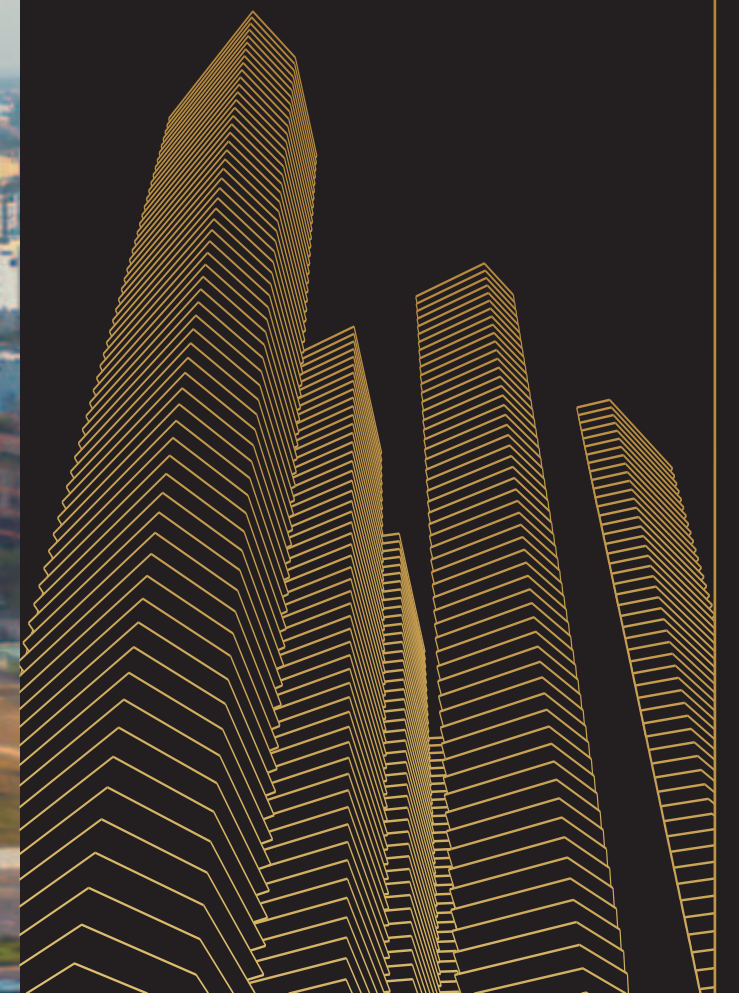


# MODULAR CHILLER



**115** R32 Inverter Air-cooled  
Modular Chiller

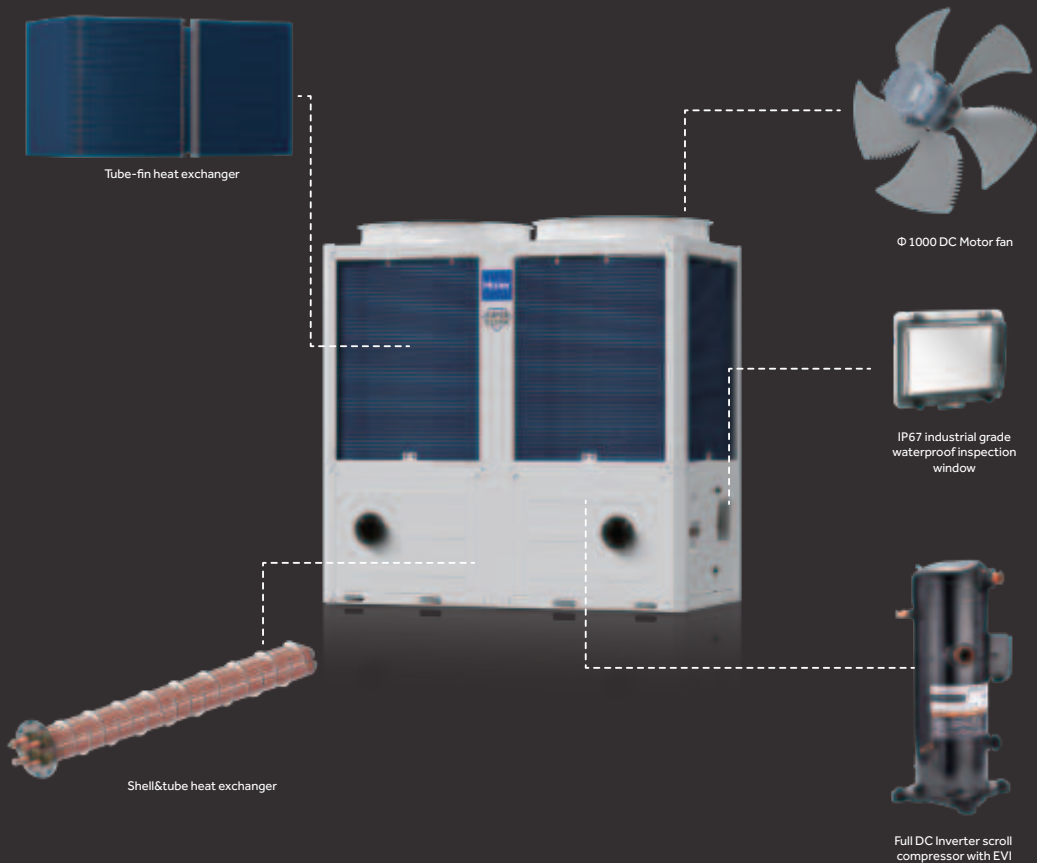




# R32 Inverter Air-cooled Modular Chiller

## Introduction

Haier Super Clima R32 inverter air-cooled modular chiller providing cooling, heating and domestic hot water high performance with Eco-friendly refrigerant R32



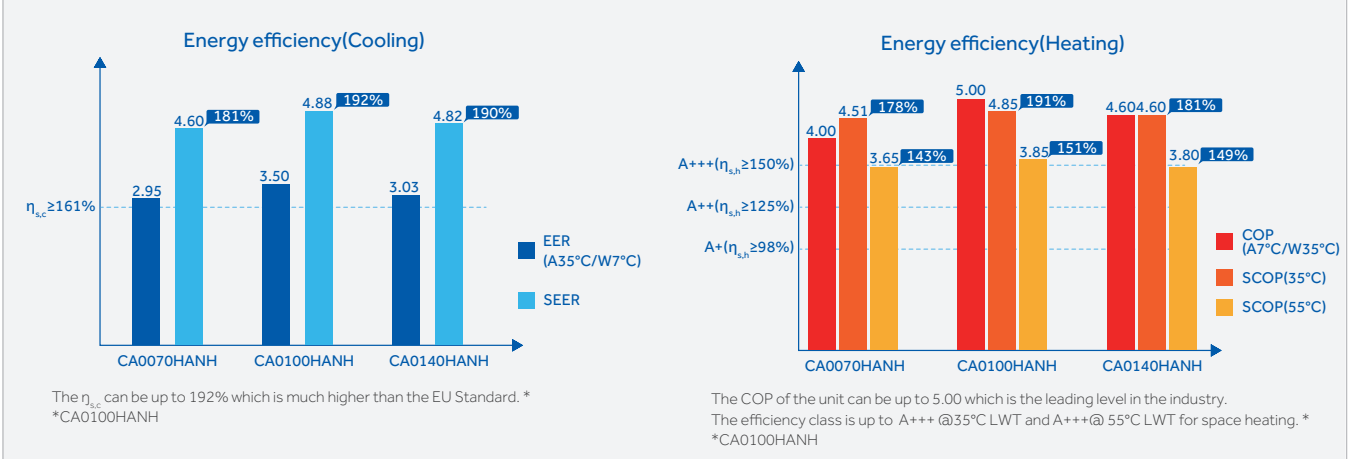
## Product Line-up

Model	CA0070HANH	CA0100HANH	CA0140HANH
Capacity Cooling/Heating	65/71	100/100	130/142
Appearance			



## Excellent Performance

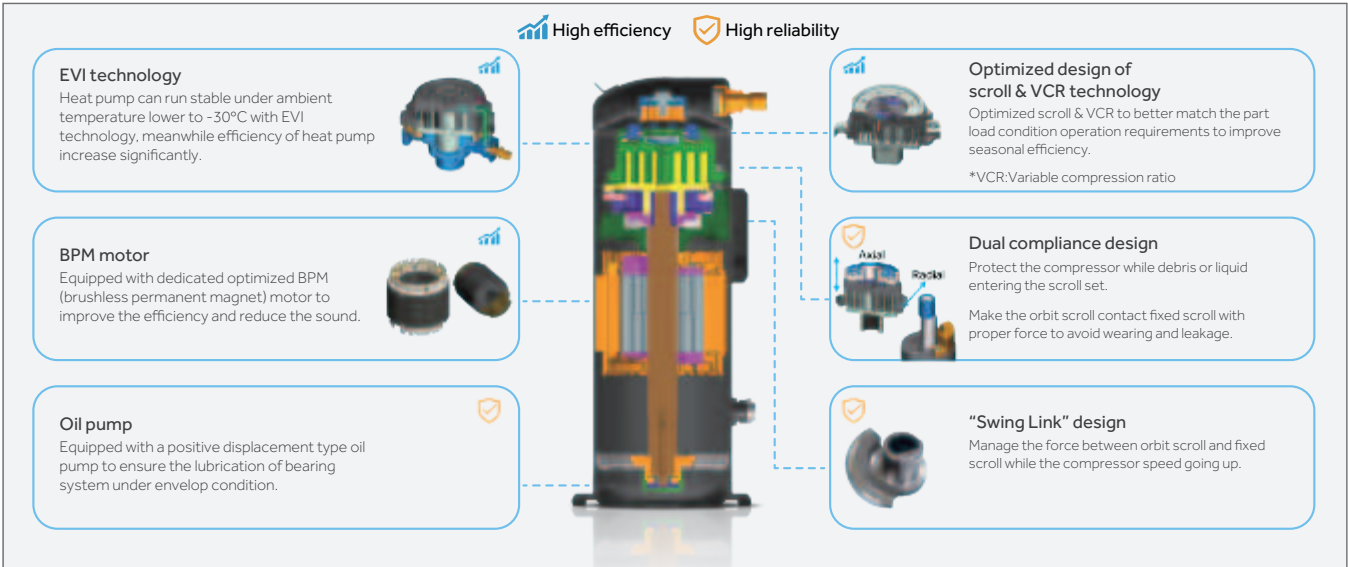
New products offer high efficiency both at full load and annual years operation conditions



## High-efficiency components results in excellent performance

### Full DC Inverter scroll compressor with EVI

The latest DC inverter compressor with EVI technology to create a strong "power " for the unit. Uniquely designed with higher compression ratios and larger pressure difference allows the unit to operate reliably even in the harshest ambient conditions. It realizes the stepless adjustment of the compressor capacity to achieve precise temperature control.

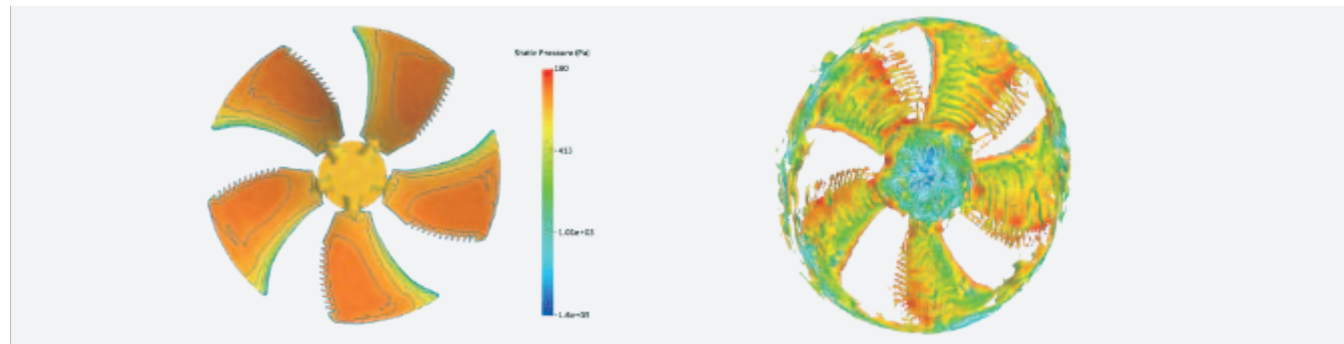


## Φ 1000 DC motor fan

The industry's largest diameter axial fans increase air volume and make more effective heat exchange while reducing noise.

The trailing edge of the fan blade is designed with a bio-mimetic tooth shape, effectively cutting and combing the airflow at the outlet to achieve reduced wind noise, stable and powerful air output, and quiet operation.

Variable speed fans by drive DC motors offer better seasonal performance.



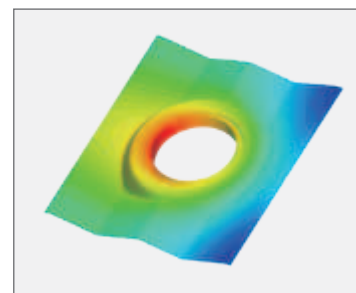
## Tube-fin heat exchanger

U-shaped heat exchanger in one piece enlarges the heat exchanging area by 47%\* and allows airflow from 360° directions to improve performance.

\*Compared to the previous generation R410A air-cooled modular chiller

Φ7inner-threaded copper tubes increases internal turbulence and then enhances heat exchange. The corrugated fins are made of hydrophilic aluminum foil to improve airflow and overall optimize heat exchange efficiency.

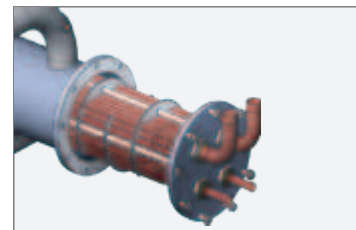
Controlled by 2 electronic expansion valves, the refrigerant flow is more evenly, which results in more adequate heat transfer.



## Shell&tube heat exchanger

Patented design shell&tube heat exchanger can significantly enhance the units' anti-frosting and anti-fouling performance.

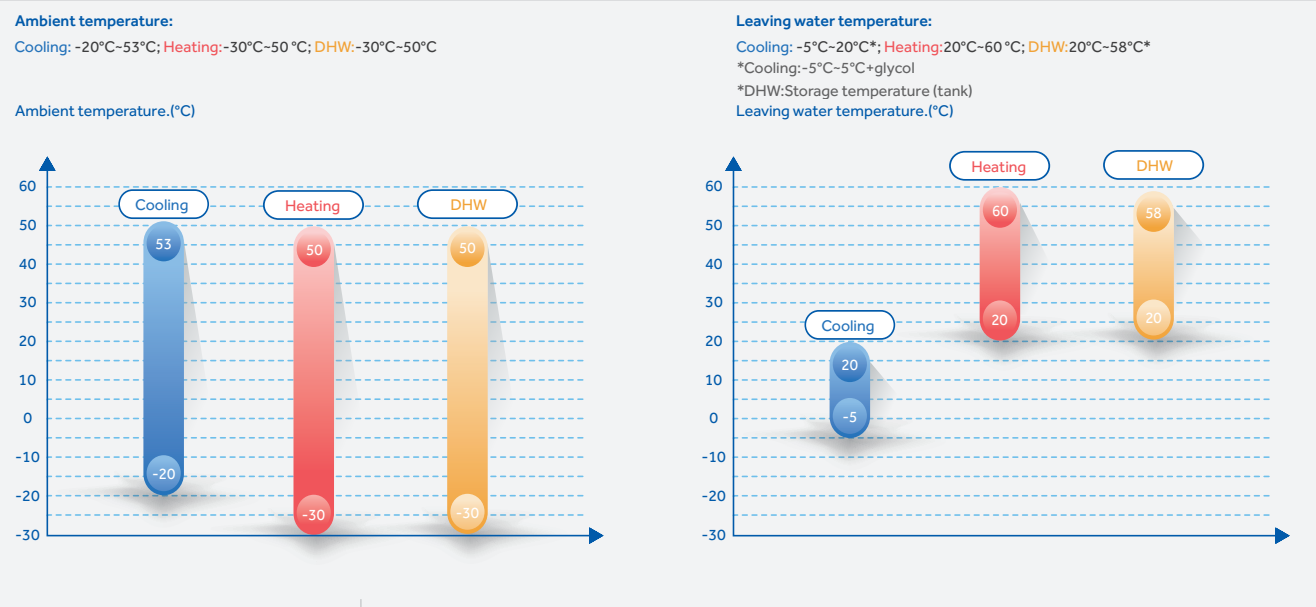
The installation of baffles enhances fluid turbulence, thereby promoting heat transfer between the fluids.



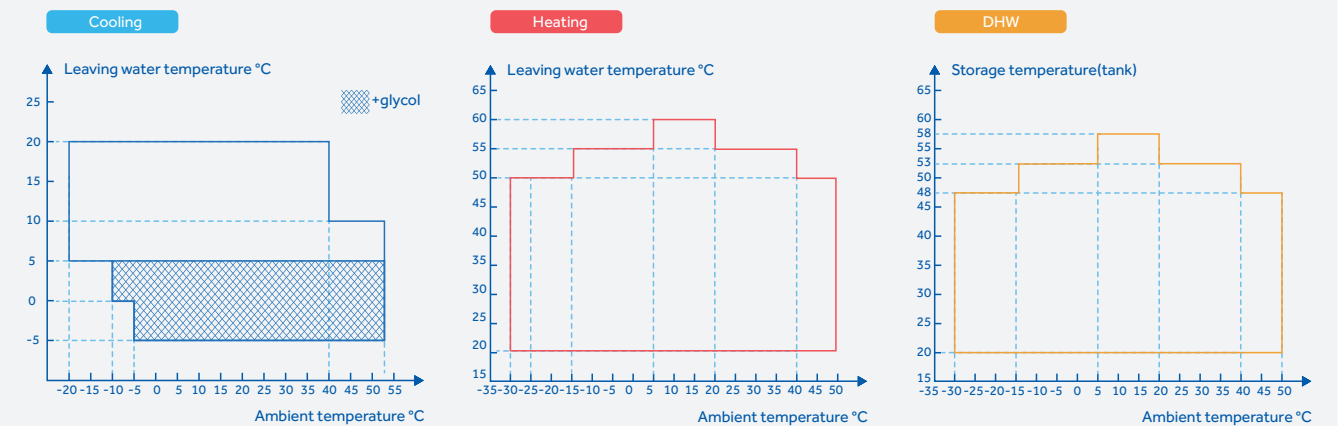
# Unparalleled Flexibility

## Wide operating range

The unit can stable operate under wide conditions, which is ideal option for various requirements.



## Operating envelope



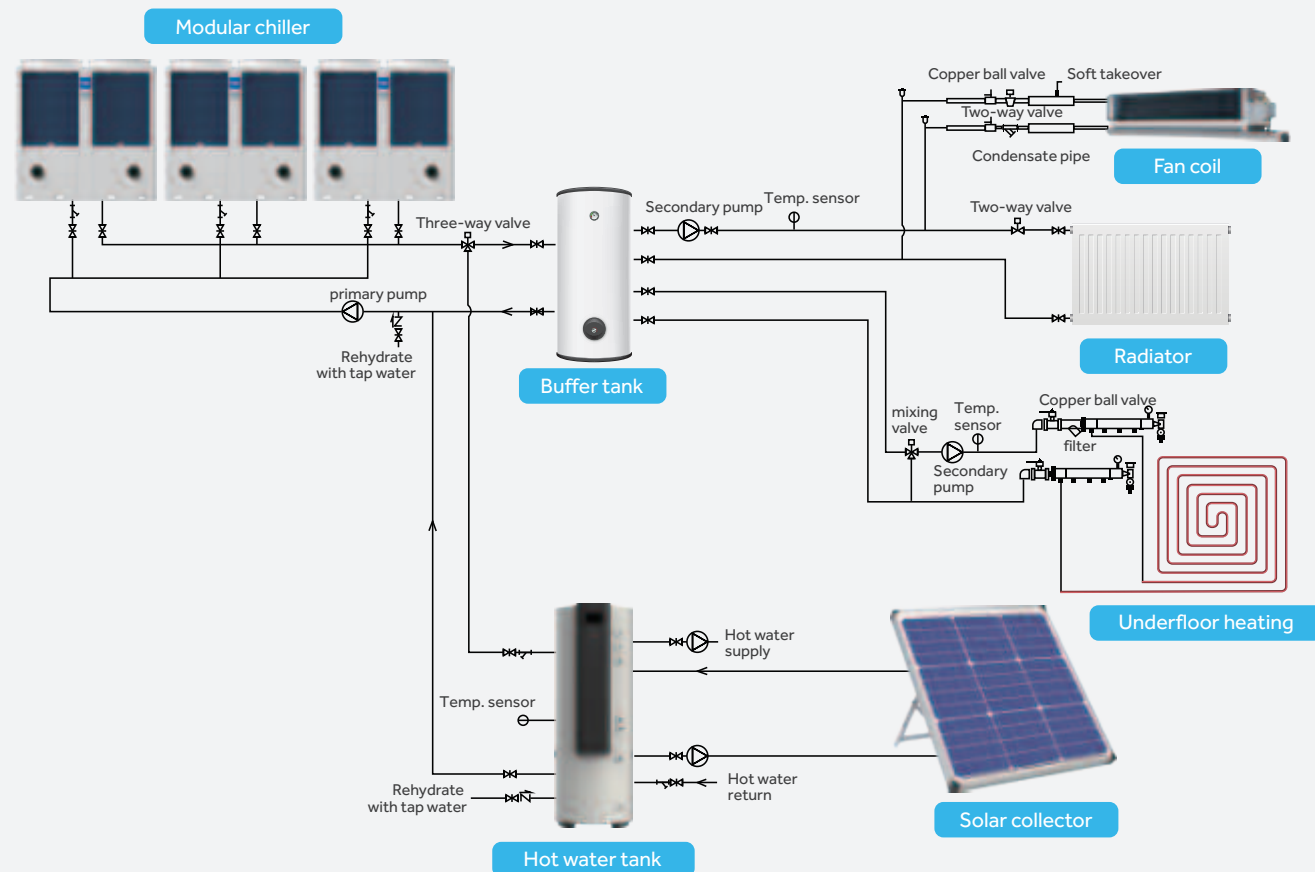
## Multiple applications

Integrated heating, cooling and domestic hot water into one system, adapt easily to multiple applications.



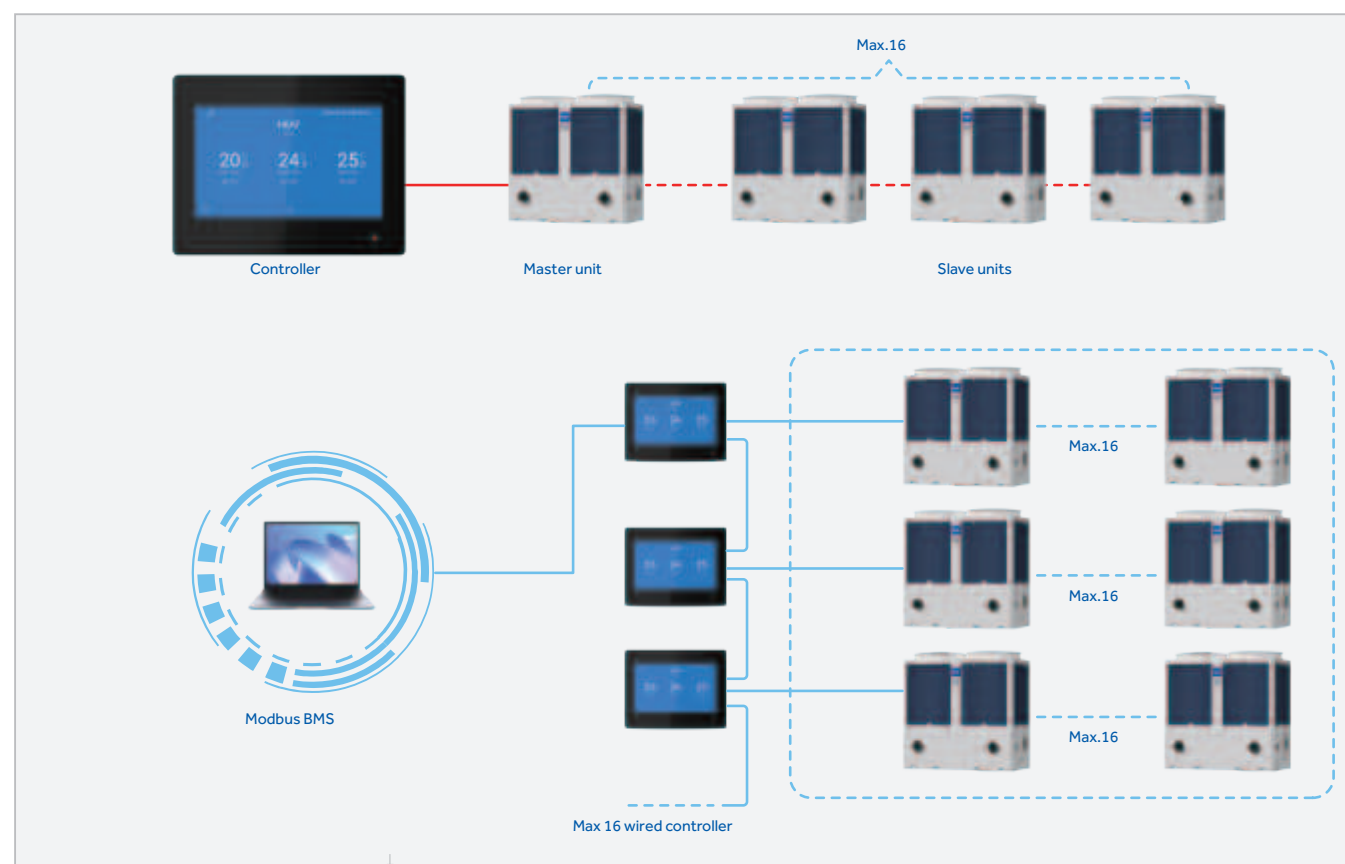


## Typical cooling/heating/DHW system application



## Max.16 combination

Max up to 16 units can be connectable into one system to meet larger capacity demands.



## Ultimate Comfort

### Intelligent precise defrosting

Module chiller design to monitor the refrigerant pressure and temperature when frost happen, the PCB would detect the heat load recession and start defrosting to make sure chiller optimization operation.

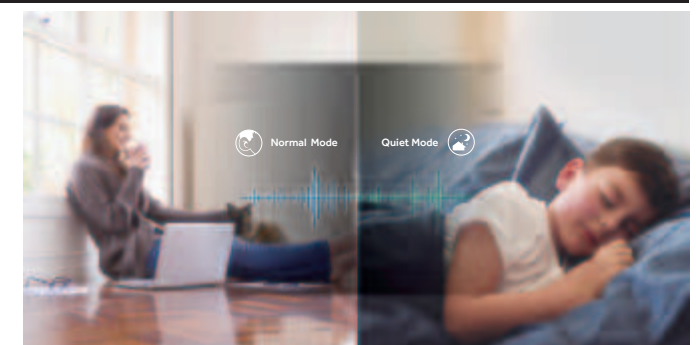
- CA0100HANH/CA0140HANH have two independent refrigerant circuit. Winter at heating operation for defrost period that one circuit is in defrost, the other still working in heating that chiller operation simultaneously and stability.
- In combination system, defrosting one of module does not affect other modules operation. If one unit is defrosted, other heat units still in operate. That realize non-stop system heating during defrosting.



- To cope with blizzards and freezing rain weather, it is equipped with centralized drainage and electric heating functions as standard. This ensures that condensate or defrosting water can be quickly discharged to the external unit during severe weather conditions, preventing ice buildup.

### Low sound level

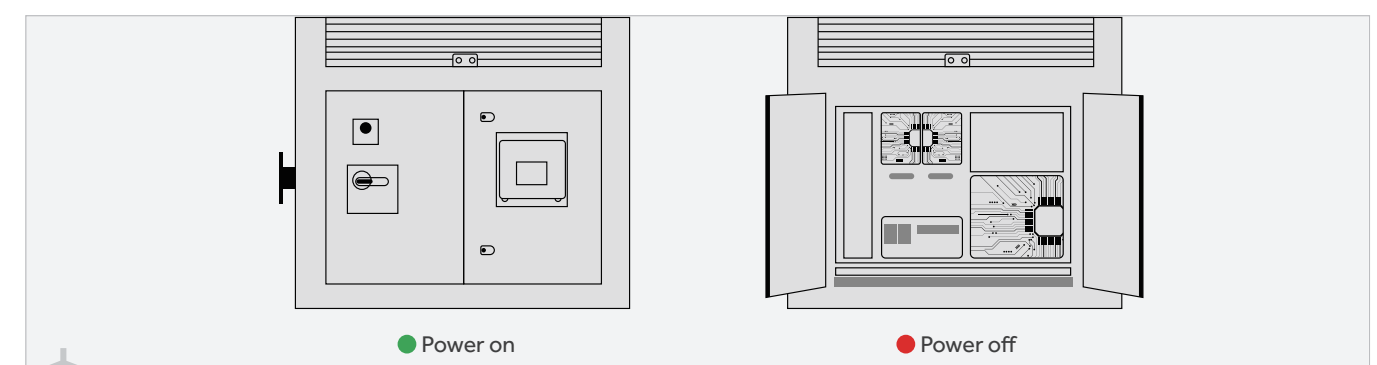
- Multi design to reduce noise, ensure chiller always running at a low sound level.
- Used the soundproof material, blocking noise from the compressor.
- Mounted on the rubber anti-vibration pad for chiller quiet operation and low vibration.
- Insulation the removable panels that help reduce the noise level.
- Brushless DC fan motor and aerodynamically optimized impeller for noise and vibration reduction.
- The quiet function would work low-speed.



## High Reliability

### Safety is paramount

With emg stop button & built-in circuit breaker double protection design ensure safety for users and unit. When the unit is powered on, the self-locking mechanism of circuit breaker will lock, preventing users opening the door of the control box, minimizing the risk of electric shock. In addition, this design protect the power circuit system when electrical faults, result prolonged chiller operation.



The safety control system has comprehensive protection during operation such as overcurrent and overvoltage, evaporator and condenser anti-freeze protection, discharge temperature overheat, phase monitoring that provides protection against phaseloss, phase reversal, and phase unbalance,ect. which above protections function design to guarantee units' table operation.



## Quality is the first priority

To ensure the long-term reliable operation of the unit, Haier products undergo rigorous simulation tests on critical components in collaboration with specialized laboratories. Additionally, transportation simulation tests are conducted on vibrating tables in the laboratory.



## Super Convenience

### User-friendly controller

The unit equipped with 5-inch touch screen, that delivers capabilities of controlling and monitoring the unit operations. Users can easily access the unit operation parameters via touch screen. These parameters are helpful for after service to diagnose the system.

If control system detects failure, the related code will be recorded, which is convenient for fast troubleshooting.

Control panel supports Modbus protocol, with which unit can seamlessly connect with the Building Automation System.

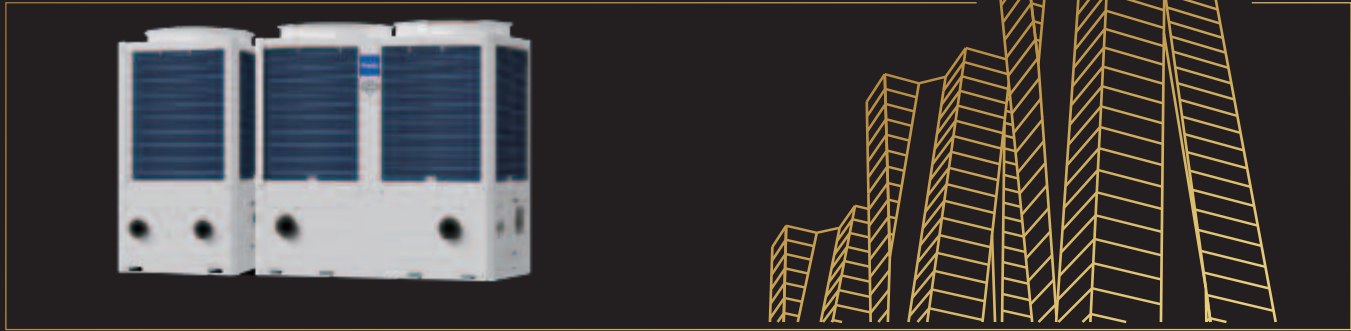


### Easy installation and maintenance

Water pipe extension that can be easy installed without the need to remove the panels.

The electrical box is hinged door design that makes maintenance and commissioning more convenient.

The unit can control a 3-portvalve water side , auxiliary heat source and the electric heater in the DHW tank.

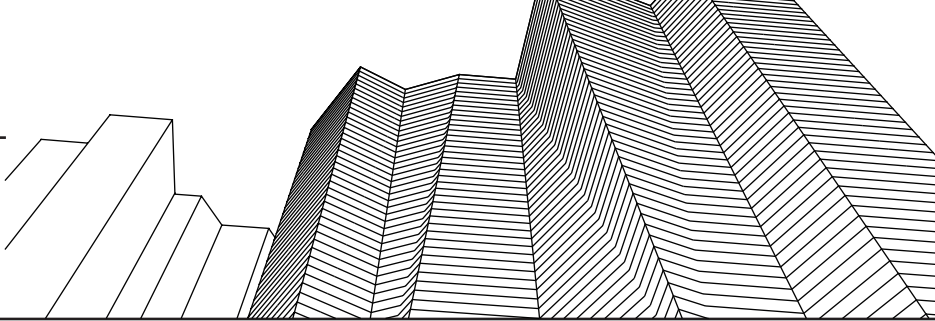


MODEL			CA0070HANH	CA0100HANH	CA0140HANH
Cooling (LWT 7°C/OAT 35°C)	Capacity	kW	65.0	100.0	130.0
	Power Input	kW	22.03	28.60	42.88
	EER	W/W	2.95	3.50	3.03
Cooling (LWT 18°C/OAT 35°C)	Capacity	kW	73.0	110.0	145.0
	Power Input	kW	18.96	23.40	40.28
	EER	W/W	3.85	4.70	3.60
Heating (LWT 35°C/OAT 7°C)	Capacity	kW	71.0	100.0	142.0
	Power Input	kW	16.14	20.00	30.87
	COP	W/W	4.40	5.00	4.60
Heating (LWT 45°C/OAT 7°C)	Capacity	kW	71.0	100.0	142.0
	Power Input	kW	18.93	24.20	36.90
	COP	W/W	3.75	4.13	3.85
Heating (LWT 55°C/OAT 7°C)	Capacity	kW	71.0	100.0	142.0
	Power Input	kW	22.90	29.10	43.50
	COP	W/W	3.10	3.44	3.26
Seasonal Energy Efficiency	SEER	W/W	4.60	4.88	4.82
	η <sub>s,c</sub>	%	181	192	190
	SCOP (35°C)	W/W	4.51	4.85	4.60
	η <sub>s,h</sub>	%	178	191	181
	SCOP (55°C)	W/W	3.65	3.85	3.80
Operating Temperature Range	η <sub>s,h</sub>	%	143	151	149
	Cooling	°C	-20~53°C		
	Heating	°C	-30~50°C		
	DHW	°C	-30~50°C		
Leaving Water Temperature Range	Cooling	°C	-5~20°C		
	Heating	°C	20~60°C		
Storage Temperature Range(tank)	DHW	°C	20~58°C		
Power Supply		Ph/V/Hz	3N~/380~415V/50Hz		
Sound Power Level		dB	88	88	91
Sound Pressure Level		dB(A)	71	70	72
Waterside Heat Exchanger Type		-	Shell & Tube Heat Exchanger		
Airside Heat Exchanger Type		-	Copper Tube & Aluminum Fin		
Refrigerant Throttle Type		-	Electronic Expansion Valve		
Compressor	Type	-	Inverter Scroll Compressor		
	Qty.	-	1	2	2
Refrigerant	Type	-	R32		
	Charge	kg	10	11*2	11*2
	CO <sub>2</sub> e	t	6.75	14.85	14.85
Fan	Type	-	Axial		
	Motor Type		DC Motor		
	Airflow Rate	m³/h	25400	20500	25400
Water System	Qty.	-	1	2	2
	Water Resistance	kPa	53	30	54
	Water Flow Rate (Cooling)	m³/h	11.20	17.20	22.40
	Water Flow Rate(Heating)	m³/h	12.20	17.20	24.40
	Max. Pressure	MPa	1	1	1
	Water Pipe Size (Inlet/Outlet)	-	DN50/DN50	DN65/DN65	DN65/DN65
External Dimension	W*D*H	mm	1260*1210*2260	2260*1255*2260	2260*1255*2260
Packing Dimension	W*D*H	mm	1280*1230*2400	2280*1275*2400	2280*1275*2400
Weight	Net Weight	kg	500	910	910
	Gross Weight	kg	515	940	940
	Operating Weight	kg	525	973	973

Note:

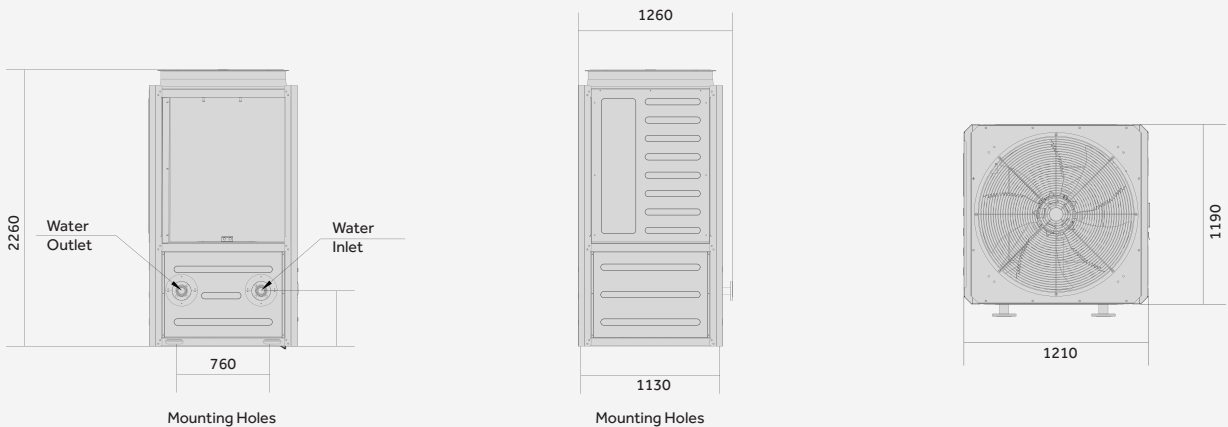
- Haier reserves the right to change these specifications without prior notice.
- Ratings calculated according to EN14511 and EN14825.
- η<sub>s</sub> calculated according to Ecodesign regulation for chillers comfort cooling and heating (813/2013, 2016/2281)
- Ecodesign figures are calculated at variable water flow rate.
- Sound data is tested in Haier lab, which may vary according to different installation conditions.
- The pressure drop parameters listed in the table do not account for the pressure drop of the included water filter.
- CA0100HANH/CA0140HANH have two independent refrigerant circuit.
- For further information, please contact Haier staff.

# Dimensions



## Outline dimension

CA0070HANH



Front View

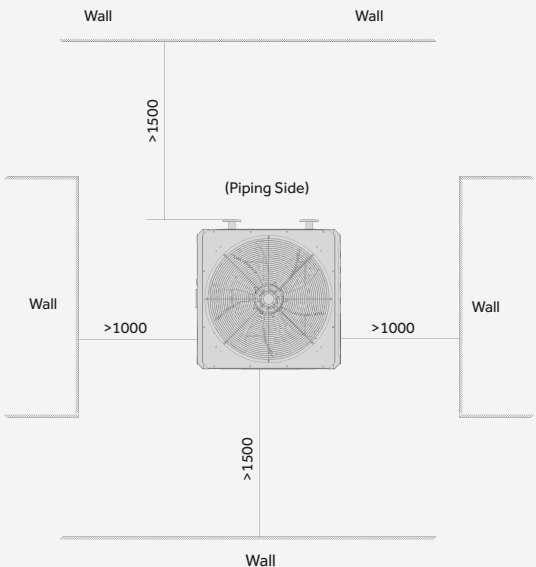
Side View

Top View

Note: All dimensions are in millimeters (mm)

## Installation Clearance (Single Chiller)

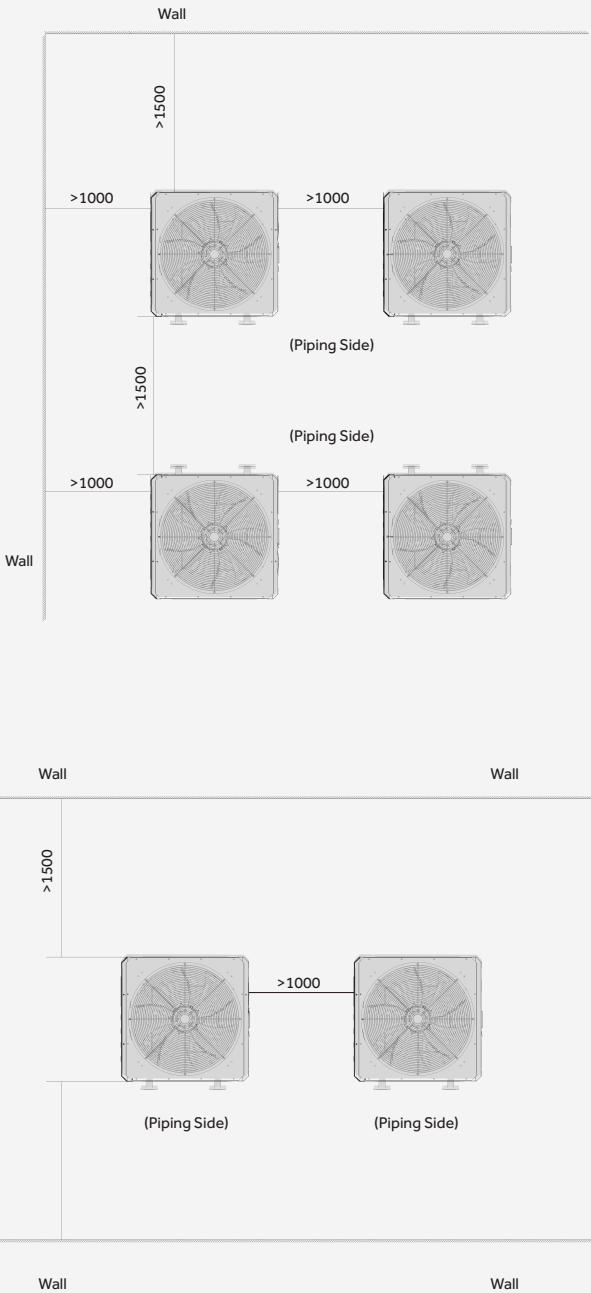
CA0070HANH



Note: All dimensions are in millimeters (mm)

## Installation Clearance (Multiple Chilers)

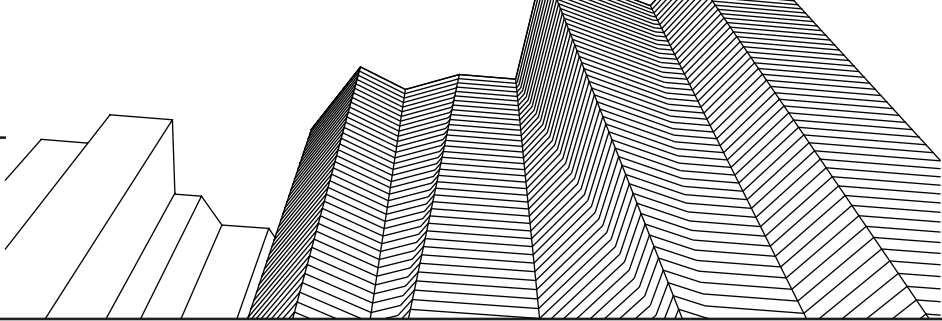
CA0070HANH



Note: All dimensions are in millimeters (mm)

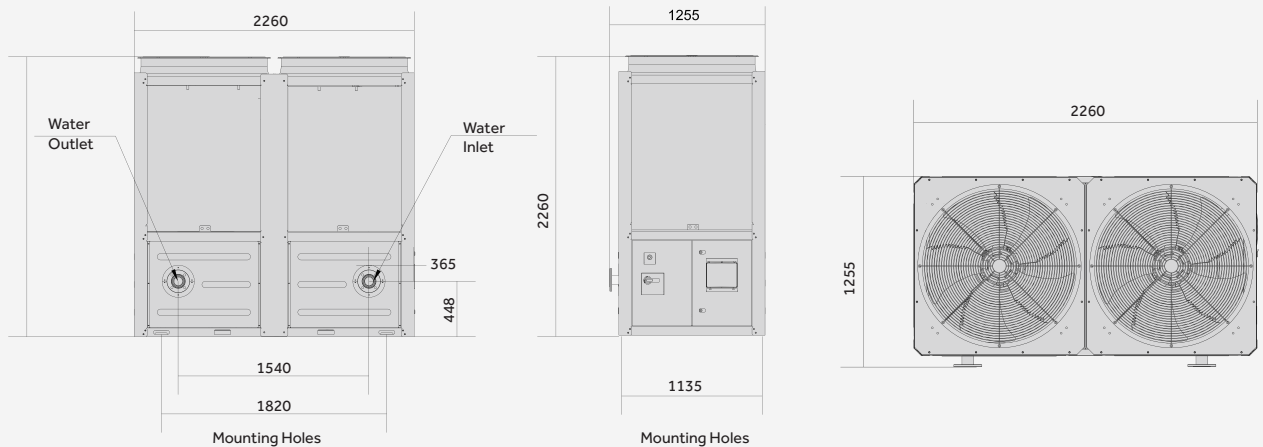


# Dimensions



## Outline dimension

CA0100HANH/CA0140HANH



Front View

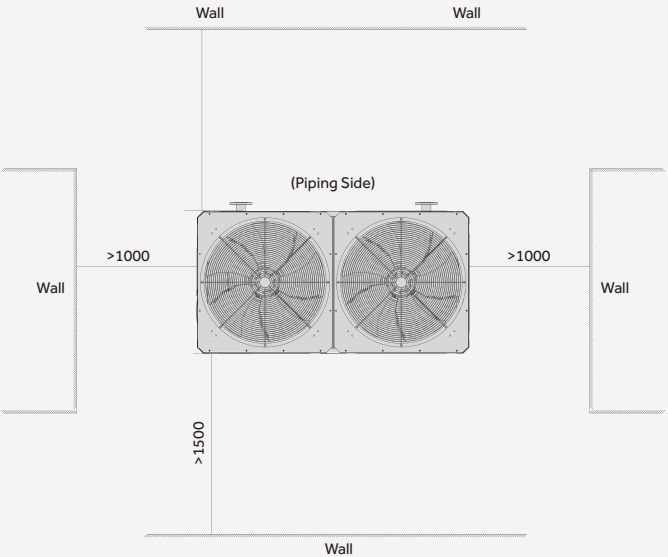
Side View

Top View

Note: All dimensions are in millimeters (mm)

## Installation Clearance (Single Chiller)

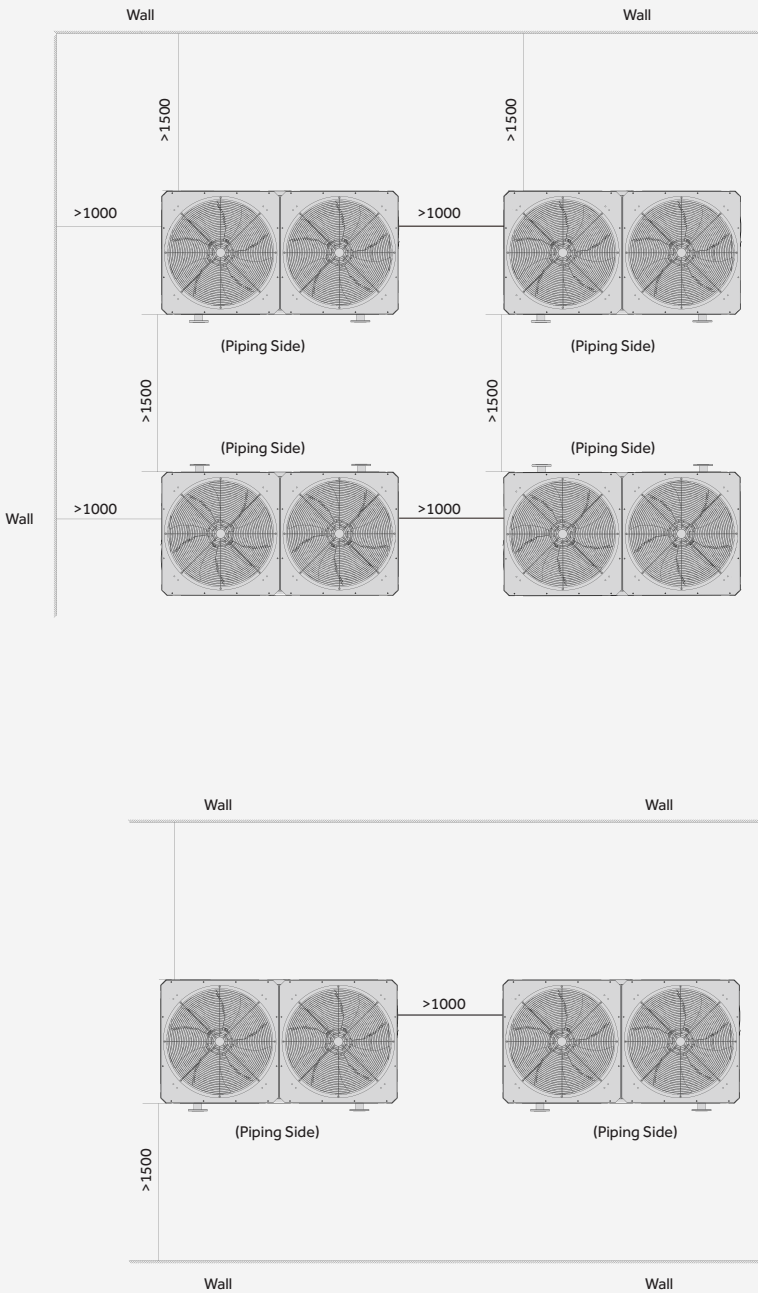
CA0100HANH/CA0140HANH



Note: All dimensions are in millimeters (mm)

## Installation Clearance (Multiple Chilers)

CA0100HANH/CA0140HANH



Note: All dimensions are in millimeters (mm)