

MODULAR CHILLER

- /101
Inverter Modular Chiller
- /109
Full Heat Recovery Modular Chiller
- /115
Modular Chiller



-  High Efficiency
-  Comfortable
-  High Reliability
-  Convenient

Air cooled/Heating pump
Cooling capacity range from 60kW up to 960kW



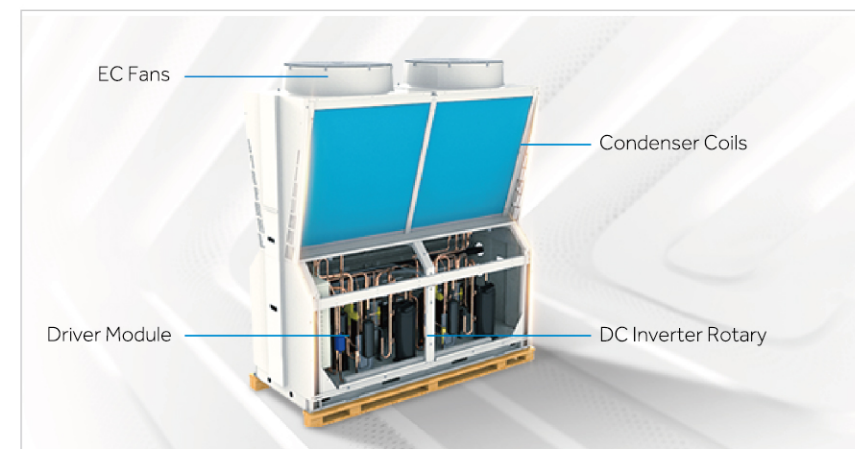
INVERTER MODULAR CHILLER



Features



High Efficiency



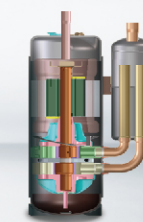
'Y' shape appearance

'Y' shape design is more fashion and increases the heat exchanger area.

High efficiency parts and unique design ensure the chiller high efficiency COP up to 3.0.

Compressor

The unit adopts full DC inverter rotary compressor, driven by high-efficiency permanent magnet DC motor to improve the energy efficiency greatly. The high-efficiency oil supply and oil separation parts ensure the low friction, low noise, stable and reliable operation of the compressor.



Motor

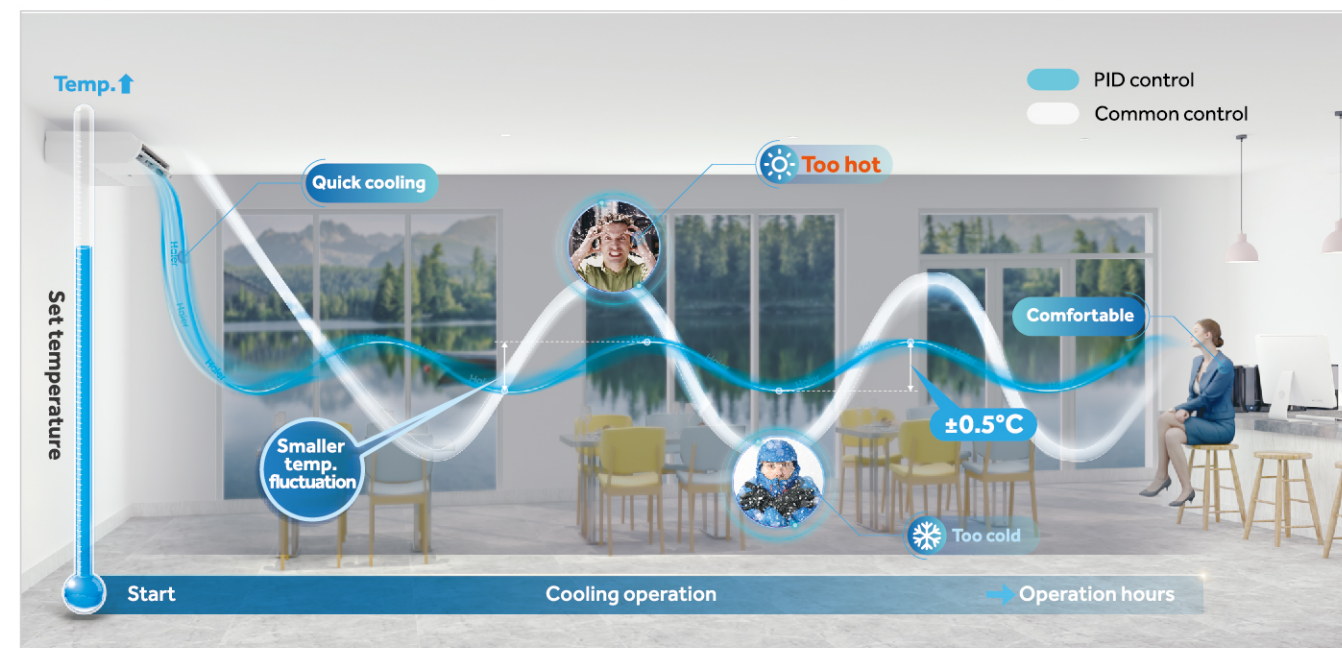
Low sound power level EC fans, together with high efficiency DC inverter motor, greatly reducing the power consumption. Special 0-91Hz stepless variable frequency speed regulation ensures the stable and reliable operation of the unit.



Comfortable

Precise temperature control

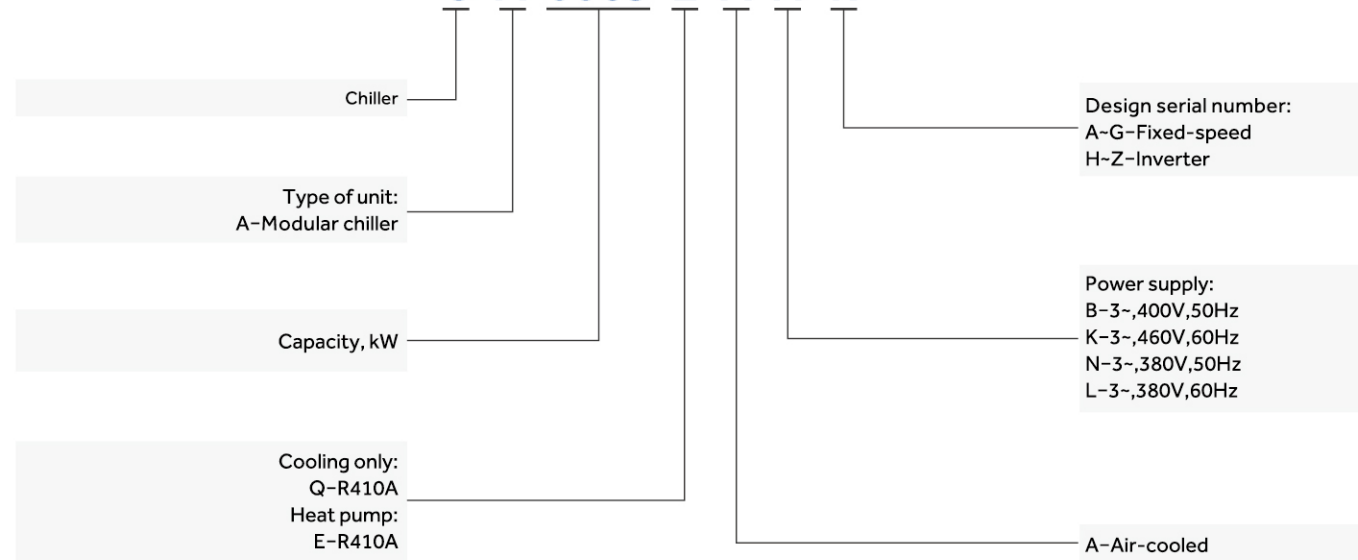
EXV adopts PID control, accurate control refrigerant distribution, outlet water temp. $\pm 5\%$ of the set temperature.

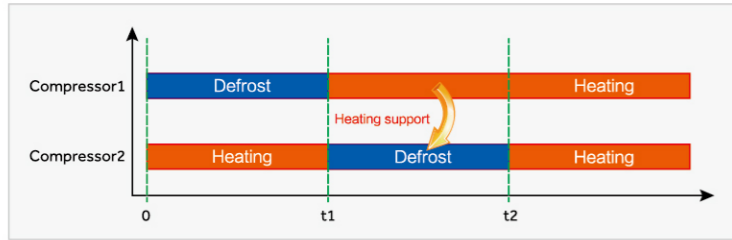


Nomenclature

Inverter

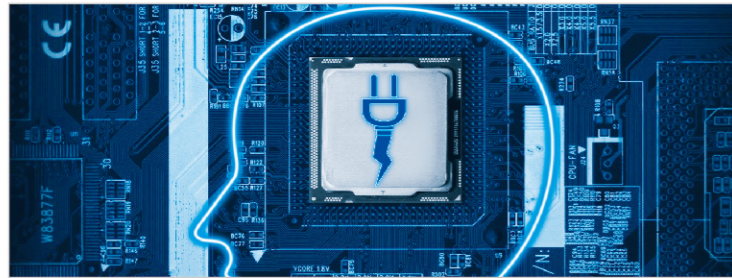
C A 0065 E A N R





Special defrosting design

Fast defrosting speed, small water temp. fluctuation.

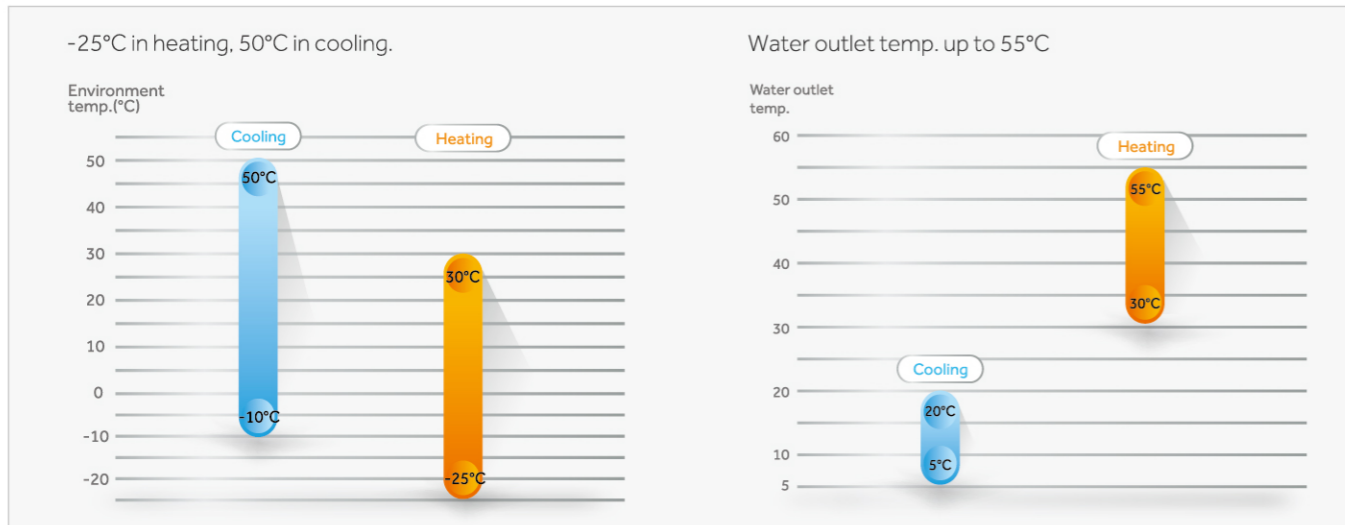


Power cut memory function

The system will record the operating state before the power cut. When the power supply is restored, the system will automatically return to the state before the power cut without setting again.

High Reliability

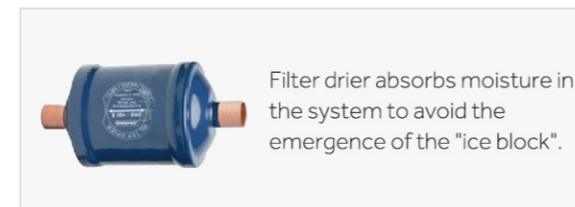
Wide working ambient temperature range



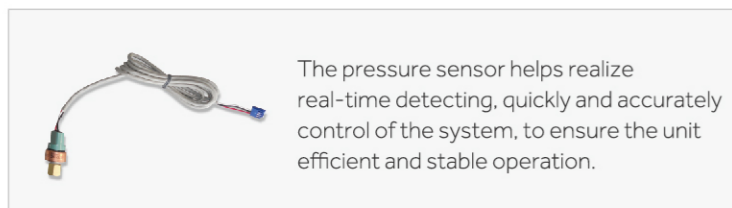
Shell & tube heat exchanger



Filter drier



Pressure sensor control



Three phase fan motor



Backup operation function

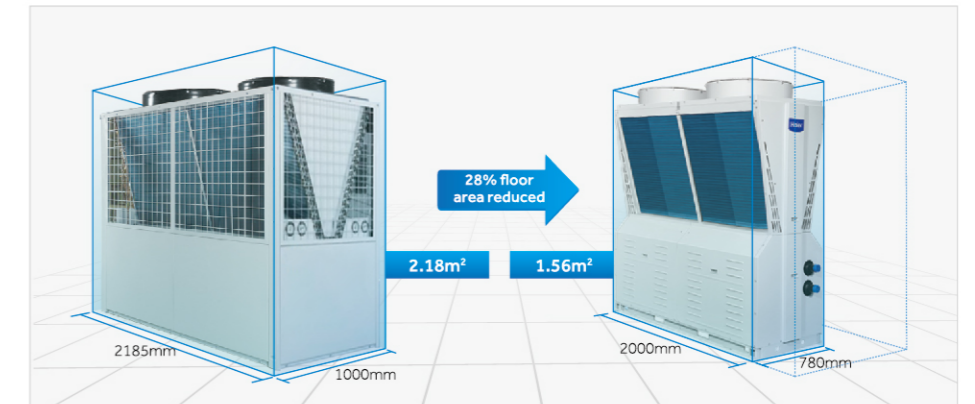
When multiple units are combined to use, if one module has malfunction, another module will start automatically to meet the air conditioning demands of the users.



Convenient

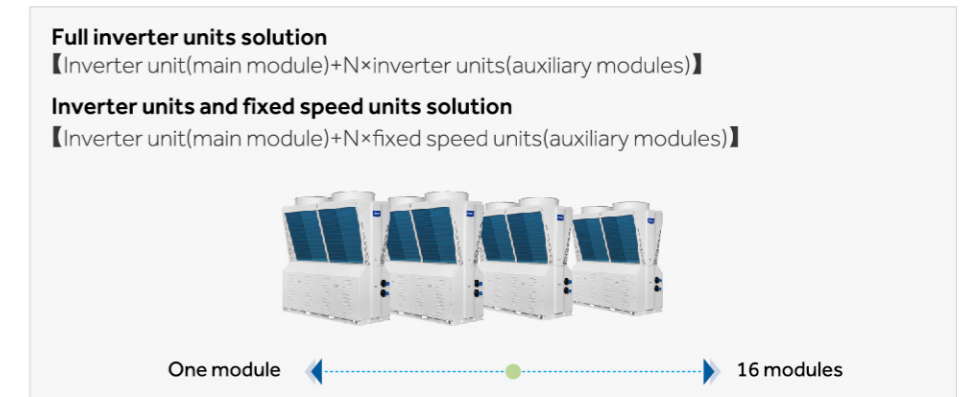
Compact design, small footprint

'Y' shape design increases the heat exchange area. Compact design ensures small floor area, which is reduced by 28% compared with the old model.



Modular design, flexible combination

The unit adopts modular design, and max.16 modules can be combined in each group, which can meet the load demand of different buildings. The combination can be "full inverter units solution" or "inverter units and fixed speed units solution".



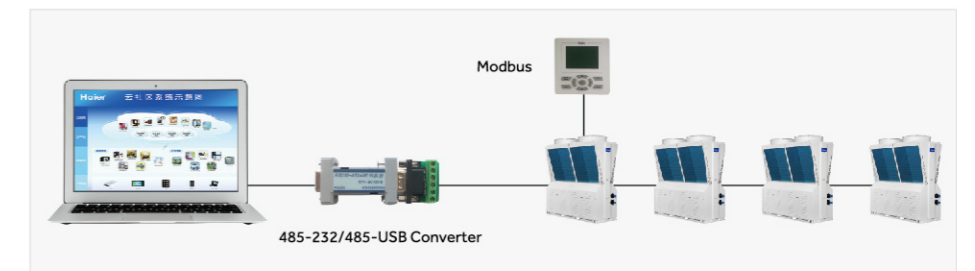
Standard flow switch

Standard flow switch is provided with the product for convenient installation.



Modbus function

MODBUS interface is reserved for units, which can be connected to building automation systems for centralized control, easy to realize intelligent management and remote control.



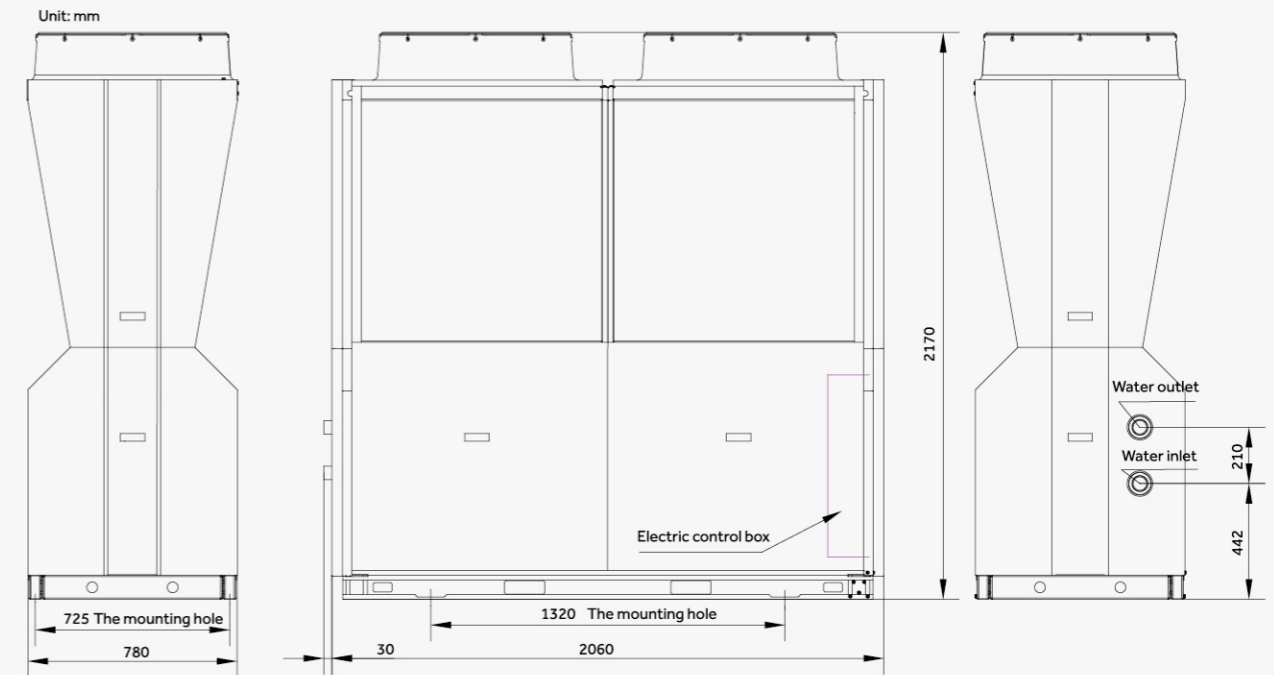


MODEL		CA0065EANR	
Cooling	Cooling capacity	kW	60
	Power input	kW	20
	Running current	A	38
Heating	Heating capacity	kW	65
	Power input	kW	19.4
	Running current	A	36.8
COP _R		kW/kW	3.00
COP _H		kW/kW	3.35
Max. power input		kW	31.6
Max. running current		A	60
Power supply		3N-/380V/50Hz/60Hz	
Refrigerant throttle type		Electronic expansion valve	
Capacity control		Stepless	
Safety & functional protections		High/low Pressure Protection, Water Leakage delay Protection, Freeze Protection, Overload & Overheat Protection, Phase Loss, Phase Sequence Protection	
Compressor	Type	Rotary	
	Quantity	2	
	Input power	kW	9.5×2
Refrigerant	Type	R410A	
	Charge	kg	6×2
Air side heat exchanger	Type	(Slit fin & efficient inner grooved copper tube) Inner grooved copper pipe & hydrophilic aluminum fin coil	
	Fan power	kW	0.8×2
	Fan type	Axial flow fan	
	Fan quantity	2	
Water side heat exchanger	Type	Shell and tube heat exchanger	
	Rated water flow	m ³ /h	10.32
	Inlet/outlet pipe	R2"	
	Fouling factor	m ² ·K/kW	0.018
	Standard pressure	Mpa	1.0
	Water resistance	kPa	45
Sound pressure level		dB(A)	65
External dimension	Unit length	mm	2060
	Unit width	mm	780
	Unit height	mm	2170
Package dimension	Unit length	mm	2200
	Unit width	mm	830
	Unit height	mm	2270
Weight	Unit weight	kg	700
	Gross weight	kg	715
	Operation weight	kg	750

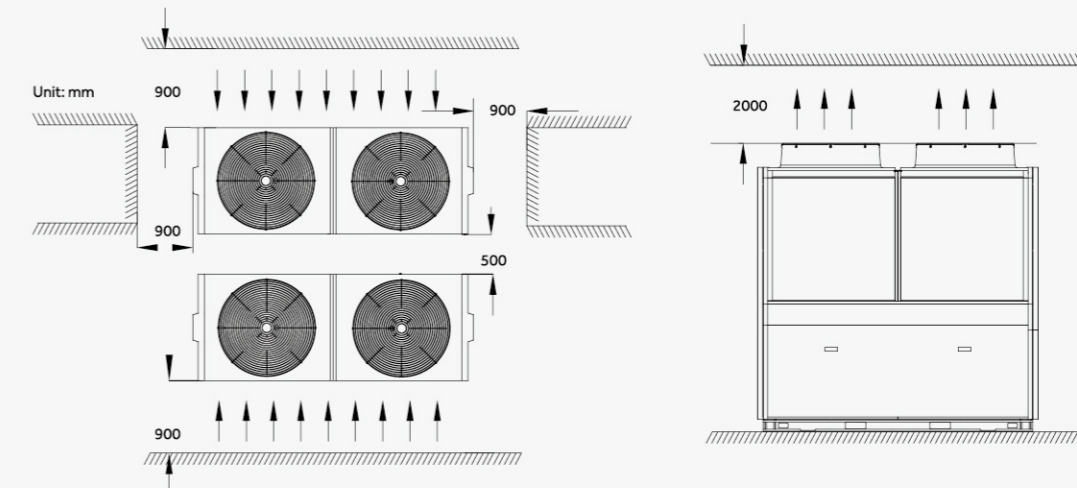
Note:
 1. Specifications are based on the following conditions: • Cooling: chilled water inlet/outlet: 12°C/7°C, and outdoor ambient temp. 35°CDB. • Heating: warm water inlet/outlet: 40°C/45°C, and outdoor ambient temp. 7°CDB/6°CWB. • Water side fouling factor: 0.018m²·K/kW; • 1m away in open field(sound pressure)
 2. Due to our policy of innovation, some specifications may be changed without notification

Unit dimension diagram

R410a Y-shape air-cooled modular chiller dimension
 CA0065EANR Model



Installation & maintenance space

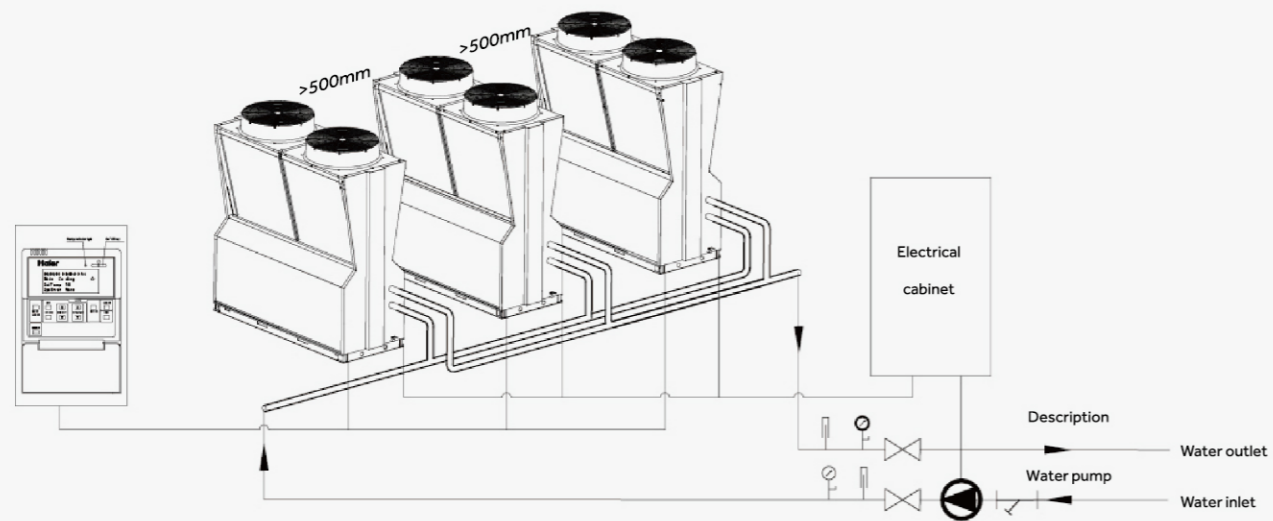


Dimensions



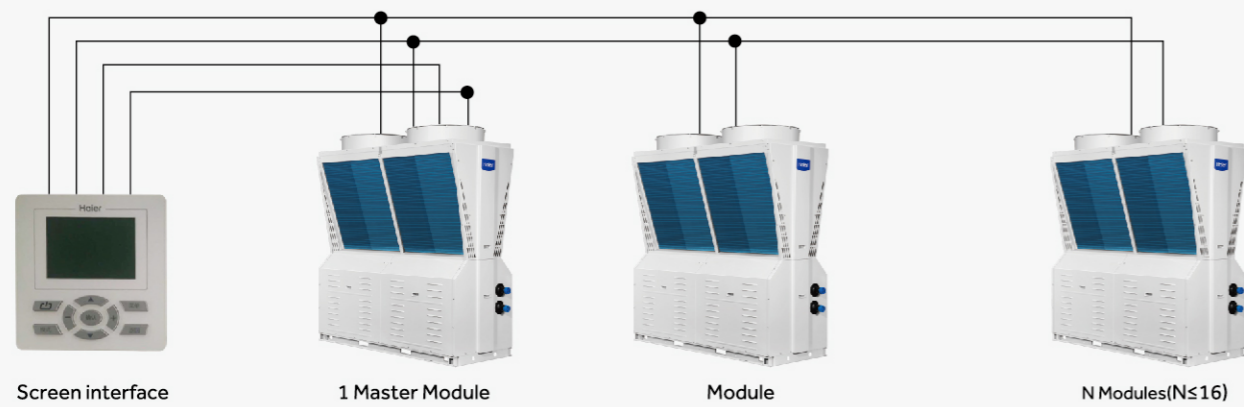
Chiller water system and control wiring diagram

Water pipe and control wiring connection diagram for multi-modular chiller

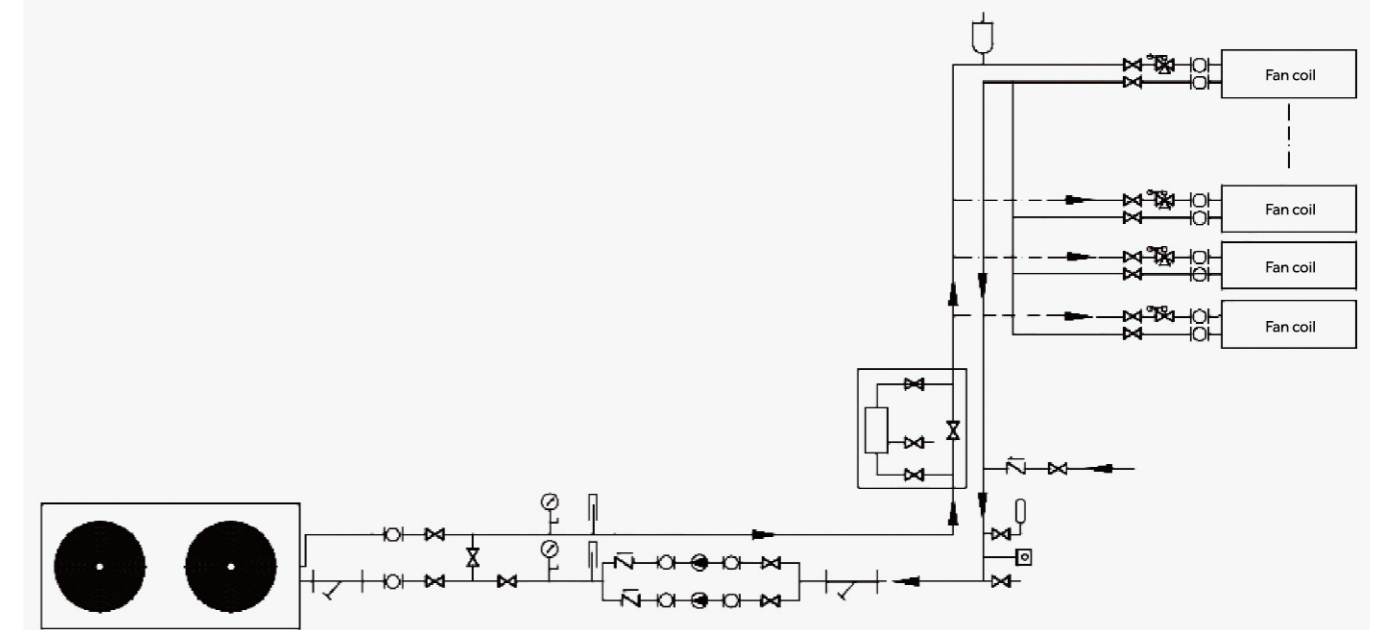


Control wiring diagram

For example the model CA0065EANR



Water system installation sketch



Graphic symbol	Description
	Check valve
	Automatic exhaust valve
	Water filter
	Stop valve
	Thermometer
	Pressure gauge
	Water pump
	flexible connection
	Expansion tank
	Electronic water processor
	3-way valve
	2-way valve

Air cooled/Heating pump
Cooling capacity from 30kW up to 2080kW



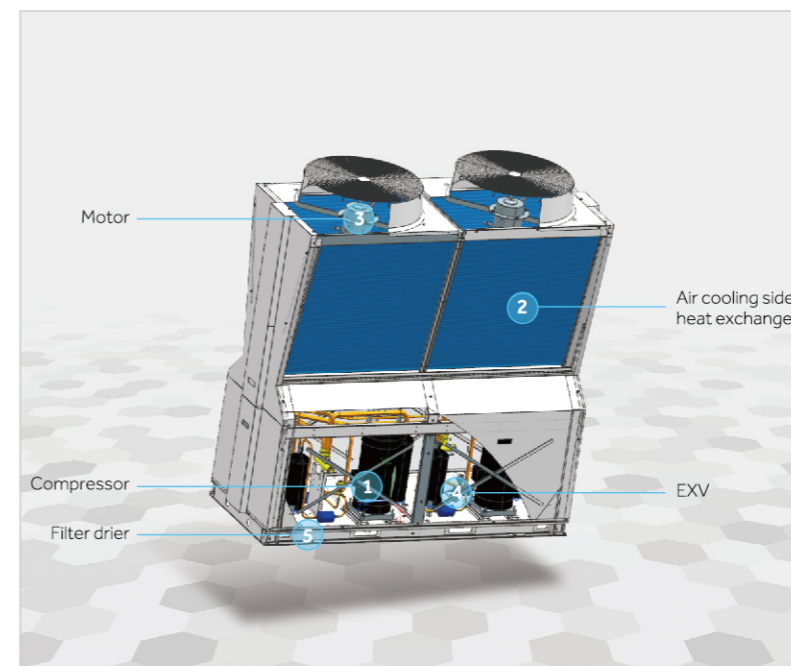
MODULAR CHILLER



Features



High Efficiency



Compressor

Famous brand scroll compressor with low sound power level and high efficiency is adopted.



Air cooling side heat exchanger

The heat exchange area is enlarged by 5% to increase energy efficiency, which is bigger than normal modular chiller.



EXV design

Adopt high efficient EXV to adjust the refrigerant flow by adjusting the system superheat. With the high efficiency evaporator, the COP at full load and partial load reaches the best state.



Motor

Low sound power level axial fan, together with the high efficient motor, making higher efficiency and lower sound power level.



Nomenclature

C A 0070 E A N E

Chiller

Type of unit:
A-Modular chiller

Capacity, kW

Cooling only:
Q-R410A
Heat pump:
E-R410A

Design serial number:
A-G-Fixed-speed
H-Z-Inverter

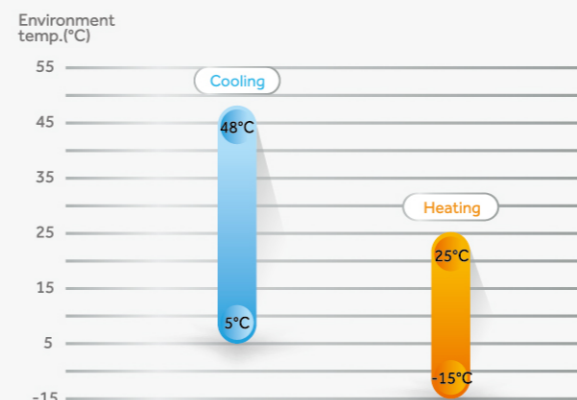
Power supply:
B-3-,400V,50Hz
K-3-,460V,60Hz
N-3-,380V,50Hz
L-3-,380V,60Hz

A-Air-cooled

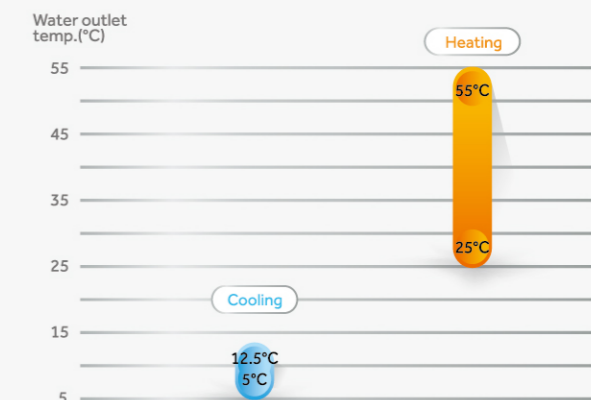
High Reliability

Wide working ambient temperature range

-15°C in heating, 48°C in cooling



Water outlet temp. up to 55°C



Specification



MODEL		CA0035EANE	CA0070EANE	CA0100EANE	CA0130EANE	
Cooling	Cooling capacity	kW	30	65	98	130
	Power input	kW	9.4	19.2	28.9	38.4
	Running current	A	15.8	34.6	53.2	75.4
Heating	Heating capacity	kW	33	70	103	135
	Power input	kW	9.6	19.1	28.7	38.2
	Running current	A	16.2	34.4	52.8	75
COP _R		kW/kW	3.19	3.39	3.39	3.39
COP _H		kW/kW	3.44	3.66	3.59	3.53
Max. power input		kW	16.3	28	45.6	56
Max. running current		A	27.5	55	82.5	110
Power supply			3N/380V/50Hz			
Refrigerant throttle type			Electronic expansion valve			
Capacity control			100%	50%, 100%	33%, 67%, 100%	25%, 50%, 75%, 100%
Safety & functional protections			High/low Pressure Protection, Water Leakage delay Protection, Freeze Protection, Overload & Overheat Protection, Phase Loss, Phase Sequence Protection			
Compressor	Type		scroll compressor			
	Quantity		1	2	3	4
	Input power	kW	9	18	27	36
Refrigerant	Type		R410A			
	Charge	kg	5.5	6*2	5.8*3	5.8*4
Air side heat exchanger	Type		(Slit fin & efficient inner grooved copper tube)Inner grooved copper pipe & hydrophilic aluminum fin coil			
	Fan power	kW	0.7	1.5	2.3	3
	Fan type		Axial flow fan			
	Fan quantity		1	2	3	4
Water side heat exchanger	Type		Plate heat exchanger		Shell & Tube heat exchanger	
	Rated water flow	m ³ /h	5.6	12	17.7	24
	Inlet/outlet pipe		R 2" (external screw thread)	R 2" (external screw thread)	R 2" (external screw thread)	R 2 1/2" (external screw thread)
	Fouling factor	m ² •K/kW	0.018			
	Standard pressure	Mpa	1.0	1.0	1.0	1.0
	Water resistance	kPa	40	45	50	60
Sound pressure level		dB(A)	60	65	67	68
External dimension	Unit length	mm	785	2060	2060	2060
	Unit width	mm	1038	780	1603	1603
	Unit height	mm	1810	2170	2170	2170
	Unit height	mm	1810	2170	2170	2170
Package dimension	Unit length	mm	810	2200	2200	2200
	Unit width	mm	1070	830	1650	1650
	Unit height	mm	1880	2280	2280	2280
Weight	Unit weight	kg	270	630	960	1090
	Gross weight	kg	290	645	990	1125
	Operation weight	kg	280	670	1010	1245

Note:
Specifications are based on the following conditions: • Cooling: chilled water inlet/outlet: 12°C/7°C, and outdoor ambient temp. 35°CDB; • Heating: warm water inlet/outlet: 40°C/45°C, and outdoor ambient temp. 7°CDB/6°CWB; • Water side fouling factor: 0.018m²•K/kW; • 1m away in open field(sound pressure)

MODEL		CA0140QANF	
Cooling	Cooling capacity	kW	140
	Power input	kW	42
	Running current	A	82.5
COP _R		kW/kW	3.33
Max. power input		kW	56
Max. running current		A	110
Power supply			3N~/380V/50Hz
Refrigerant throttle type			Electronic expansion valve
Capacity control			25%,50%,75%,100%
Safety & functional protections			High/low Pressure Protection,Water Leakage delay Protection, Freeze Protection,Overload & Overheat Protection, Phase Loss, Phase Sequence Protection
Compressor	Type		Scroll compressor
	Quantity		4
	Input power	kW	40
Refrigerant	Type		R410A
	Charge	kg	8*4
Air side heat exchanger	Type		(Slit fin & efficient inner grooved copper tube)Inner grooved copper pipe & hydrophilic aluminum fin coil
	Fan power	kW	3
	Fan type		Axial flow fan
	Fan quantity		4
Water side heat exchanger	Type		Shell & Tube heat exchanger
	Rated water flow	m ³ /h	24
	Inlet/outlet pipe		R 3" (external screw thread)
	Fouling factor	m ² •K/kW	0.018
	Standard pressure	Mpa	1.0
	Water resistance	kPa	55
Sound pressure level		dB(A)	68
External dimension	Unit length	mm	2060
	Unit width	mm	1603
	Unit height	mm	2170
Package dimension	Unit length	mm	2200
	Unit width	mm	1650
	Unit height	mm	2280
Weight	Unit weight	kg	1065
	Gross weight	kg	1100
	Operation weight	kg	1160

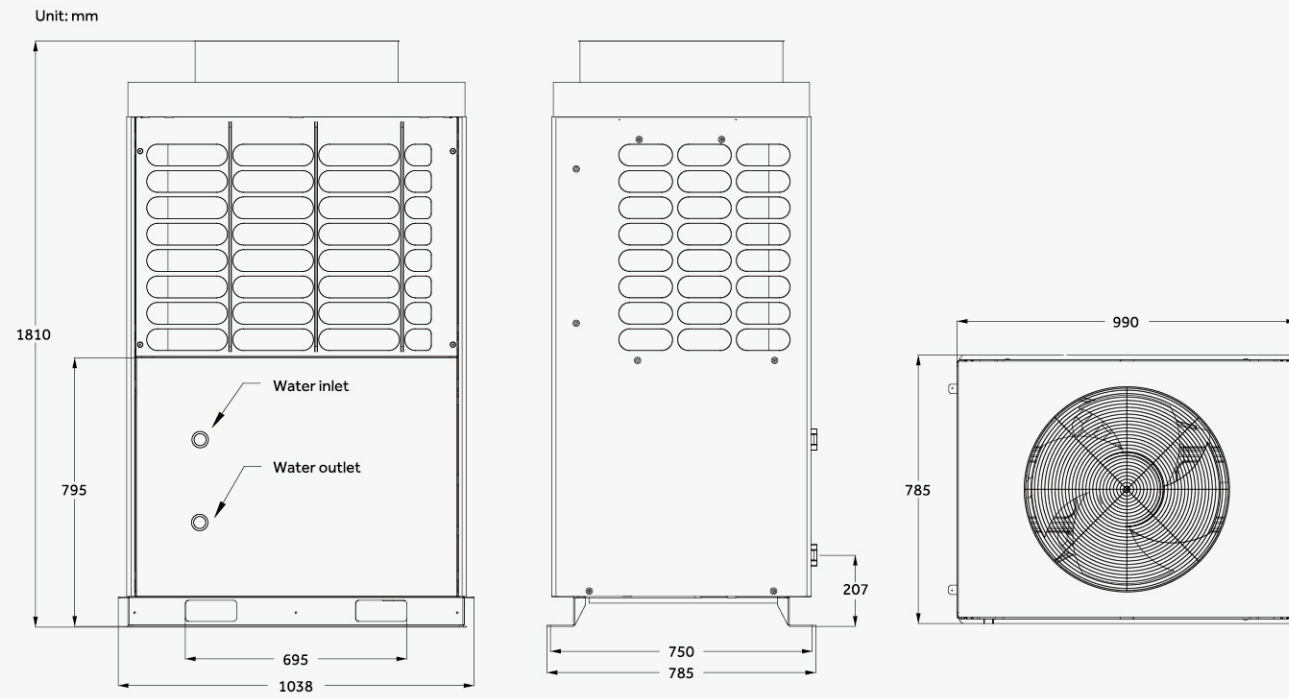
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Dimensions

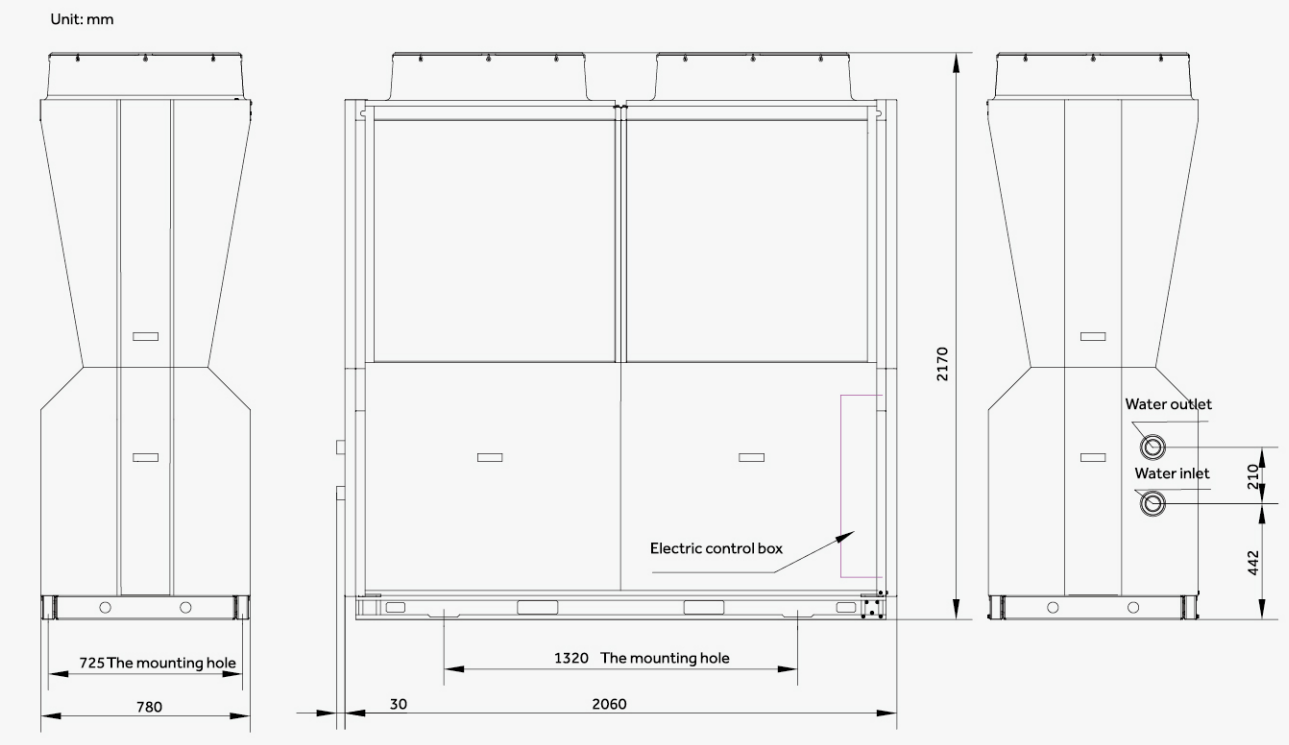


Outline dimension

CA0035EANE Model

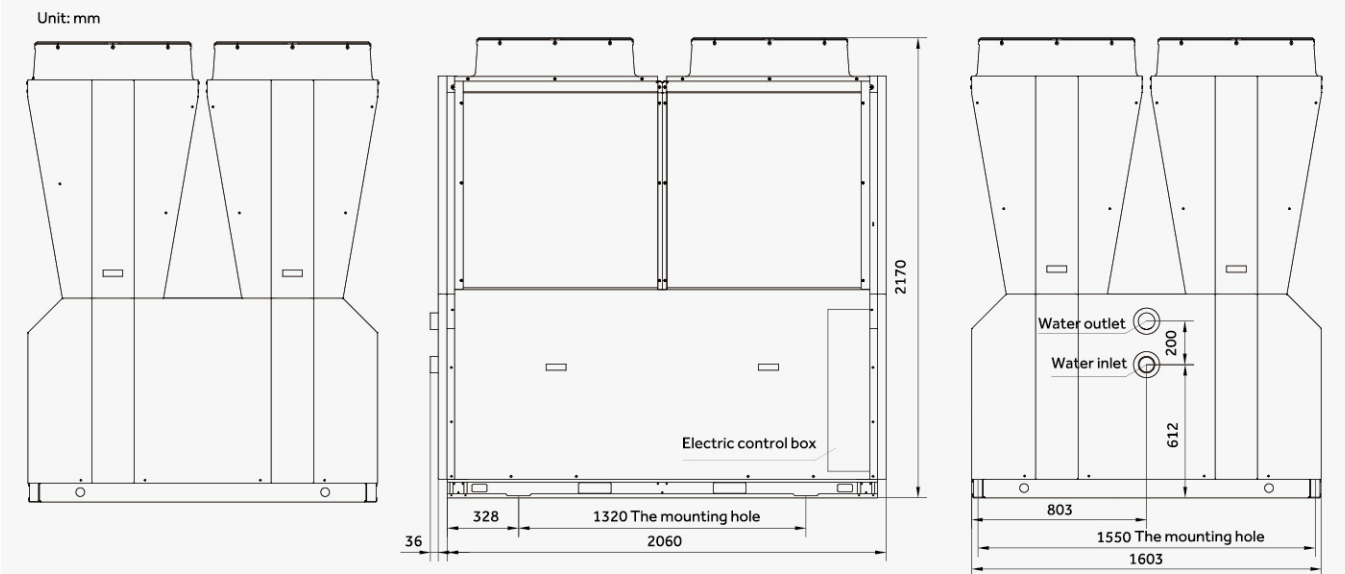


CA0070EANE Model

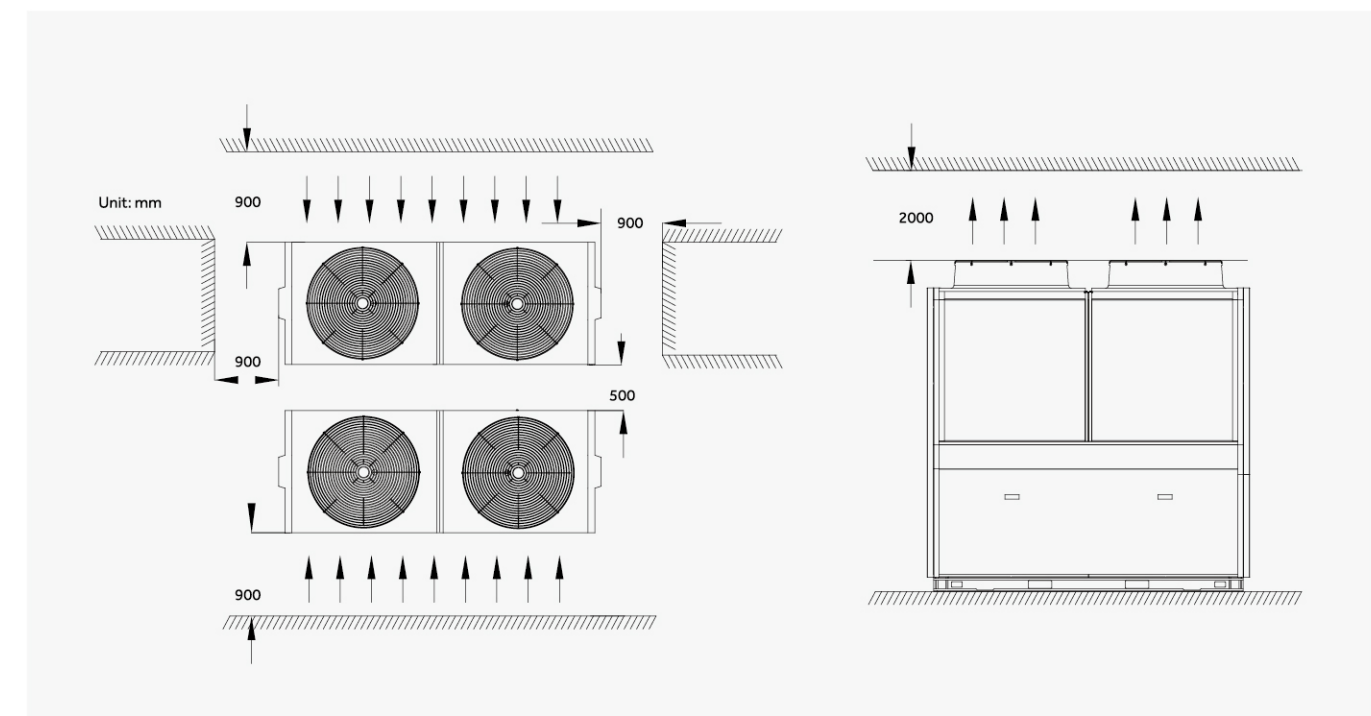


Unit dimension diagram

R410a Y-shape air-cooled modular chiller dimension
CA0100EANE/CA0130EANE/CA0140QANF Model



Installation & maintenance space

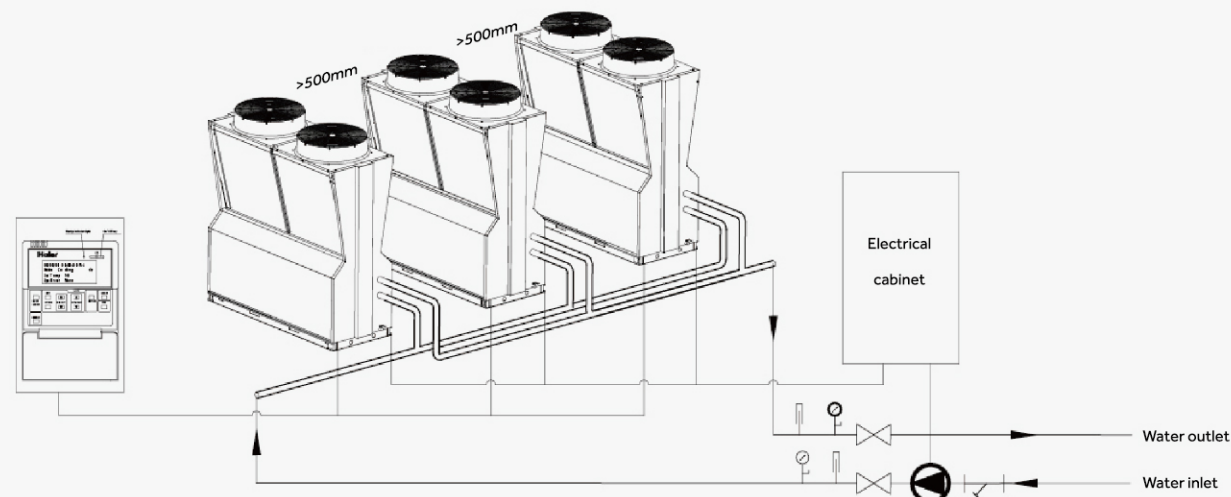


Dimensions



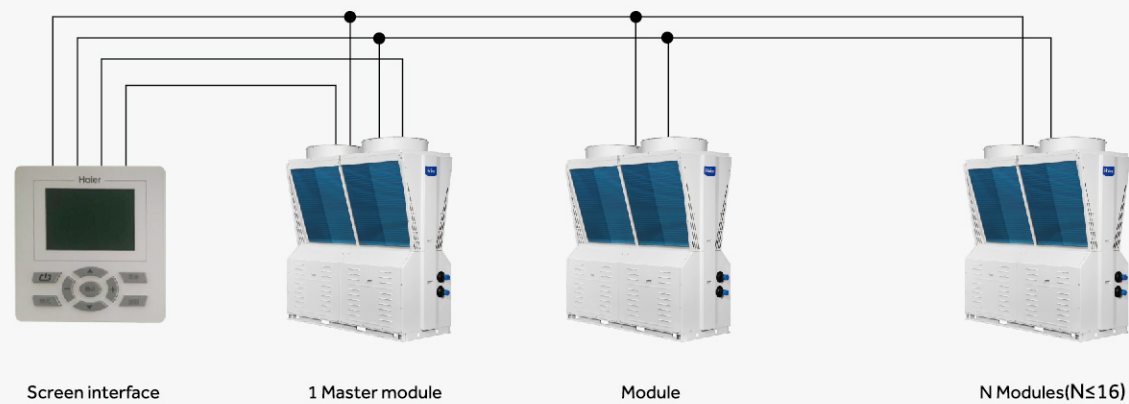
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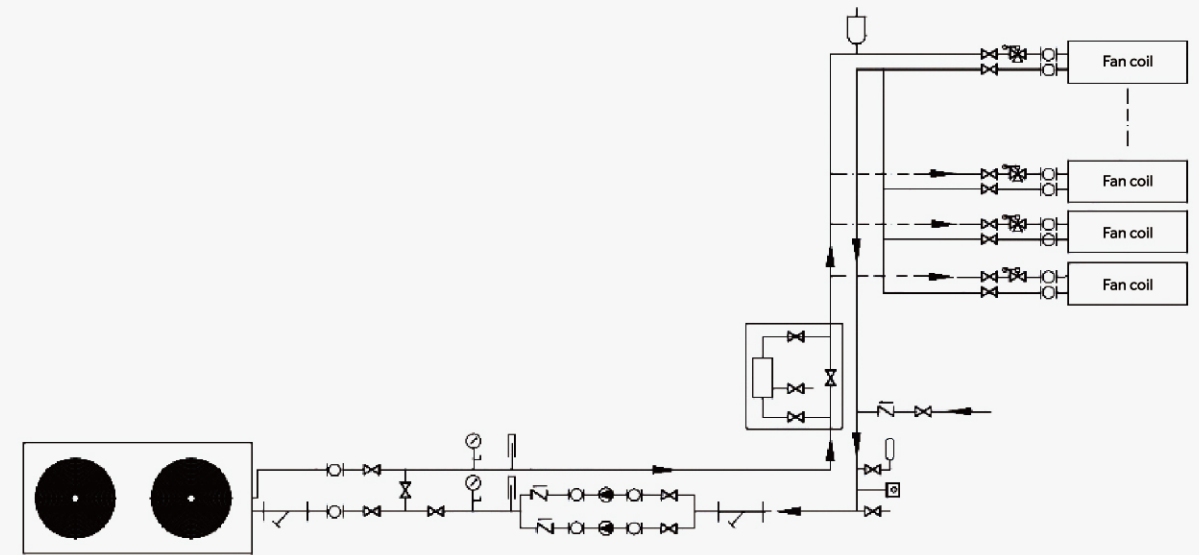


Control wiring diagram

For example the model CA0070EANE



Water system installation sketch



Graphic symbol	Description
	Check valve
	Automatic exhaust valve
	Water filter
	Stop valve
	Thermometer
	Pressure gauge
	Water pump
	flexible connection
	Expansion tank
	Electronic water processor
	3-way valve
	2-way valve