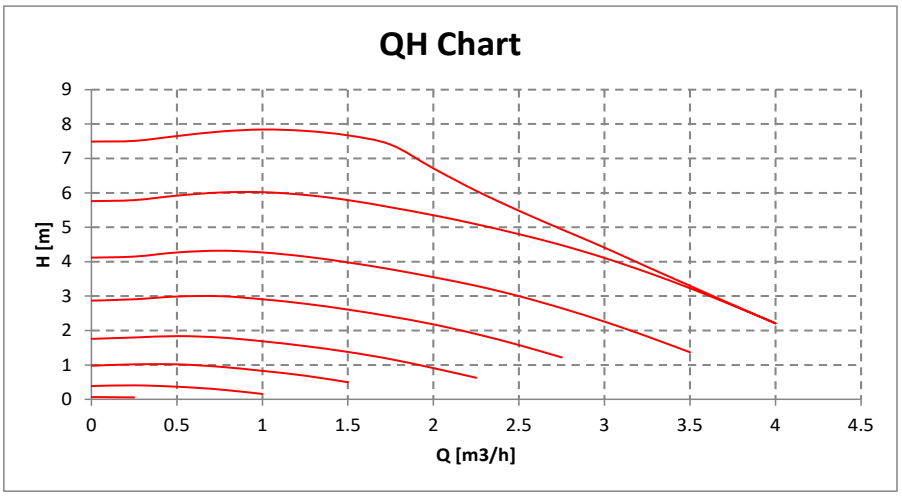


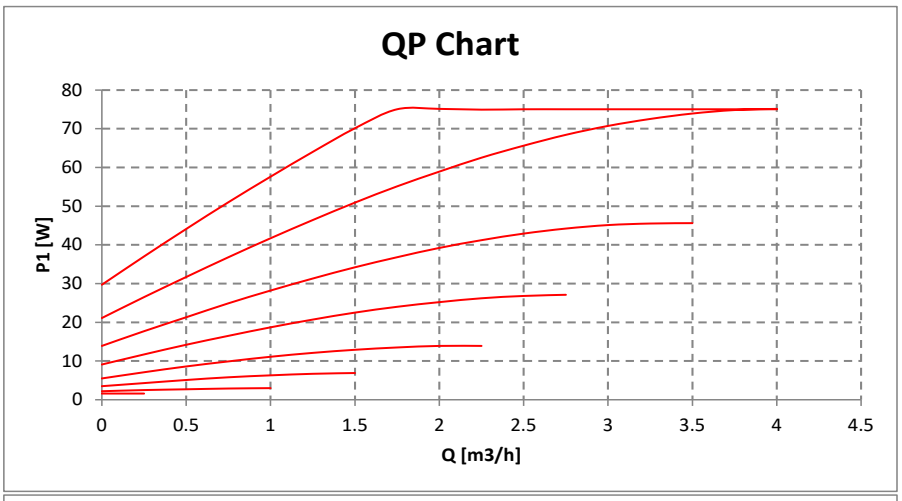
Water Flow (m³/h)			Water Pressure Drop (kPa)	Pump Head (kPa)	External Residual Pressure(kPa)
2.752	10%	0.3	2	125	123
2.752	20%	0.6	4	125	121
2.752	30%	0.8	6	125	119
2.752	40%	1.1	7	125	118
2.752	50%	1.4	9	125	116
2.752	60%	1.7	12	125	113
2.752	70%	1.9	14	125	111
2.752	80%	2.2	18	124	107
2.752	90%	2.5	21	120	98
2.752	100%	2.8	25	113	88
2.752	110%	3.0	28	106	78
2.752	120%	3.3	33	100	68
2.752	130%	3.6	38	95	57

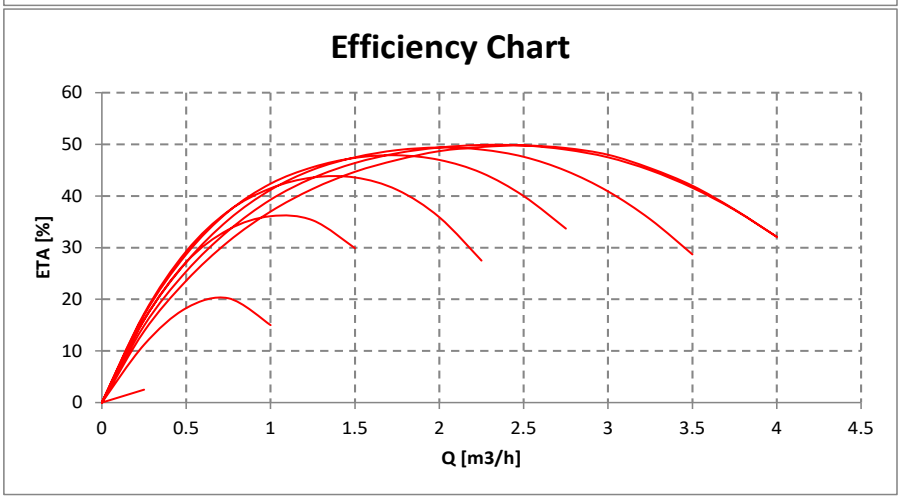
13. Water Pump Characteristic Curve

13.1 Outdoor Units

1m head can overcome 10kpa water pressure







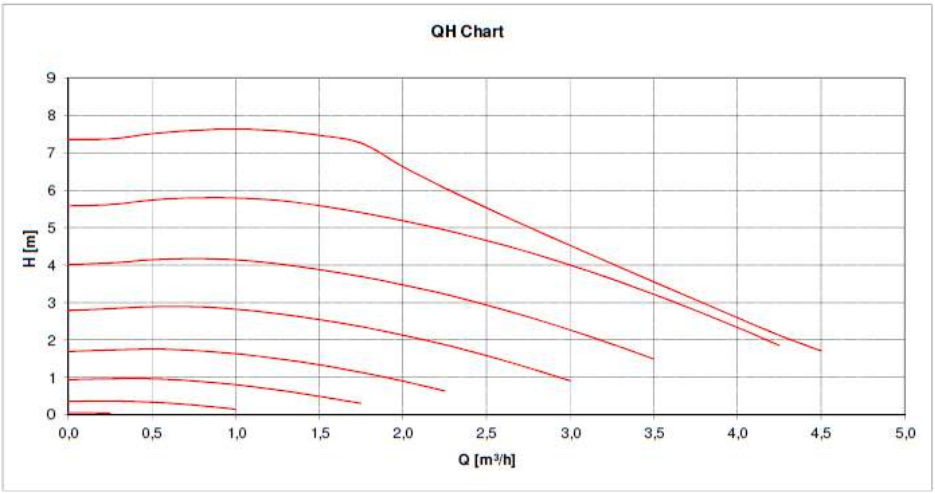
The Performance of PWM was measured under 8 PWM value (heating). 5 % (max.), 20 %, 31 %, 41 %, 52 %, 62 %, 73 %, 88 %(min.).

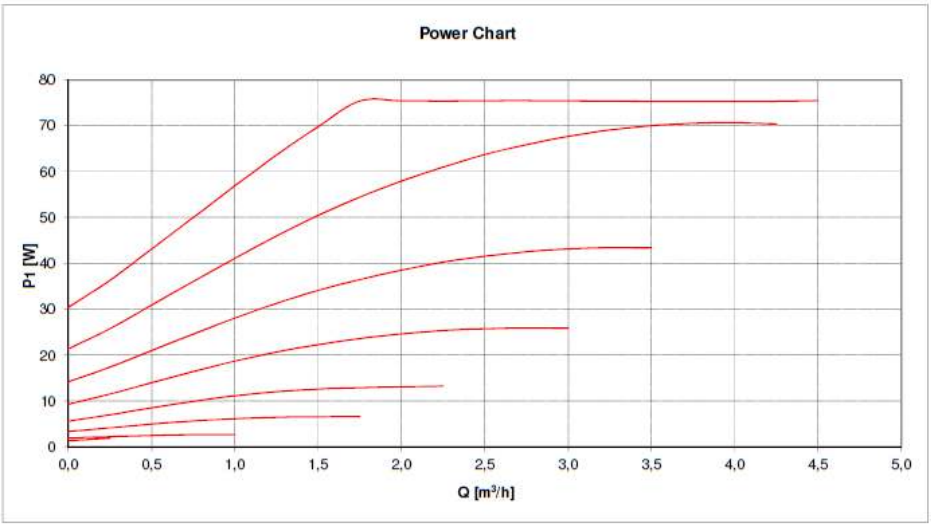
According to ISO 9906, system 2.0 bar, water temperature 20℃

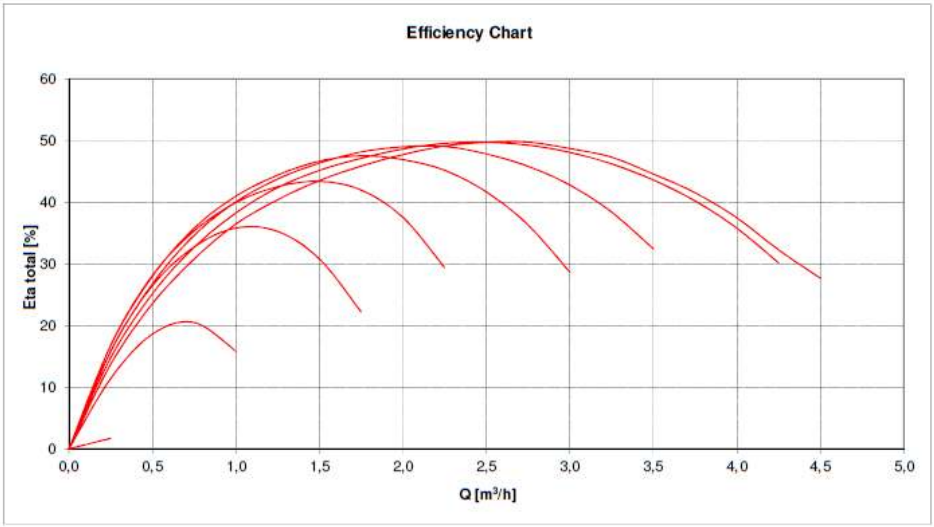
13.2 Indoor Units

1m head can overcome 10kpa water pressure

HU102WAHYA HU10NWAHYAE3 HU102WAHYB HU102F16AHYA HU102F16AHYAE3 HU102F20AHYA HU102F20AHYAE3 HU102F24AHYA HU102F24AHYAE3

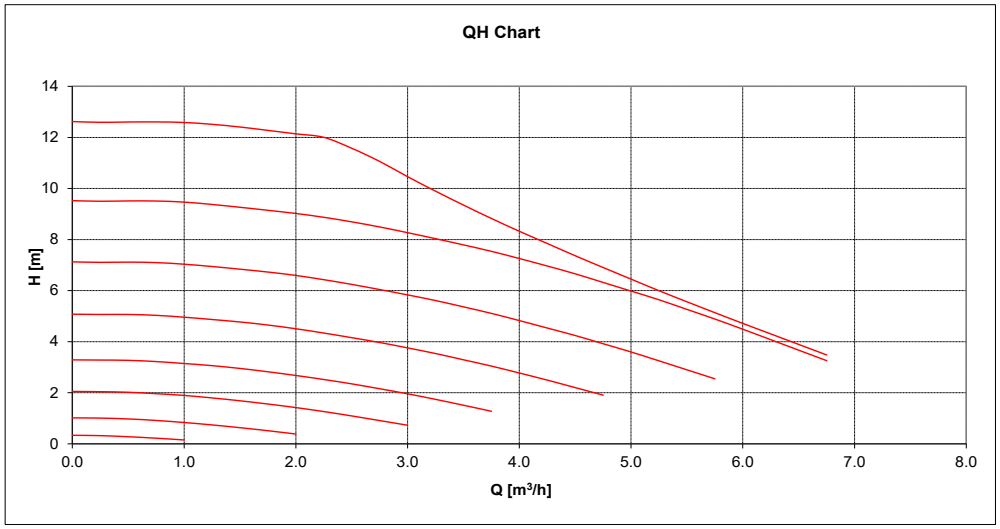


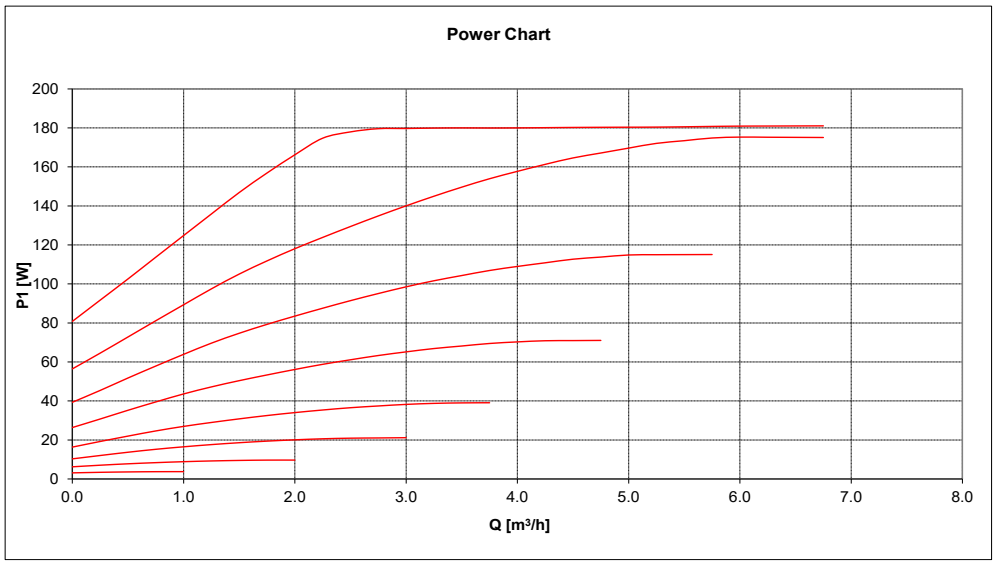


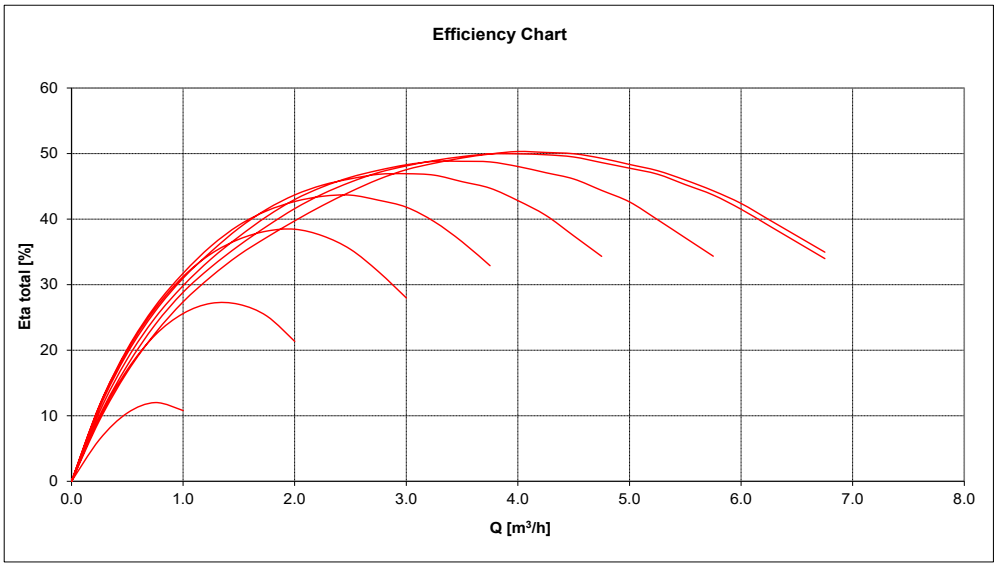


The performance test was measured according to ISO 9906 (GBT 3216). System initial pressure 2.0 bar, liquid temperature 20℃

HU162WAHYA HU16NWAHYAE3 HU162WAHYB HU16NWAHYBE3 HU162F20AHYA HU162F20AHYAE3 HU162F24AHYA HU162F24AHYAE3



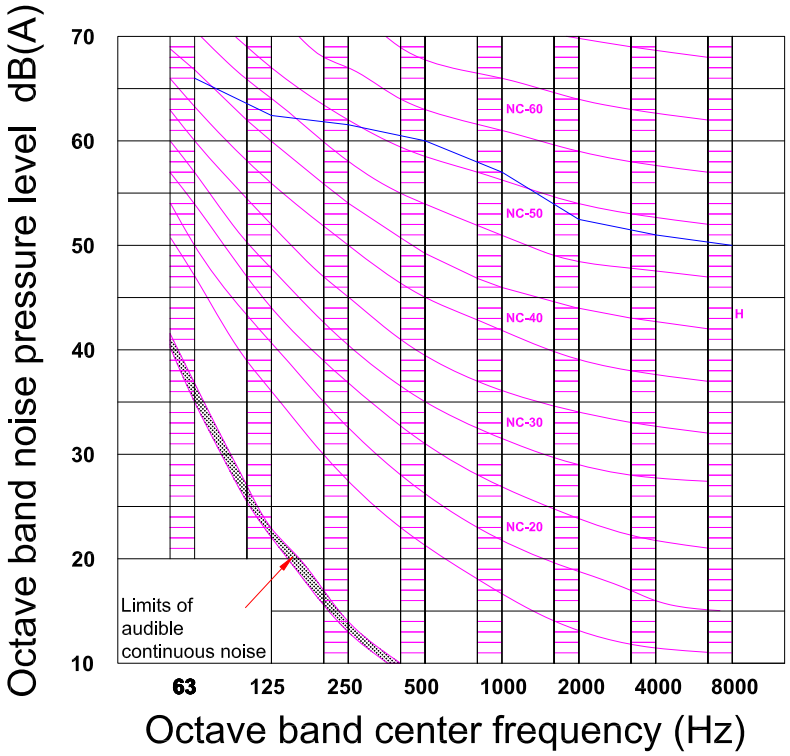




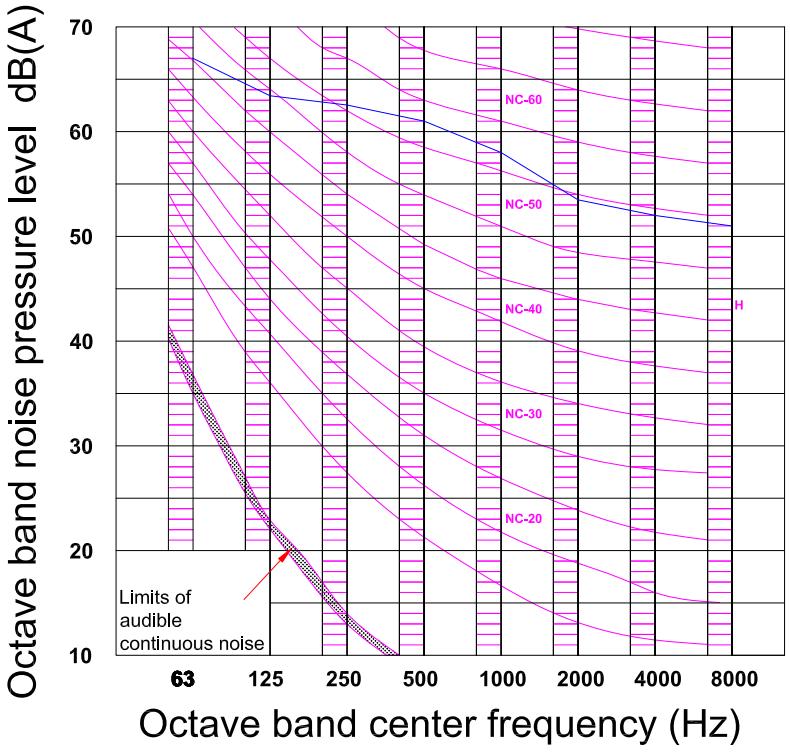
The Performance of PWM was measured under 8 PWM value (heating). 5 % (max.), 20 %, 31 %, 41 %, 52 %, 62 %, 73 %, 88 %(min.).
According to ISO 9906, system 2.0 bar, water temperature 20℃

14. Sound Level

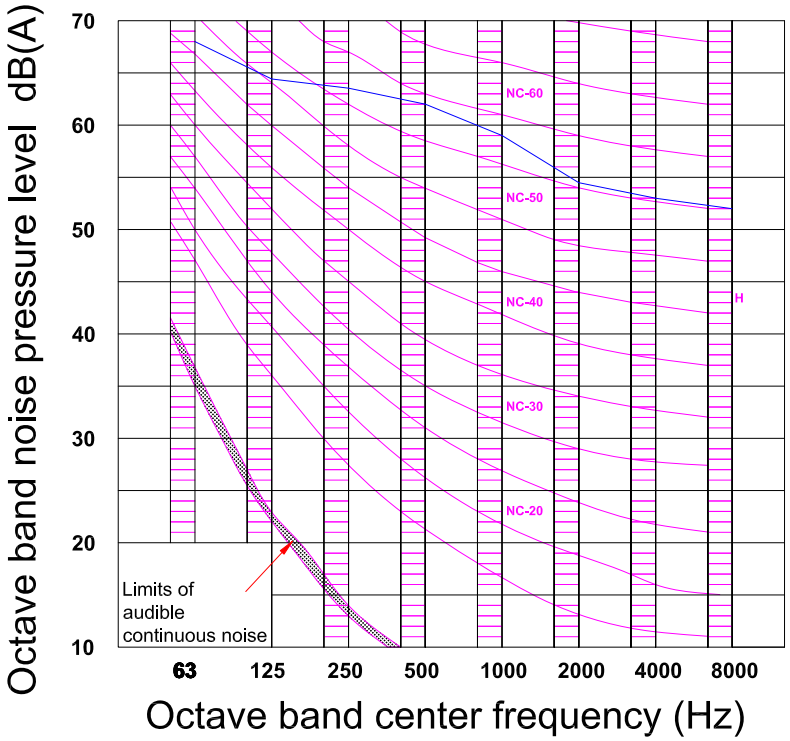
AW042HUGHA



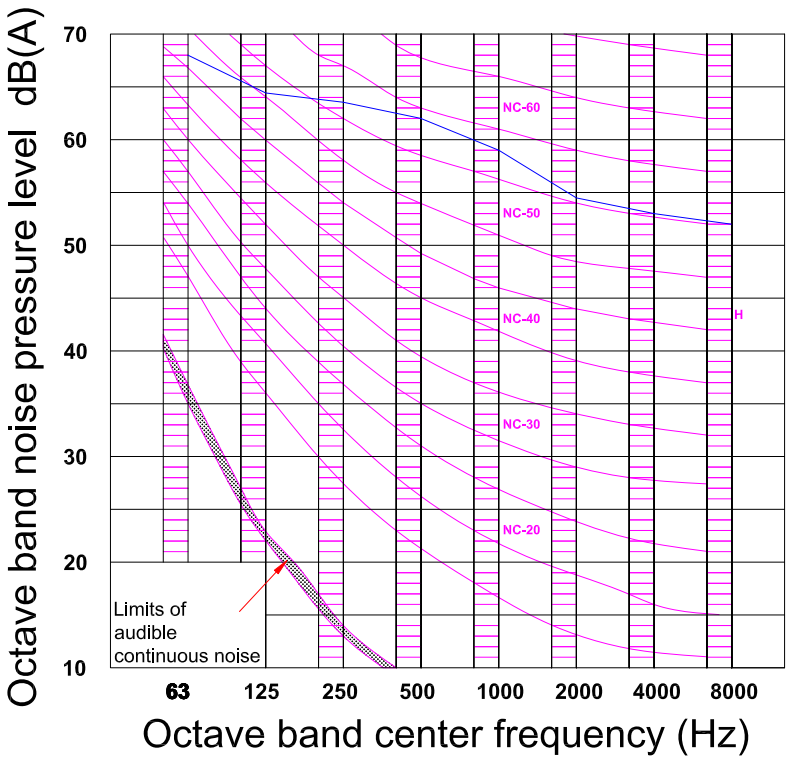
AW062HUGHA



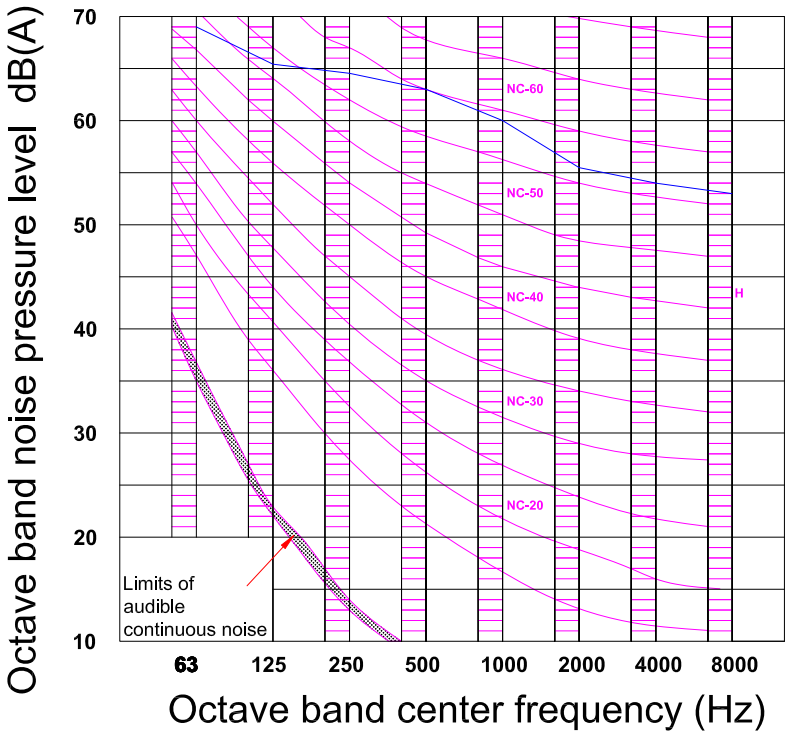
AW082HUGHA



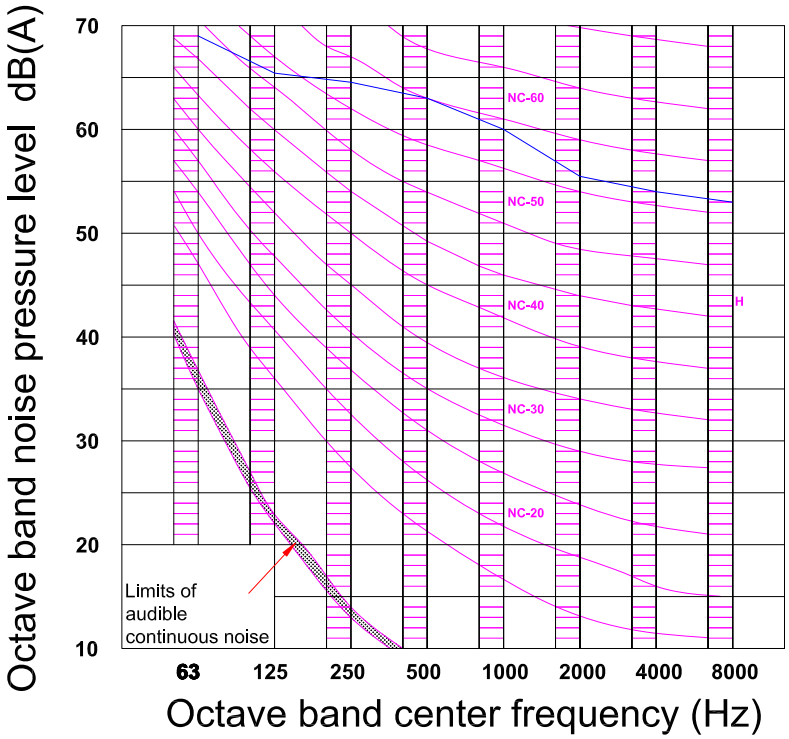
AW102HUGHA/AW10NHUGHA



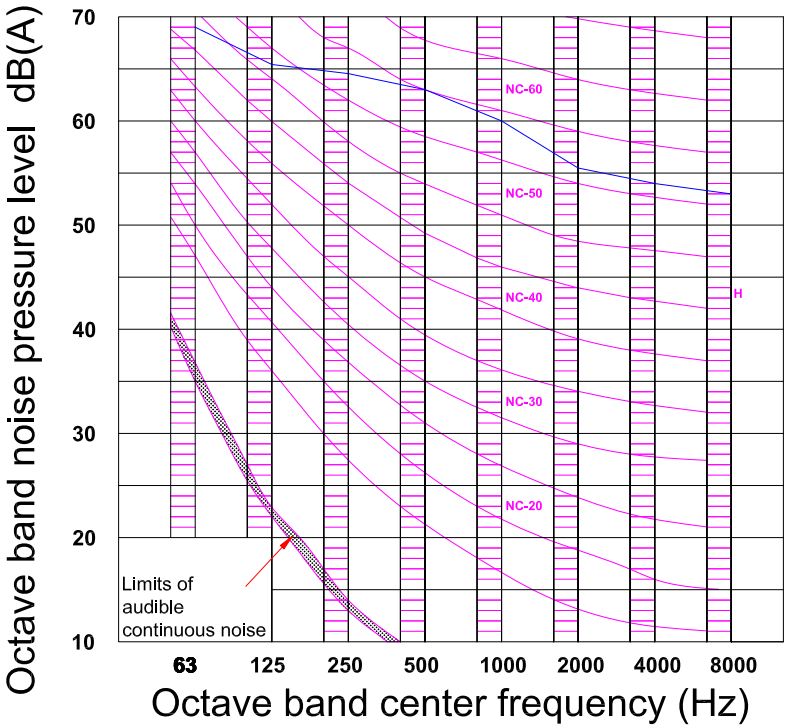
AW122HVGHA/AW12NHVGHA



AW142HVGHA/AW14NHVGHA



AW162HVGHA/AW16NHVGHA

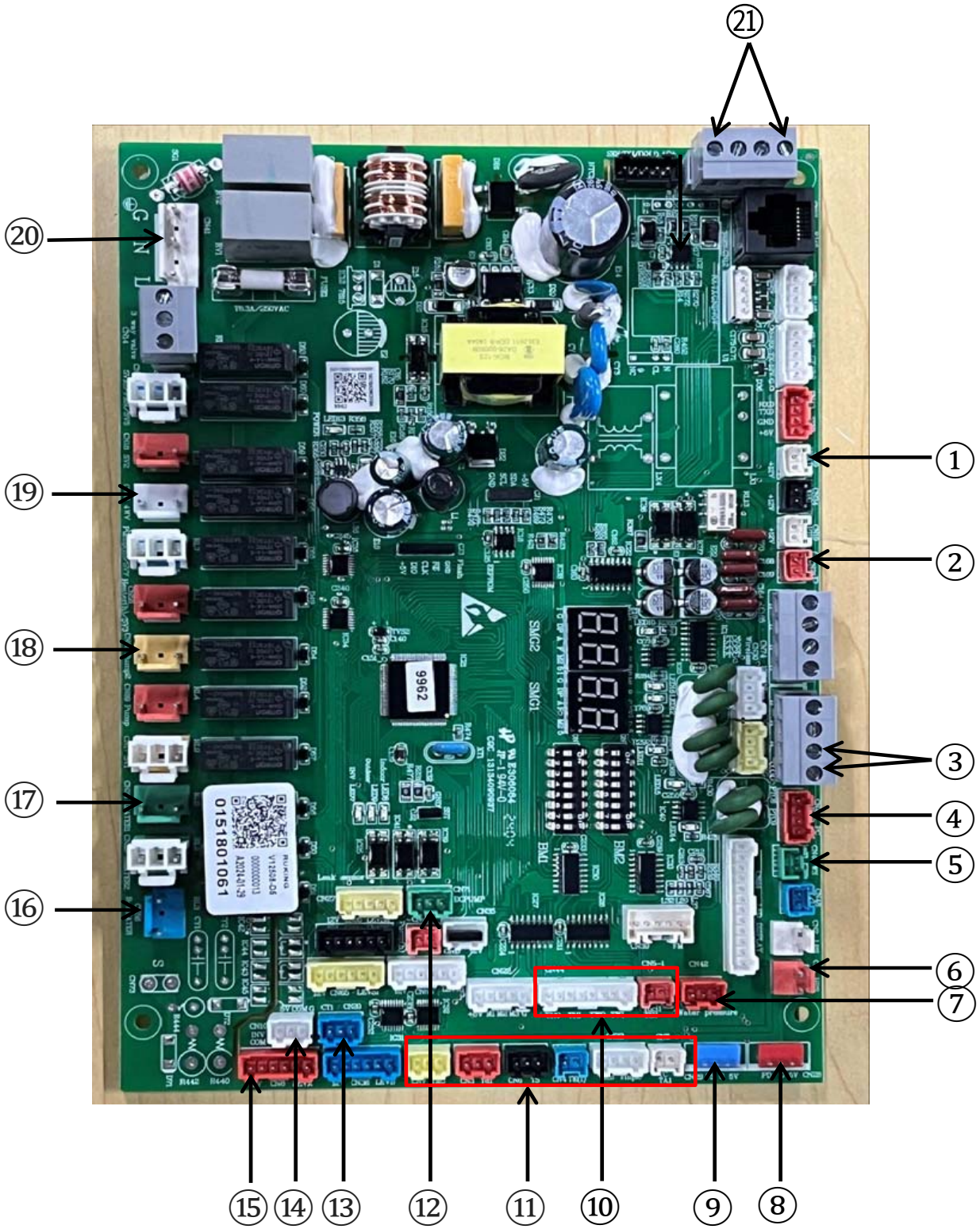


15. PCB Photos

15.1 Outdoor Units

AW042HUGHA AW062HUGHA AW082HUGHA
AW102HUGHA AW122HVGHA AW142HVGHA AW162HVGHA

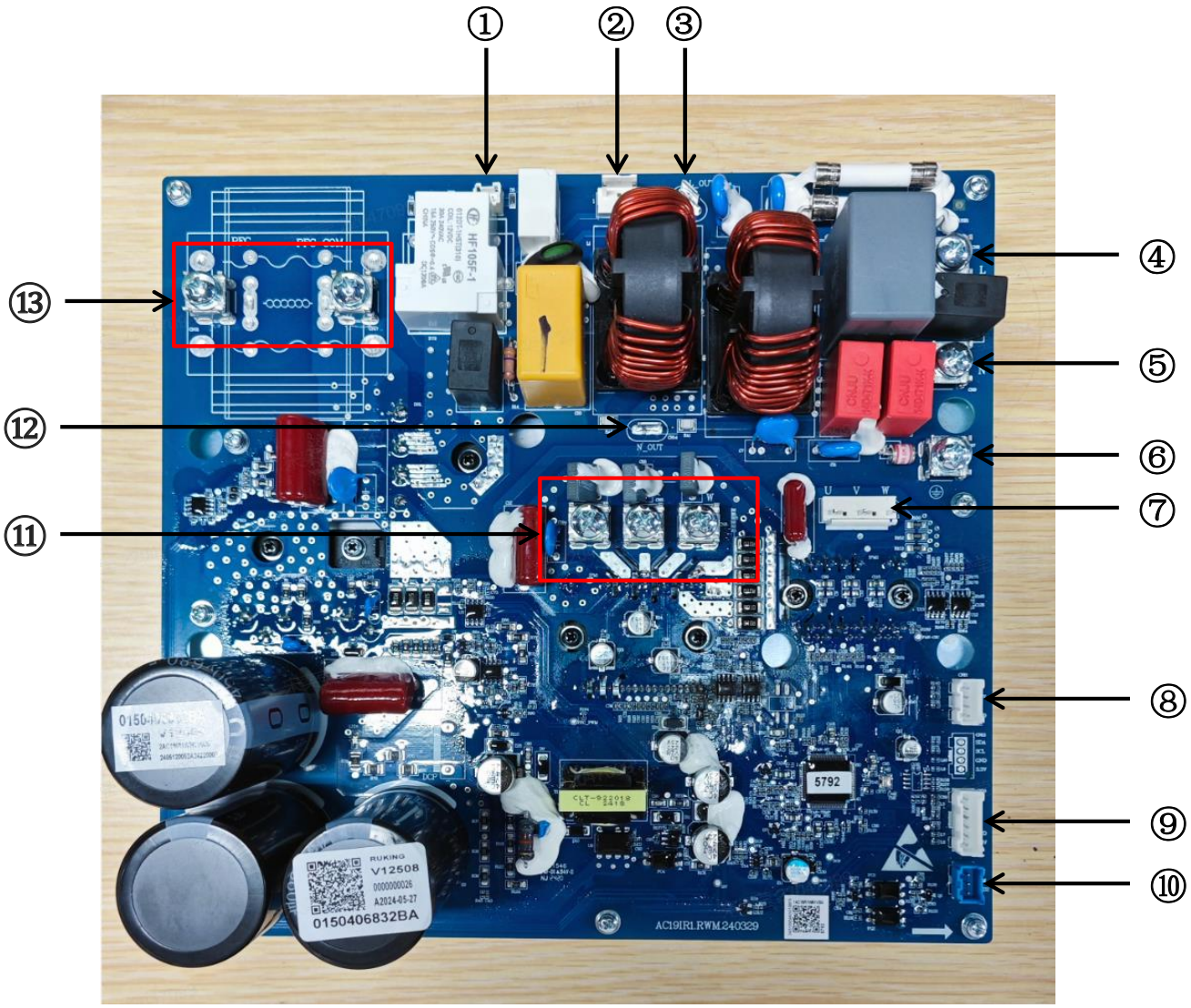
Main PCB Code: 0151801061



No.	Port No.	Silk No.	Full Name Description
1	CN9	HEATER1	Electric Heater Control
2	CN21	Q P	Indoor & Outdoor Units Communication
3	CN31	A B	PC Monitor(Reserved)
4	CN40	PC	PC Monitor
5	CN46	WS	FlowMeter
6	CN1	HPS	High Pressure Switch
7	CN42	Water Pressure	Water Pressure Sensor
8	CN28	PD	High Pressure Sensor
9	CN29	PS	Low Pressure Sensor
10	CN44 CN5-1	THO THI TWO TWI Toci1/TE2	Temperature Sensor
11	CN7 CN3 CN6 CN4 CN23 CN5	TAO Td1 TS TE(1) Tsco Tliqsc TC/TA1	Temperature Sensor
12	CN71	DCPUMP	DC Water Pump Control Signal
13	CN20	CT1	CT PCB
14	CN10	INV COM	Inverter Communication
15	CN8	LEVA	Electronic Expansion Valve
16	CN56	B-HEATER	Chasis Heater
17	CN25	HEATER1	Crankcase Heater
18	CN55	Pump2	DC Water Pump Power Supply
19	CN16	4WV	Four Way Valve
20	CN41	G N L	Power Supply
21	CN32	WIFI/CANDY	Wi-Fi

AW042HUGHA AW062HUGHA

Inverter PCB Code: 0150406832BA

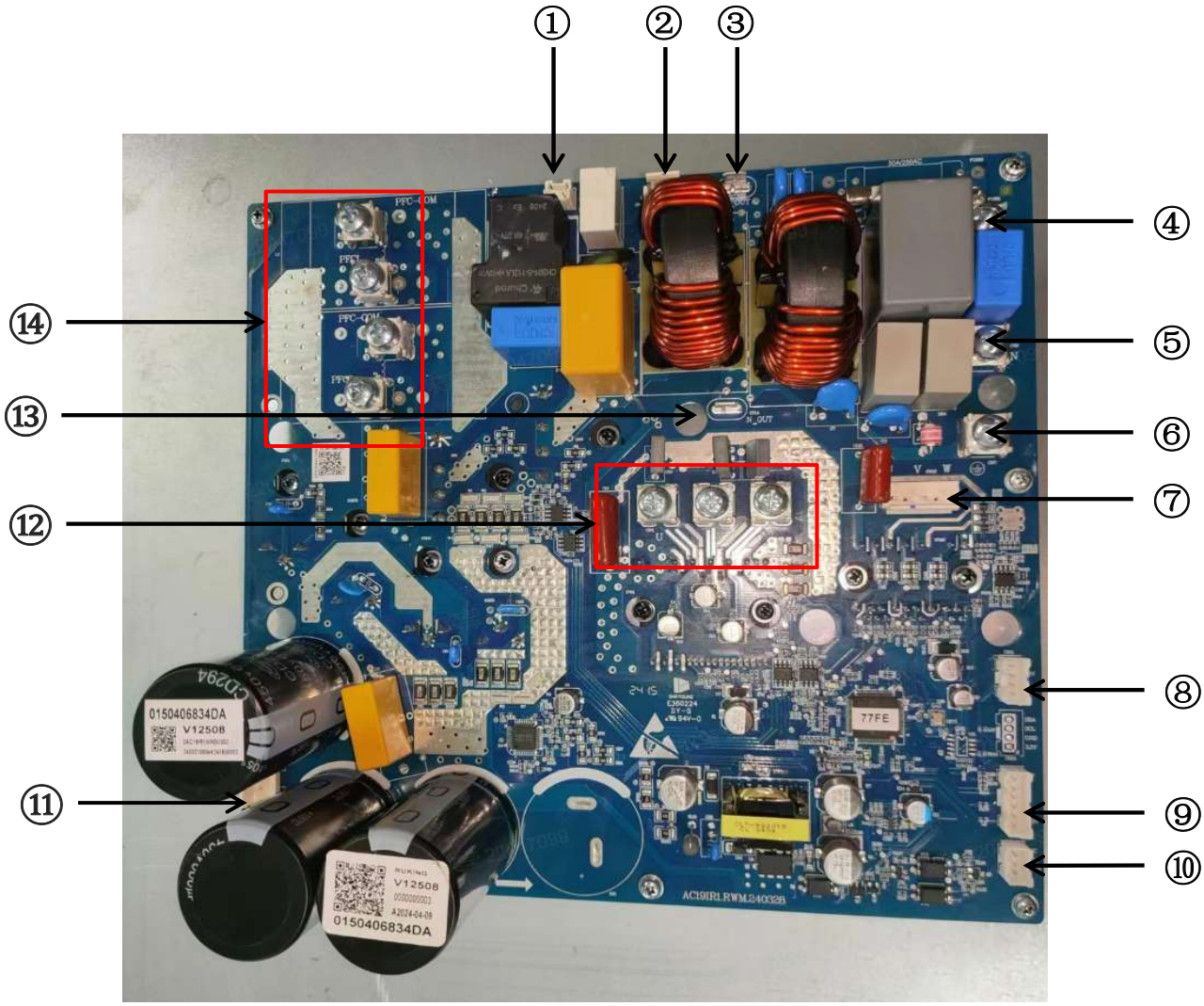


No.	Port No.	Silk No.	Full Name Description
1	CN2	/	12V Standby
2	CN3	/	Jump Wire (Reserved for Standby Function)
3	CN15	L_OUT	L Power Supply
4	CN8	L	L Power Input
5	CN9	N	N Power Input
6	CN7	⏚	Earthing Input
7	CN12	U V W	Fan Motor Input
8	CN11	/	Chip Pgoramming
9	CN10	/	Test Monitoring
10	CN1	/	Main PCB Communication
11	CN4 CN5 CN6	U V W	Compressor Output
12	CN14	N_OUT	N Power Supply
13	CN18 CN17	PFC PFC-COM	External Inductance

AW082HUGHA AW102HUGHA

Inverter PCB Code: 0150406834DA

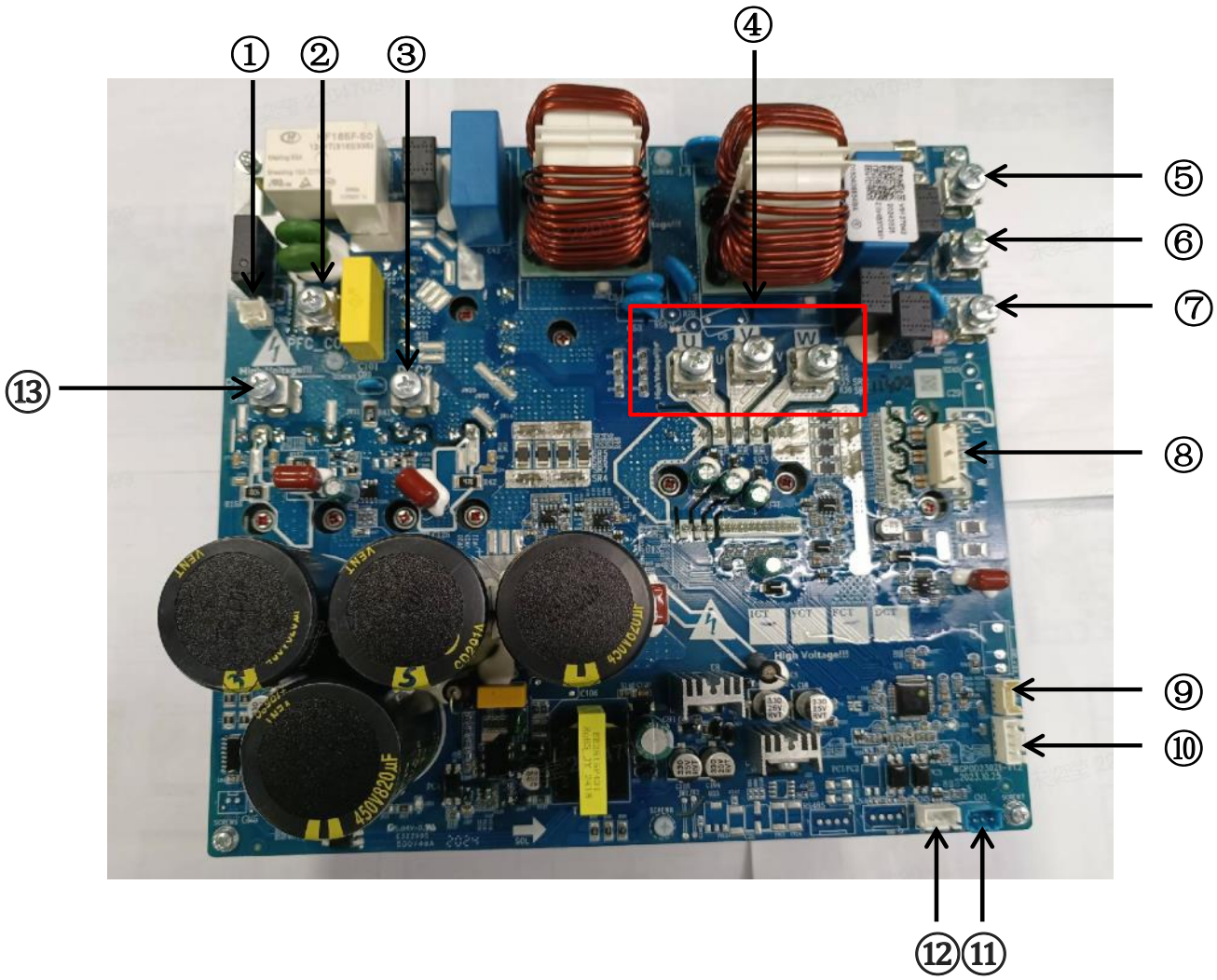
0150406834DA



No.	Port No.	Silk No.	Full Name Description
1	CN8	/	12V Standby
2	CN3	/	Jump Wire (Reserved for Standby Function)
3	CN15	L_OUT	L Power Supply
4	CN2	L	L Power Input
5	CN1	N	N Power Input
6	CN7	⏚	Earthing Input
7	CN12	U V W	Fan Motor Input
8	CN11	/	Chip Programming
9	CN10	/	Test Monitoring
10	CN9	/	Mian PCB Communication
11	CN16	N P	Compressor Output
12	CN4 CN5 CN6	U V W	DC Bus Voltage Output
13	CN14	N_OUT	N Power Supply
14	P1 P2 P3 P4	PFC-COM PFC1 PFC-COM PFC2	External Inductance

AW122HVGHA AW142HVGHA

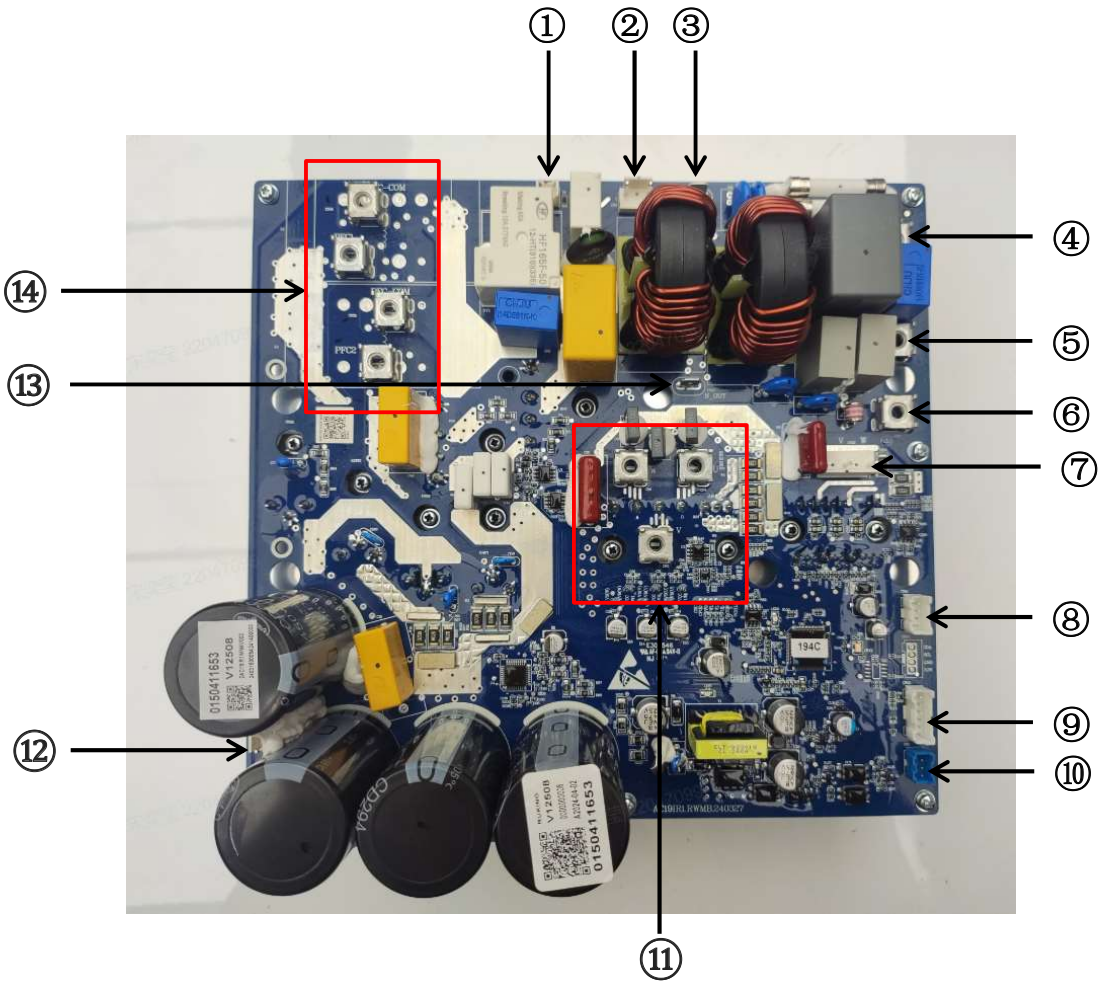
Inverter PCB Code: 0150406834BA



No.	Port No.	Silk No.	Full Name Description
1	CN2	/	12V Standby
2	PFC_COM	PFC_COM	External Inductance
3	PFC2	PFC2	External Inductance
4	U V W	U V W	Compressor Output
5	AC-L	AC-L	L Power Input
6	AC-N	AC-N	N Power Input
7	EARTH	EARTH	Earthing Input
8	DCFAN1	U V W	Fan Motor Output
9	CN-PC	CN-PC	Test Monitoring
10	ISP	ISP	Chip Pgoramming
11	CN1	/	Main PCB Communication
12	CN3	/	Main PCB Communication
13	PFC1	PFC1	External Inductance

AW162HVGHA

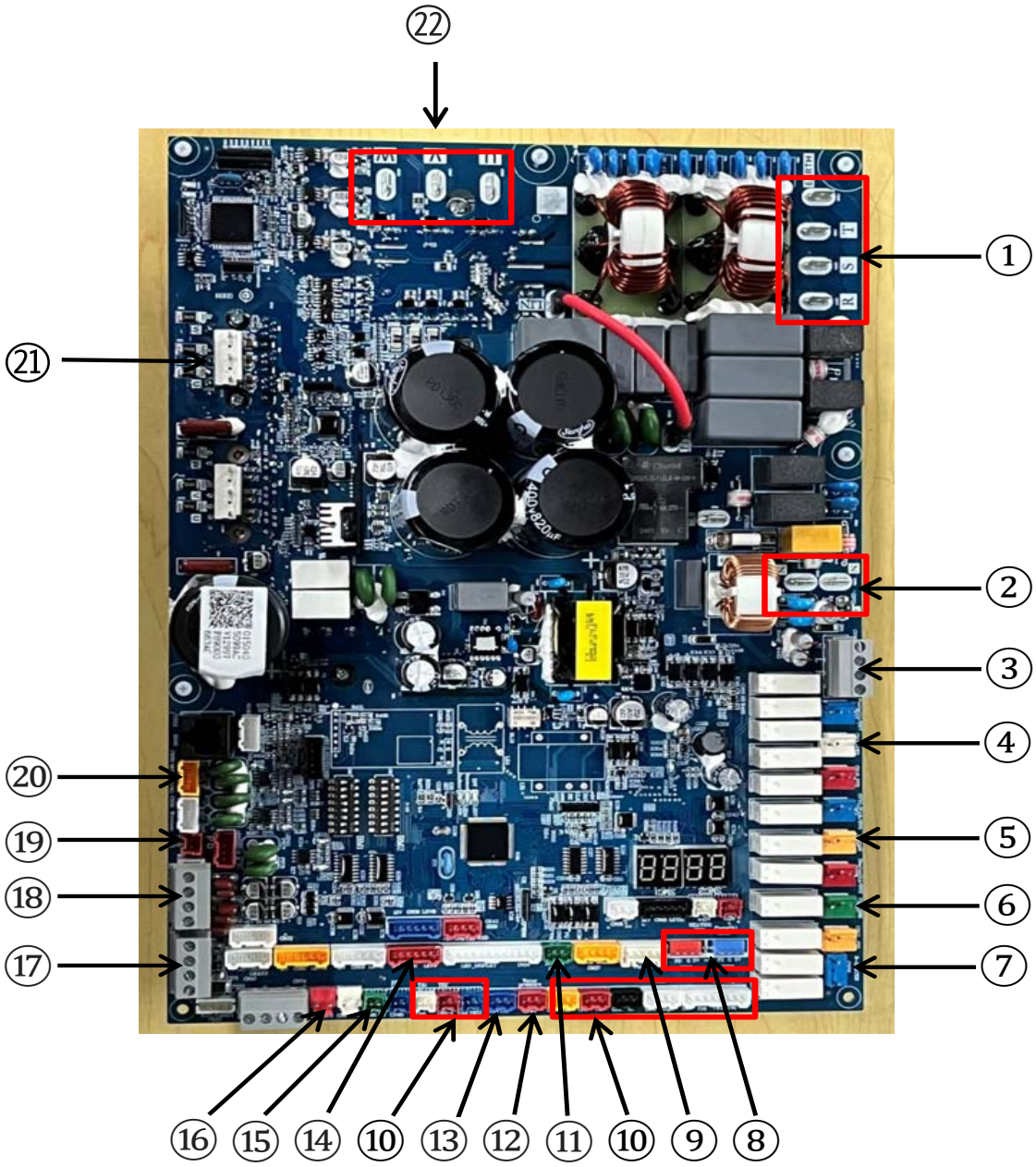
Main PCB Code: 0150411653



No.	Port No.	Silk No.	Full Name Description
1	CN2	/	12V Standby
2	CN3	/	Jump Wire (Reserved for Standby Function)
3	CN15	L_OUT	L Power Supply
4	CN8	L	L Power Input
5	CN9	N	N Power Input
6	CN7	⏚	Earthing Input
7	CN12	U V W	Fan Motor Output
8	CN11	/	Chip Pgoramming
9	CN10	/	Test Monitoring
10	CN1	/	Main PCB Communication
11	CN4 CN5 CN6	U V W	Compressor Output
12	CN16	N P	DC Bus Voltage Output
13	CN14	N_OUT	N Power Supply
14	CN18 PFC1 CN21 PF2	PFC-COM PFC1 PFC-COM PFC2	External Inductance

AW10NHUGHA AW12NHVGHA AW14NHVGHA AW16NHVGHA

Main PCB Code: 0150405099AC 0150405099AD 0150405099AE

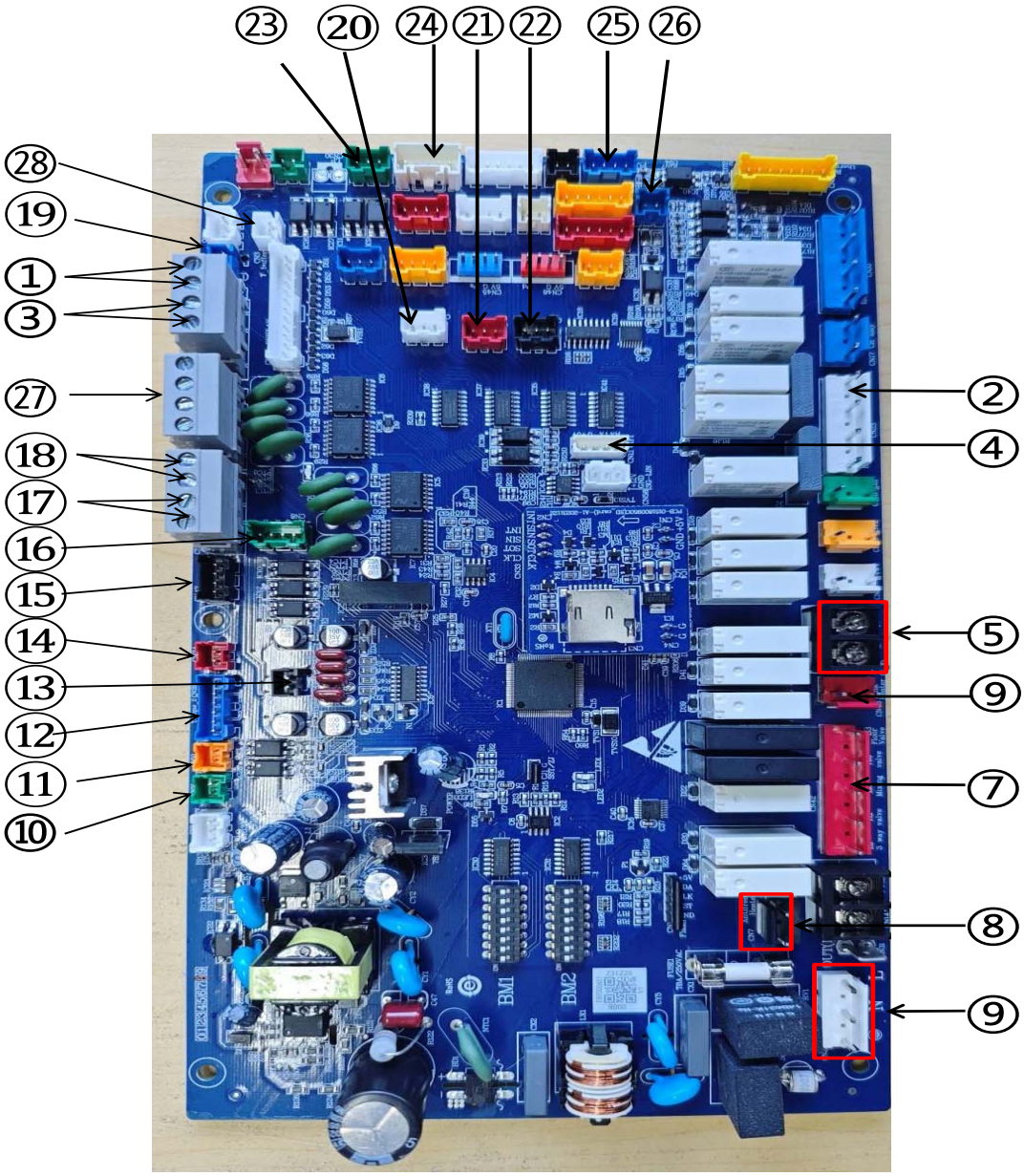


No.	Port No.	Silk No.	Full Name Description
1	CN77 CN79 CN81 CN82	R S T EARTH	Driver PCB Power Supply
2	CN93 CN90	N N	Main PCB Power Supply
3	CN14	3 way valve	Three Way Valve(Reserved)
4	CN16	4WV	Four Way Valve
5	CN55	Pump2	Water Pump
6	CN25	HEATER1	Crankcase Heater
7	CN56	B-HEATER	Chasis Heater
8	CN28 CN29	PD PS	Pressure Sensor
9	CN39	FM	Flowmeter
10	CN7 CN3 CN6 CN23 CN44	TAO Td1 TS Tsco Tliqsc THO THI TWO TWI	Temperature Sensor
11	CN71	DCPUMP	DC Water Pump Control Signal
12	CN42	Water pressure	Water Pressure Sensor
13	CN20	CT1	CT PCB
14	CN8	LEVA	Electronic Expansion Valve
15	CN46	WS	Flow Switch
16	CN1	HPS	Pressure Switch
17	CN15	/	Wi-Fi(Reserved)
18	CN31	/	PC Monitor(Reserved)
19	CN21	P Q	Indoor & Outdoor Communication
20	CN70	MODBUS/4G	Modbus(Reserved)
21	CN76	U V W	Fan Motor Output
22	CN86 CN87 CN88	U V W	Compressor Output

15.2 Indoor Units

HU102WAHYA HU162WAHYA HU10NWAHYAE3 HU16NWAHYAE3 HU102WAHYB HU162WAHYB HU16NWAHYBE3 HU102F20AHYA HU162F20AHYA HU102F20AHYAE3 HU162F20AHYAE3 HU102F16AHYA HU102F24AHYA HU162F24AHYA HU102F16AHYAE3 HU102F24AHYAE3 HU162F24AHYAE3

Main PCB Code:0151800950B



No.	Port No.	Silk No.	Full Name Description
1	CN52	HM	Calorimeter
2	CN23	Heater_1 Heater_2	HU Electric Heater
3	CN52	EM	Electric Meter
4	CN11	WIFI	Wi-Fi
5	CN35	PUMP_0	DC Water Pump Power Supply
6	CN43	Tank Heater	Water Tank Electric Heater
7	CN42	3 way valve Mixing valve Floor Valve	Three way valve Mixing Valve Floor Heating Valve
8	CN7	Antifreeze Heater	Water Circuit Anti-freeze Electric Heater
9	CN24	N L	Power Supply
10	CN55	OLP-1	Electric Heater Over Heat Protection Feedback
11	CN50	T_tanku	Water Tank Upper Temperature Sensor
12	CN28	Twzone_1 Twzone_2	Zone1 Zone2
13	CN4	Q P	Indoor & Outdoor Communication
14	CN34	Tz	Anti-freeze Sensor
15	CN47	DRED-SG	SG
16	CN6	/	Controller
17	CN2	Modbus	The Third-party Modbus Cloud service
18	CN2	IO card	485
19	CN8	PC	PC Monitor
20	CN49	Tout2	Temperature Sensor after Auxiliary Heater
21	CN38	P_w	Water Pressure Sensor
22	CN48	T_tankd	Water Tank Lower Temperature Sensor
23	CN9	PUMP_0-FB	DC Water Pump Control Signal
24	CN36	FM	Flow Meter
25	CN37	PUMP_1 PUMP_2	External Water Pump Control Signal
26	CN51	OLP-2	Water Tank Electric Heater Over Heat Protection Feedback
27	CN5	/	OEM WIFI
28	CN3	T_buffer	T_buffer Temperature Sensor

16. Dip Switch Setting

Must power off before opening the cover of the electrical control box and setting the dip switch.
In the following table, 1 is for ON and 0 is for OFF.

16.1 Outdoor Units

(1) BM1 dip switch definition:

BM1_1	Capacity Control Mode Option	[1]	Capacity Control Mode Option			
		0	Normal Control (Default)			
		1	IO Board 0-10V Control			
BM1_2 BM1_3 BM1_4 BM1_5	Outdoor Unit Model Option	[2]	[3]	[4]	[5]	Outdoor Unit Model Option
		0	0	0	0	AW042HUGHA
		0	0	0	1	AW062HUGHA
		0	0	1	0	AW082HUGHA
		0	0	1	1	AW102HUGHA/AW10NHUGHA
		1	0	0	0	AW122HVGHA/AW12NHVGHA
		1	0	0	1	AW142HVGHA/AW14NHVGHA
		1	0	1	0	AW162HVGHA/AW16NHVGHA
BM1_6	Power Supply Option	[6]	Power Supply Option			
		0	Single Phase (Default)			
		1	Three Phase			
BM1_7 BM1_8	Outdoor Unit Mode Option	[7]	[8]	Outdoor Unit Modes Option		
		0	0	Normal Mode (Default)		
		0	1	Power Mode		
		1	0	Quiet Mode		
		1	1	Performance Test Mode		

(2) BM2 dip switch definition:

BM2_1 BM2_2 BM2_3	Outdoor Unit Model Option	[1]	[2]	[3]	Outdoor Unit Model
		0	0	0	MONOBLOC (Default)
		0	0	1	Hydro Split
		0	1	0	All in One
BM2_4	Refrigerant Type Option	[3]	Refrigerant Type Option		
		0	R290 (Default)		
		1	R32(Reserved)		
BM2_5~8	Reserved	Reserved (Default as 0)	Reserved (Default as 0)		

16.2 Indoor Units

(1) BM1 dip switch definition:

BM1_1	Hydrobox Models	[1]				Reserved
		0				Normal HydroBox (Default)
		1				HydroBox
BM1_2~4	Host Machine & Submachine Option	[2]	[3]	[4]		Host Machine & Submachine Option
		0	0	0		Host Machine (Default)
		0	0	1		Submachine 1#
		0	1	0		Submachine 2#
		0	1	1		Submachine 2#
		1	0	0		Submachine 4#
		1	0	1		Submachine 5#
		1	1	0		Submachine 6#
		1	1	1		Submachine 7#
BM1_5~8	Capacity Option	[5]	[6]	[7]	[8]	Capacity Option
		0	0	0	0	AW042HUGHA
		0	0	0	1	AW062HUGHA
		0	0	1	0	AW082HUGHA
		0	0	1	1	AW102HUGHA/AW10NHUGHA
		1	0	0	0	AW122HVGHA/AW12NHVGHA
		1	0	0	1	AW142HVGHA/AW14NHVGHA
		1	0	1	0	AW162HVGHA/AW16NHVGHA

(2) BM2 dip switch definition:

BM2_1	Indoor Unit Communication Address Setting Mode	0	Auto Setting (Default)						
		1	Dip Switch Setting Address						
BM2_2	Water Tank Sensor Option	0	Two Sensors: Ttanku and Ttankd (Default)						
		1	One Sensor: Ttanku						
BM2_3~8	Indoor Unit Communication Address for Modbus RTU	[3]	[4]	[5]	[6]	[7]	[8]	Communication Address	
		0	0	0	0	0	0	0# (Default)	
		0	0	0	0	0	1	1#	
		0	0	0	0	1	0	2#	
		…	…	…	…	…	…	……	
		1	1	1	1	1	1	63#	

17. Sensor Resistance Table

1. Reference Table

No.	Spare Parts Code	Sign	Parameter	Note
1	0004000046	Ts	25°10 kΩ	Sheet 1
2	0004000047	Te1	25°10 kΩ	Sheet 1
3	0004000052	Tout2	25°10 kΩ	Sheet 1
4	0004000053	Tai	25°10 kΩ	Sheet 1
5	0004000049	T-tank	25°10 kΩ	Sheet 1
6	0004000050	T-tank2	25°10 kΩ	Sheet 1
7	0004000048	Twi, Two	25°10 kΩ	Sheet 1
8		Thi, Tho	25°10 kΩ	Sheet 1
9	0150409004	Tao	25°10 kΩ	Sheet 1
10	0004000045	Td1	80°50 kΩ	Sheet 2

2. Sensor Resistance Table (Sheet 1)

25°10 kΩ

R25=10.00KΩ±3% B25/50= 3700K±3%

T(°C)	Rnom(KΩ)	T(°C)	Rnom(KΩ)
-40	250.4931	34	6.9733
-39	235.5181	35	6.7067
-38	221.5962	36	6.4516
-37	208.6378	37	6.2076
-36	196.5621	38	5.9740
-35	185.2972	39	5.7503
-34	174.7781	40	5.5362
-33	164.9457	41	5.3311
-32	155.7471	42	5.1346
-31	147.1341	43	4.9463
-30	139.0630	44	4.7659
-29	131.4940	45	4.5929
-28	111.8705	46	4.4271
-27	117.7198	47	4.2681
-26	111.4512	48	4.1155
-25	105.5570	49	3.9692
-24	100.0117	50	3.8287
-23	94.7917	51	3.6947
-22	89.8755	52	3.5660
-21	85.2430	53	3.4424
-20	80.8759	54	3.3237
-19	76.7571	55	3.2096
-18	72.8709	56	3.1000
-17	69.2025	57	2.9946
-16	65.7385	58	2.8933
-15	62.4662	59	2.7959
-14	59.3739	60	2.7022
-13	56.4507	61	2.6121
-12	53.6864	62	2.5253
-11	51.0715	63	2.4419

T(°C)	Rnom(KΩ)	T(°C)	Rnom(KΩ)
-10	48.5972	64	2.3615
-9	46.2552	65	2.2842
-8	44.0377	66	2.2097
-7	41.9376	67	2.1380
-6	39.9480	68	2.0689
-5	38.0627	69	2.0024
-4	36.2756	70	1.9383
-3	34.5812	71	1.8765
-2	32.9744	72	1.8169
-1	31.4500	73	1.7595
0	30.0037	74	1.7042
1	28.6310	75	1.6508
2	27.3278	76	1.5994
3	26.0904	77	1.5497
4	24.9152	78	1.5018
5	23.7987	79	1.4556
6	22.7377	80	1.4110
7	21.7294	81	1.3680
8	20.7707	82	1.3265
9	19.8592	83	1.2864
10	18.9922	84	1.2477
11	18.1673	85	1.2103
12	17.3825	86	1.1742
13	16.6355	87	1.1393
14	15.9243	88	1.1057
15	15.2472	89	1.0731
16	14.6023	90	1.0417
17	13.9879	91	1.0113
18	13.4024	92	0.9819
19	12.8445	93	0.9535
20	12.3126	94	0.9261
21	11.8055	95	0.8996
22	11.3218	96	0.8739
23	10.8604	97	0.8491
24	10.4201	98	0.8251
25	10.0000	99	0.8019
26	9.5989	100	0.7794
27	9.2160	101	0.7577
28	8.8503	102	0.7366
29	8.5010	103	0.7163
30	8.1673	104	0.6966
31	7.8483	105	0.6775
32	7.5435	106	0.6591
33	7.2520	107	0.6412

80°50 kΩ (Sheet 2)
R80=50KΩ±3% B25/80=4450±3% M470-2

T(°C)	Rnom(KΩ)	T(°C)	Rnom(KΩ)
-40	24087.7290	33	349.3720
-39	22367.9580	34	333.5280
-38	20789.5510	35	318.5030
-37	19338.8110	36	304.1920
-36	18003.4710	37	290.5980
-35	16772.8000	38	277.7190
-34	15637.1890	39	265.4530
-33	14588.0520	40	253.8000
-32	13617.8260	41	242.6590
-31	12719.6600	42	232.1310
-30	11887.4240	43	222.0110
-29	11115.5970	44	212.4030
-28	10399.1710	45	203.3060
-27	9733.7500	46	194.6180
-26	9115.2460	47	186.3380
-25	8539.8760	48	178.3660
-24	8004.3710	49	170.9040
-23	7505.5610	50	163.6470
-22	7040.7880	51	156.8770
-21	6607.3950	52	150.3850
-20	6203.1340	53	144.1920
-19	5825.8580	54	138.2840
-18	5473.5220	55	132.6470
-17	5144.3890	56	127.2660
-16	4836.8240	57	122.1290
-15	4549.1900	58	117.2230
-14	4280.2620	59	112.5390
-13	4028.5060	60	108.0630
-12	3792.9000	61	103.7870
-11	3572.3190	62	99.6990
-10	3365.7420	63	95.7930
-9	3172.0450	64	92.0570
-8	2990.6130	65	88.4850
-7	2820.4240	66	85.0680
-6	2660.7640	67	81.7990
-5	2511.0190	68	78.6710
-4	2370.4730	69	75.6770
-3	2238.5130	70	72.8110
-2	2114.5260	71	70.0670
-1	1998.1030	72	67.4390
0	1888.7330	73	64.9210
1	1785.8020	74	62.5100
2	1689.1060	75	60.1980
3	1598.1350	76	57.9840
4	1512.5810	77	55.8600
5	1432.0350	78	53.8250

T(°C)	Rnom(KΩ)	T(°C)	Rnom(KΩ)
6	1356.1910	79	51.8720
7	1284.7430	80	50.0000
8	1217.4850	81	48.2040
9	1154.1120	82	46.4800
10	1094.3160	83	44.8260
11	1037.9950	84	43.2390
12	984.8440	85	41.7140
13	934.7580	86	40.2510
14	887.4320	87	38.8450
15	842.7640	88	37.4950
16	800.6520	89	36.1980
17	760.7880	90	34.9520
18	723.1730	91	33.7550
19	687.6020	92	32.6030
20	653.9730	93	31.4960
21	622.0820	94	30.4320
22	592.0300	95	29.4090
23	563.5120	96	28.4250
24	536.6300	97	27.4770
25	511.0760	98	26.5660
26	486.8510	99	25.6890
27	463.9550	100	24.8450
28	442.2850	101	24.0330
29	421.7400	102	23.2500
30	402.2170	103	22.4970
31	383.6140	104	21.7720
32	366.0330	105	21.0730

18. Accessories

18.1 Outdoor Units

	AW042HUGHA AW062HUGHA AW082HUGHA AW102HUGHA AW10NHUGHA	AW122HVGHA AW142HVGHA AW162HVGHA AW12NHVGHA AW14NHVGHA AW16NHVGHA	Description	Spare Parts No.
Drainage elbow	9	10	Water drainage of outdoor unit drain pan.	0010207576
Rubber cushion	6	6	Reduce vibration.	0150205886
Water filter	1	1	Filter water	0150751113
Installation manual	1	1	Refer to this manual for installation.	/

Drainage elbow

Rubber cushion

Water filter

18.2 Indoor Units

	HU102WAHYA HU162WAHYA HU10NWAHYAE3 HU16NWAHYAE3 HU102WAHYB	HU162WAHYB HU162WAHYBE3	HU102F20AHYA HU162F20AHYA HU102F20AHYAE3 HU162F20AHYAE3	Description	Spare Parts No.
Installation manual	1	1	1	Refer to this manual for installation.	/
Rubber ring	2	5	9	Sealing ring of quick connector. Sealing function.	0150206286
T-Zone_1 Temperature sensor	1	1	1	Water temperature sensor of Zone_1. To detect the water tank Zone_1 temperature.	0150408957
T-Zone_2 Temperature sensor	1	1	1	Water temperature sensor of Zone_2. To detect the water tank Zone_2 temperature.	0150408957
T_tank Temperature sensor	2	2	/	Water temperature sensor of water tank.To detect the water tank temperature.	0150408957
T_buffer Temperature sensor	1	1	1	Water temperature sensor of buffer tank. To detect the buffter tank temperature.	0150405308
Installation plate I	1	1	/	To fix the unit in the box during transportation.	0150177509
Installation plate II	1	1	/	To fix the unit in the box during transportation.	0150181317

Rubber ring

Temperature sensor

Installation plate I

Installation plate II

19. Recommended External Device Specification

No.	Part		Specifications
1	Two way valve kit *Cooling model	Electromotoric Actuator	AC230V, 12 VA
		2-port Valve	
2	Room thermostat	Wired	AC230V
		Wireless	
3	Mixing valve	-	AC230V, 6VA
4	Pump	-	AC 230V, 0.6 A max

20. Manual Updates Versions

This part will show the update versions of this Maual.

Version Code	Description	Date
SYJS-08-2024 REV.A Edition: 2024-12-26	Add 6 modeles of IDU of Hydro All in One	2024/12/26
SYJS-08-2024 REV.A Edition: 2024-08-29	Modify Heating and DHW Water Outlet Temperature	2024/8/29
SYJS-08-2024 REV.A Edition: 2024-08-29	Modify Heating Capacity table	2024/8/29
SYJS-08-2024 REV.A Edition: 2024-08-29	Add Power Wiring Figure	2024/8/29
SYJS-08-2024 REV.A Edition: 2024-08-29	Add the maximum working pressure of the expansion vessel	2024/8/29
SYJS-07-2024 REV.B Edition: 2024-07-31	Modify the Operation Limits delivery leaving curve	2024/7/31
SYJS-07-2024 REV.B Edition: 2024-07-31	Modify the format of the sensor resistance table	2024/7/31
SYJS-07-2024 REV.B Edition: 2024-07-31	Change PCB Photos and Port No.	2024/7/31
SYJS-07-2024 REV.B Edition: 2024-07-31	Change Wiring Diagrams	2024/7/31
SYJS-07-2024 REV.B Edition: 2024-07-31	Add All in One dip switch	2024/7/31
SYJS-07-2024 REV.B Edition: 2024-07-31	Change Certificates and Regulations	2024/7/31

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