

DISCOVER  
easyCOMFORT

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Midea Building Technologies Division

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# Large Capacity Air Cooled Scroll Chiller



# MBT

Midea Building Technologies (MBT) is a key division of the Midea Group, a leading provider of comprehensive, intelligent-building solutions including energy sources, elevators, control systems and heating, ventilation and air conditioning.

Built on a foundation of innovation, Midea has emerged as a global leader in the HVAC and building management industry. Our unwavering dedication to research and development coupled with an extensive network of global partners has given birth to cutting-edge technologies that provide innovative solutions to our customers around the world.

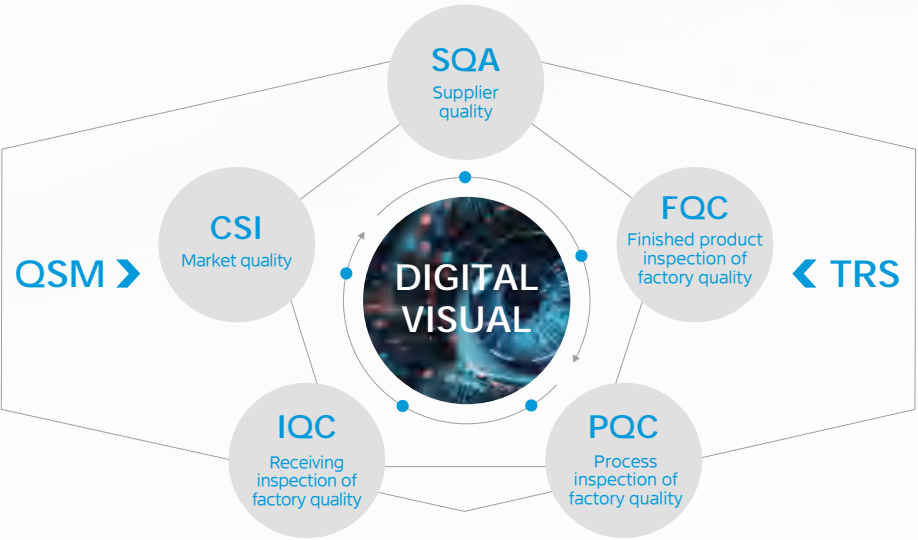
Committed to providing users with intelligent, digital, low carbon overall building solution



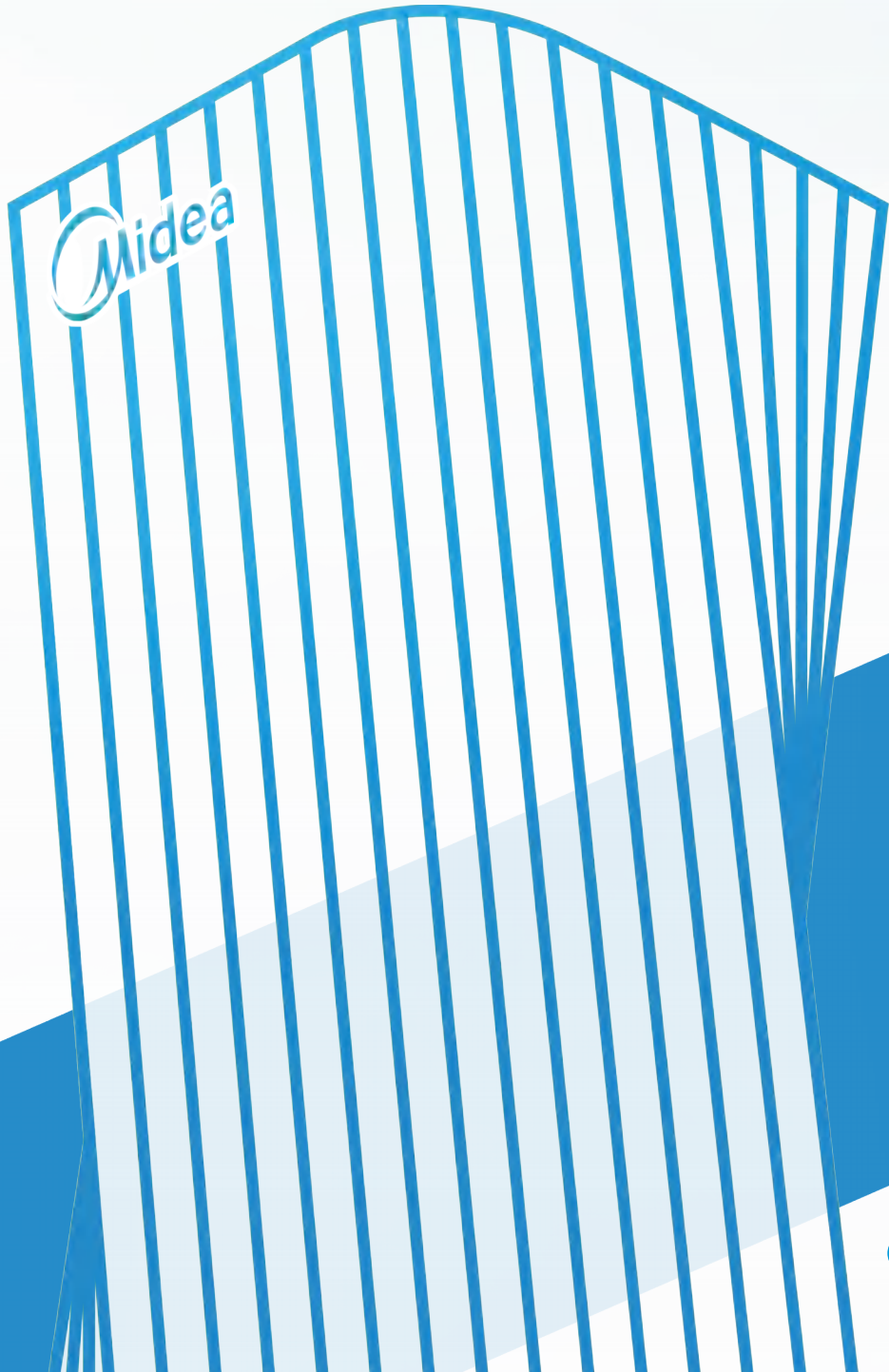
Over 100 testing labs cover a wide range of real application scenarios.



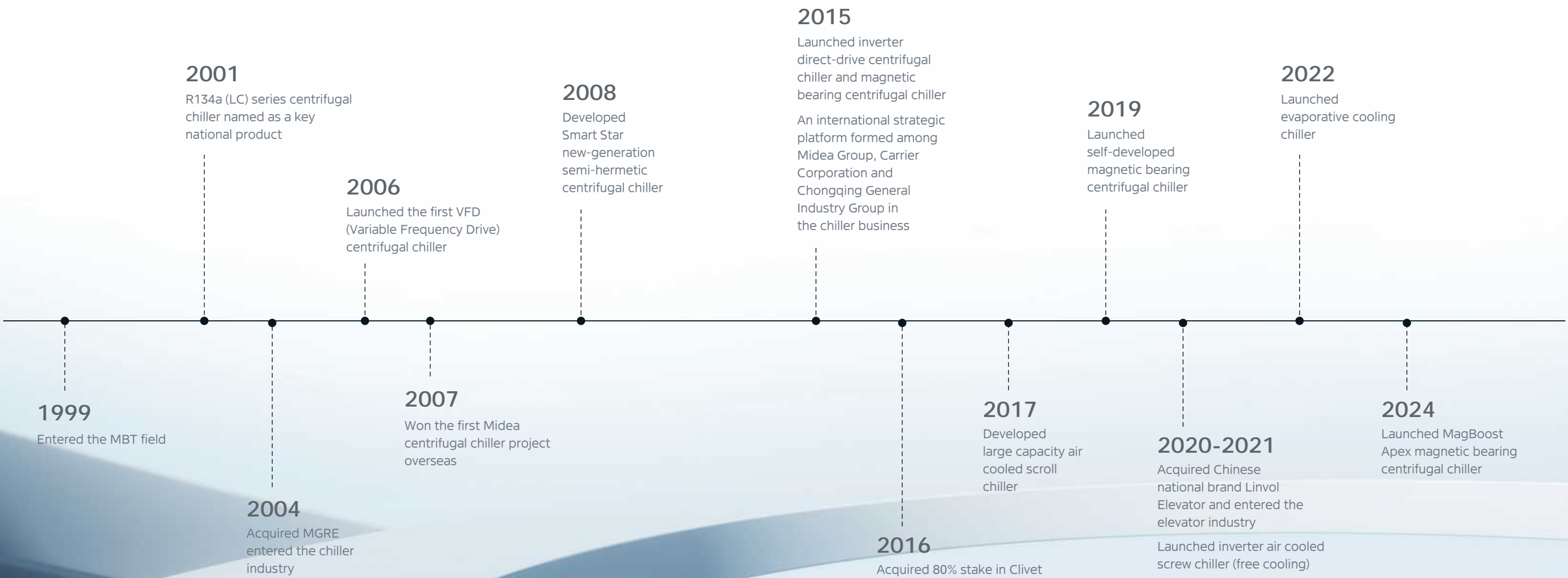
All products can be visualized and digitalized throughout entire process.



4 global manufacturing locations assure timely delivery with less sensitivity to supply chain interruption.



# MIDEA LARGE TONNAGE CHILLER HISTORY

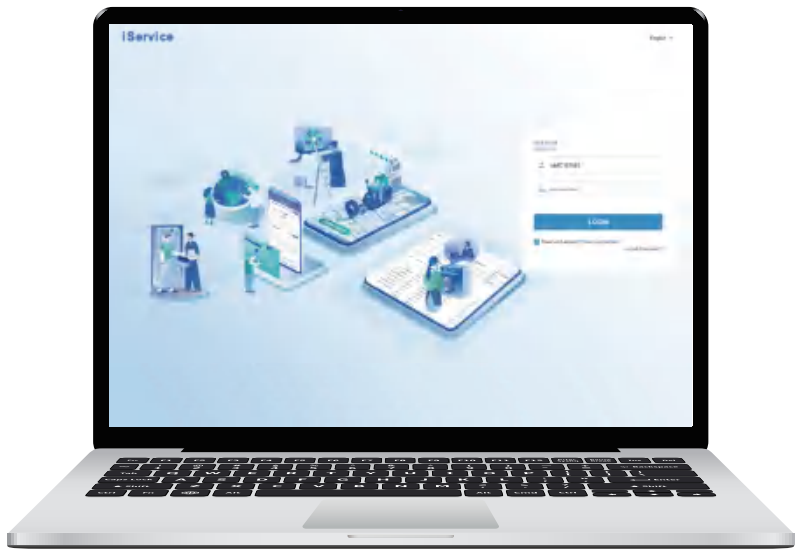




# INTERNATIONAL SERVICE MANAGEMENT

Our International Service Management (ICS) system provides customers with professional technical support. Through ICS, you can download product information/documentation, get help with technical questions and troubleshooting, submit complaints and order parts using our self-service interface.

Q > <https://ics.midea.com>  



### My order

Inquire about spare parts from an exploded view and place orders for spare parts directly in ICS.

### Document inquiry and download

View or download product technical documentation online, such as catalogs, images, training PPTs and other assets.

### Technical inquiry & FAQ

Ask technical questions online and receive a prompt response from our technicians or browse the FAQ for answers to commonly asked questions.

### Troubleshooting

Query the error code and solution by SN, model name, error code or product type.

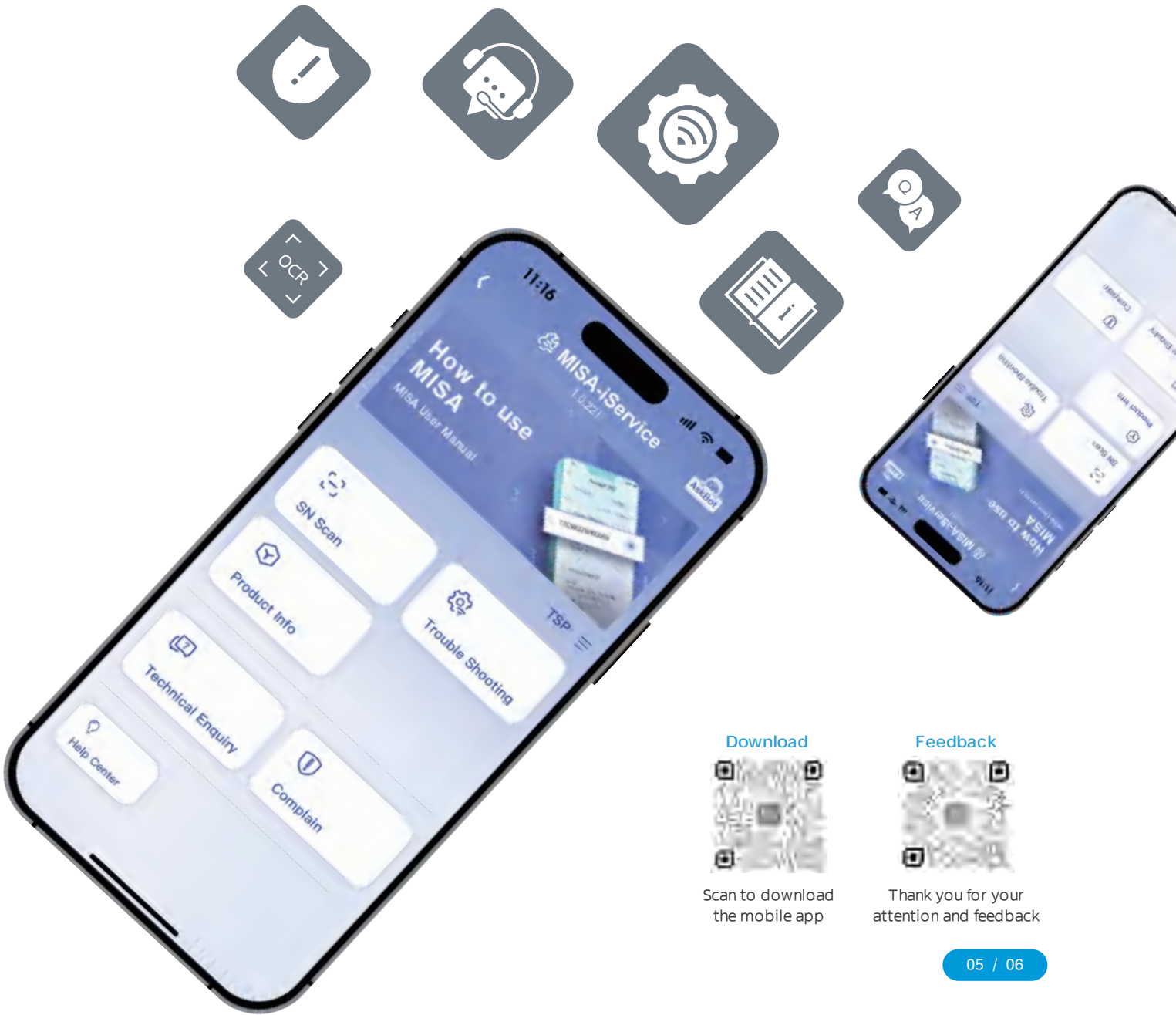
### Complain

Submit product quality complaints online, and our after-sales engineers will respond promptly.

# MOBILE INTELLIGENCE SERVICE APP

The Mobile Intelligence Service App (MISA) is the mobile version of ICS and features the same functionality. MISA often makes getting technical support timelier and more convenient.

Q > <https://link.midea.com>  



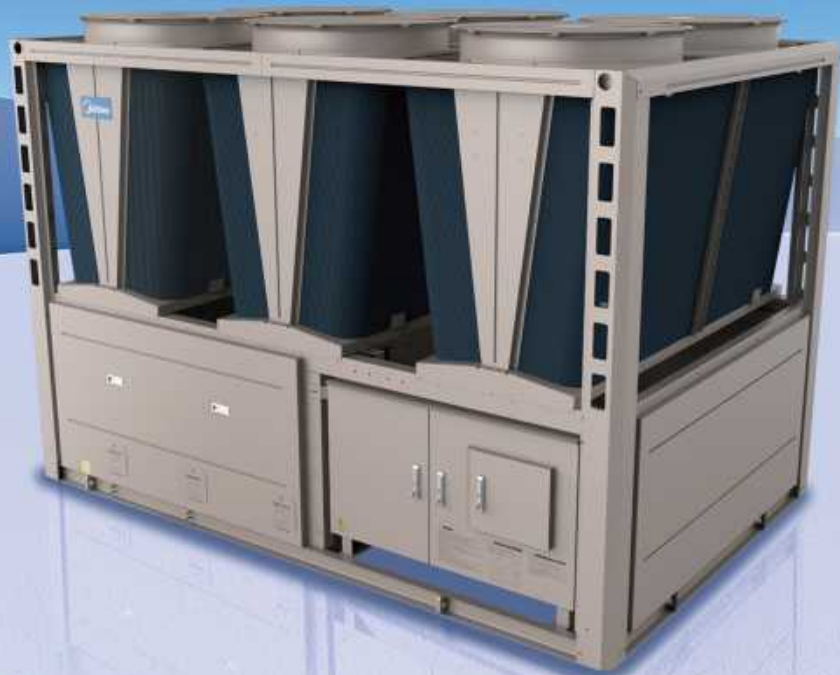


# GLOBAL BULK WAREHOUSE LAYOUT OVERVIEW



# Large Capacity Air Cooled Scroll Chiller

Midea large capacity air cooled scroll chillers feature a modular design with the ability to combine two basic modules and 8 units maximum. It's an ideal system for a variety of applications including hotels, hospitals, schools, factories, office buildings etc.



## Key advantages

- 

Heat Pump/  
Cooling Only
- 

Eco-Friendly
- 

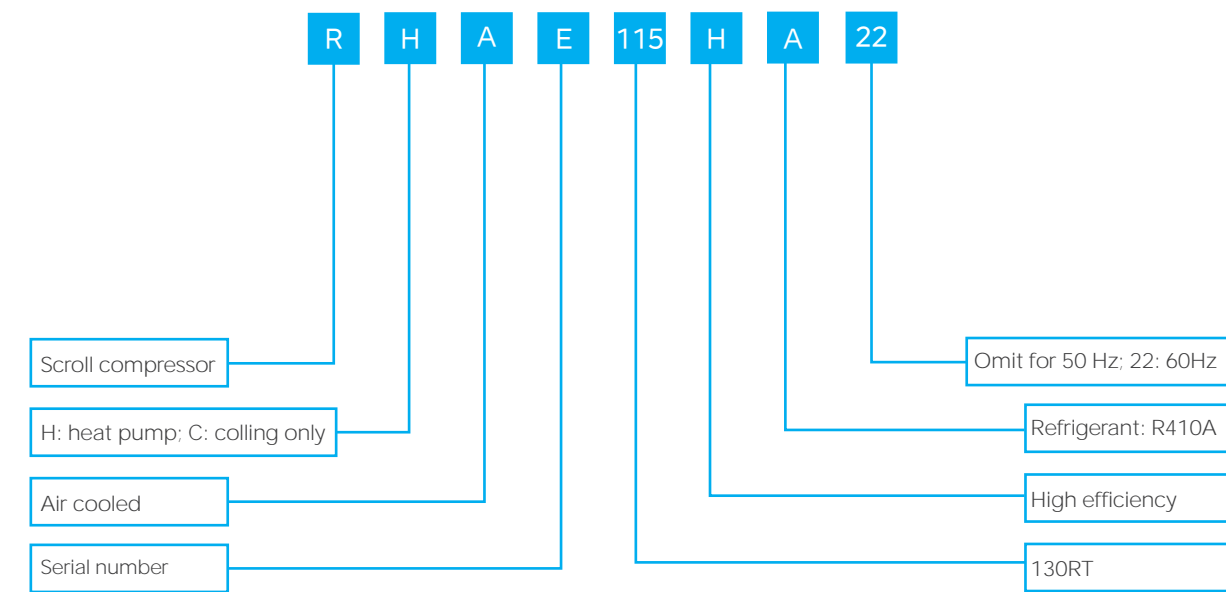
Quiet Operation
- 

Flexible Installation
- 

Wide Operating  
Range
- 

Intelligent Control

## Nomenclature



## Operating range

Operating condition	Cooling	Heating
Ambient temperature	0-48°C	-15-48°C
Water outlet temperature	5-20°C	20-50°C

# FEATURES



**Trapezoidal heat exchanger**  
An innovative annular air inlet design increases heat exchanger surface area by 30%, resulting in more uniform air distribution and better overall heat exchange.



**Fan and motor**  
Large airflow, low-noise fan design. High torque and high efficiency.



**Electric control box**  
Quality components sourced from premier manufacturers. Located on the front side of the unit, making installation and maintenance fast and easy.



**Color touch screen display**  
Large 7-inch color touch screen display for intuitive, user-friendly operation.





**Water side heat exchanger**  
A new baffle shell and tube evaporator design improves heat exchange efficiency by 10%.



**Gas-liquid separator**  
Ensures consistent and reliable system operation.

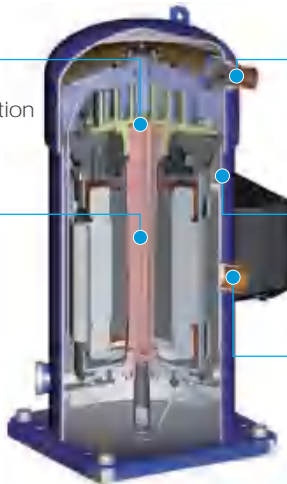


**Danfoss large capacity compressor**  
Higher efficiency and longer life span.

## Hermetic scroll compressor

**High efficiency**  
Features an innovative scroll design but without contact and wear, reducing friction inside the compressor while improving efficiency.

**Low warranty cost**  
Eco-friendly lead-free polymer bearing, stable operation and help to reduce warranty cost.



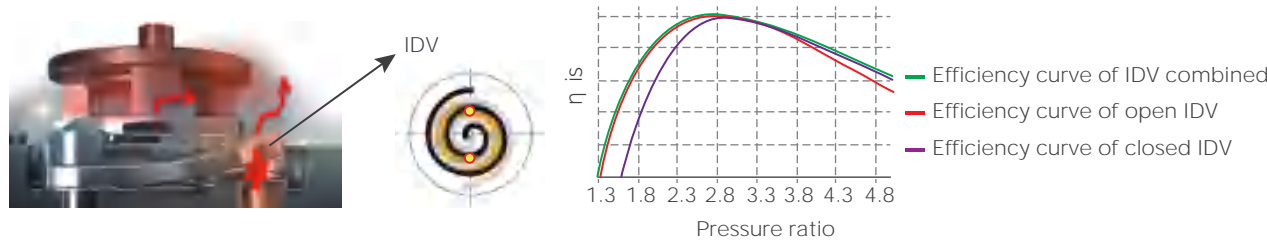
**Stable performance**  
Compressor outlet is equipped with check valve to prevent backflow of refrigerant while improving reliability.

**Maintenance free**  
Hermetic design requires no maintenance.

**Long service life**  
Suction refrigerant-cooled motor, improves efficiency while lengthening compressor service life.

Note: The actual compressor maybe slightly different from the picture shown.

**Intermediate Discharge Valve (IDV)**  
The compressor utilizes an intermediate discharge valve design which allows it to operate efficiently under full pressure ratio conditions to achieve high operating efficiency.



**Built-in discharge temperature sensor**  
A strategically-located sensor continuously monitors the compressor's discharge temperature. When the temperature exceeds a preset threshold, it immediately activates the motor protection system to prevent overheating and protect the compressor from damage.

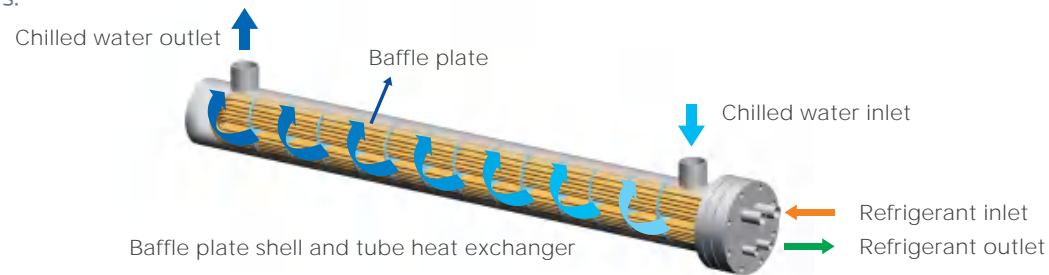
**Oil balance pipe**  
Under partial load conditions, the parallel compressor unit stores lubricating oil in the not running compressor, significantly improving system reliability. Additionally, the stored oil enhances heat transfer in the evaporator, which boosts overall system efficiency.

**Check valve**  
A check valve ensures the pressure on the top cover remains balanced at the low-pressure end after the compressor stops. This prevents refrigerant leakage at the high-pressure end, allowing the compressor to achieve a no-load start, improving efficiency and reliability.



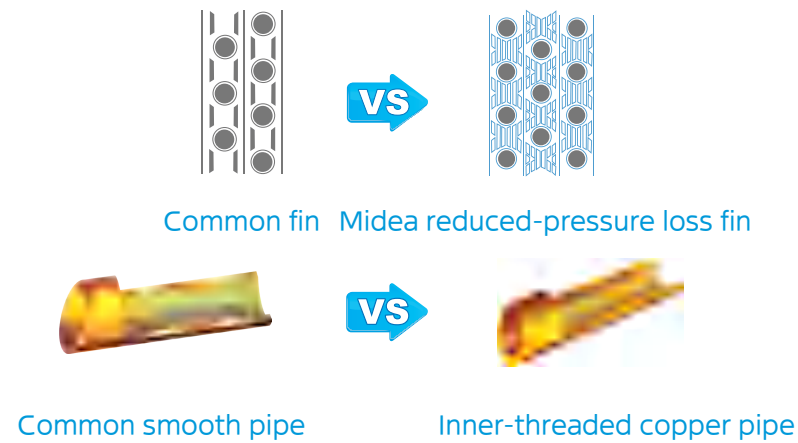
High efficiency water side heat exchanger

- An optimized design that utilizes flow path simulation technology and an innovative baffle plate enhance heat transfer efficiency.
- Overall efficiency of the heat exchanger has increased by 10% when compared to conventional shell-and-tube heat exchangers.



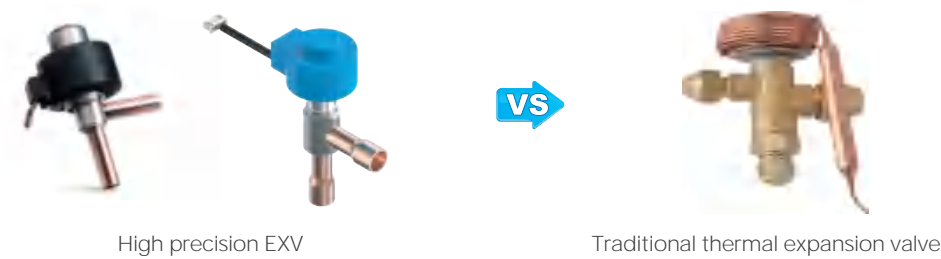
High efficiency air side heat exchanger

- An annular air inlet structure enables a 30% increase in the face area of the heat exchanger.
- Arc-shaped window structure hydrophilic aluminum fins reduce pressure loss.
- High efficiency inner-threaded copper pipes greatly enhance heat exchange.
- Flow path simulation technology has enabled an enhanced design, resulting in improved heat exchange efficiency.



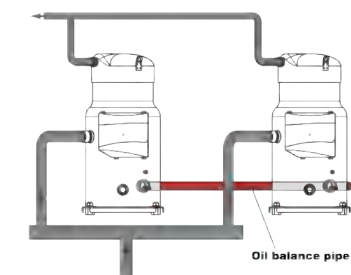
High precision EXV, more accurate temperature control

- A highly precise EXV takes only a few seconds to go from fully closed to fully open.
- No static-superheat phenomenon to interfere with low load starts, enhancing the stability and reliability of the unit.



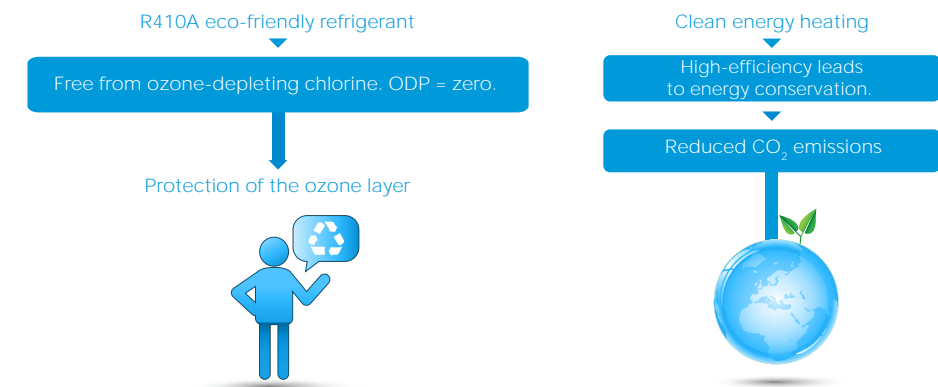
Reliable lubrication system

- Low pressure-chamber compressor features a vertical structure with the oil tank positioned at the bottom.
- When two compressors operate in parallel, an oil balance pipe positioned below the oil level runs between them, ensuring each compressor achieves proper oil pressure balance.
- A gas-liquid separator effectively prevents liquid strike, ensuring stable compressor operation.
- An oil-collecting feature built into the suction pipe effectively prevents the migration of oil and refrigerant to the compressor during shutdown and under extreme low-load conditions.



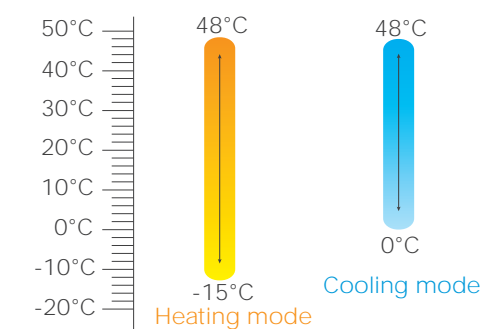
Eco-friendly

- Eco-friendly R410A is chlorine free and has an Ozone Depletion Potential (ODP) value of 0.
- Makes obtaining green building, LEED and other building certifications easier.



Wide operating range

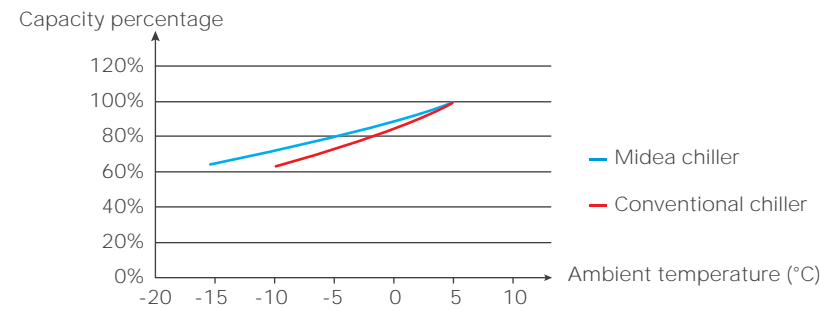
Cooling mode: 0°C to 48°C. Heating mode: -15°C to 48°C.



FEATURES

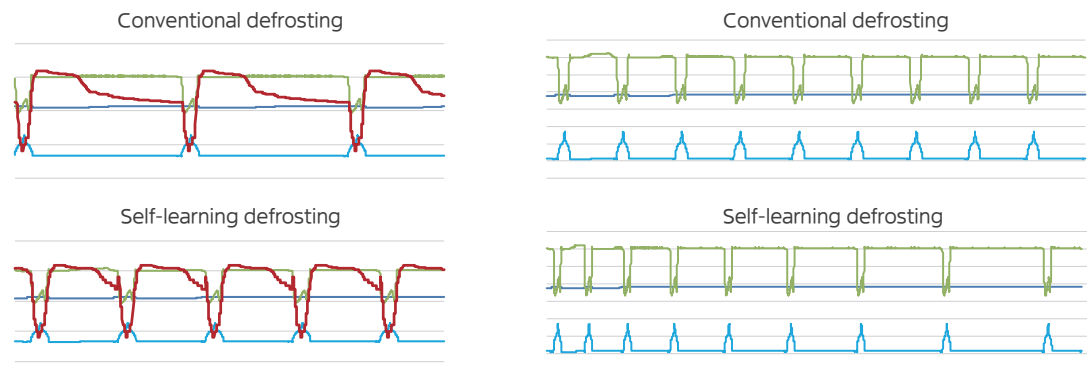
Comfortable heating

- Powerful low-temperature heating performance and advanced pressure ratio control technology ensure efficient and stable heating operation in low temperature environments.
- Less than 38% heat attenuation at -15°C.
- Intelligent defrosting only activates when necessary, avoiding wasted energy.



Online self-learning defrosting technology

Online self-learning defrosting technology utilizes fuzzy logic to automatically control defrost operation. This greatly reduces heat capacity attenuation and water temperature fluctuation caused by frequent defrosting which improves system reliability.



High humidity environments can lead to quick formation of thick frost. With strategically-timed defrosting, the unit can continue operating at high capacity.

In low humidity environments, frosting is slowly with less built up. By extending the heating intervals, frosting times can be reduced.

Quiet operation

- High efficiency and low noise fan design.
- The fan impeller is optimized with professional flow-field software to ensure exceptional aerodynamics. This leads to a larger air flow with less noise, improving heat exchange on the air side.
- Compressor noise reduction box greatly reduces operating noise.



Low noise fan



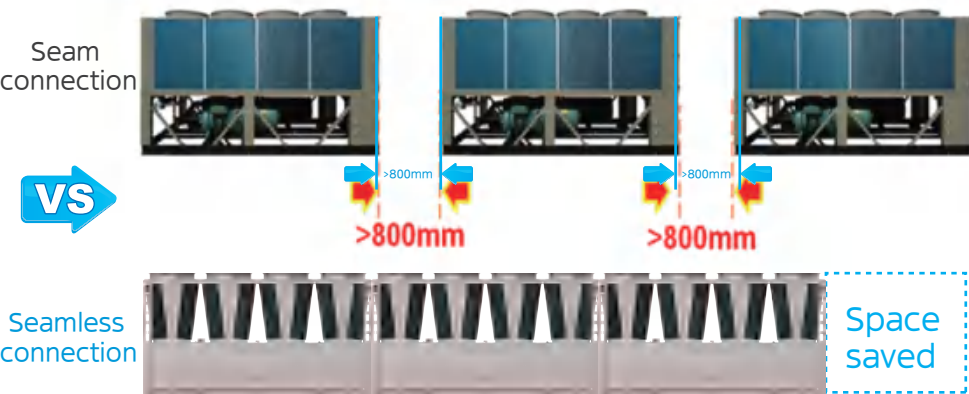
Low noise compressor



Noise reduction box for compressor (optional for 50Hz unit; standard for 60Hz unit; 60Hz unit without noise reduction box also optional)

Seamless connection

- Modular design lets you configure a system to precisely match needs while making future expansion easy.
- The trapezoidal module design allows lateral ventilation and heat exchange. Multiple modules can be seamlessly connected, reducing installation space requirements.



Advanced microcomputer control

An advanced microcomputer control panel includes multiple functions for intelligent unit operation and safety. A high-speed processing chip can quickly determine chiller system operating parameters and issue control instructions, helping to ensure stable operation.



Color Touch Screen

Precise, intuitive control for all functions including: Outlet water temperature setting, intelligent load control, self-equipped master/slave control, intelligent defrosting, intelligent low temperature control etc.

Comprehensive safeguard protections including: High pressure protection, low pressure protection, overload protection, discharge temperature protection, water flow protection, pressure ratio protection, discharge superheat protection etc.

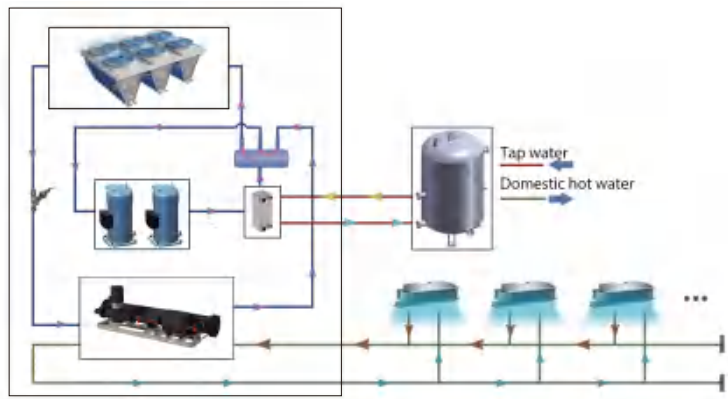


FEATURES

Optional applications

Heat recovery

- Air cooled chillers waste significant amounts of energy during cooling operation by discharging condensation heat into the air. A heat recovery unit can provide "free" domestic hot water heated up to 60°C during cooling, making full use of available energy while reducing wasted heat emissions and associated costs.
- These units are especially valuable in occasions where hot water is needed for not only production but residential applications as well such as hotels, hospital and factories with worker housing.

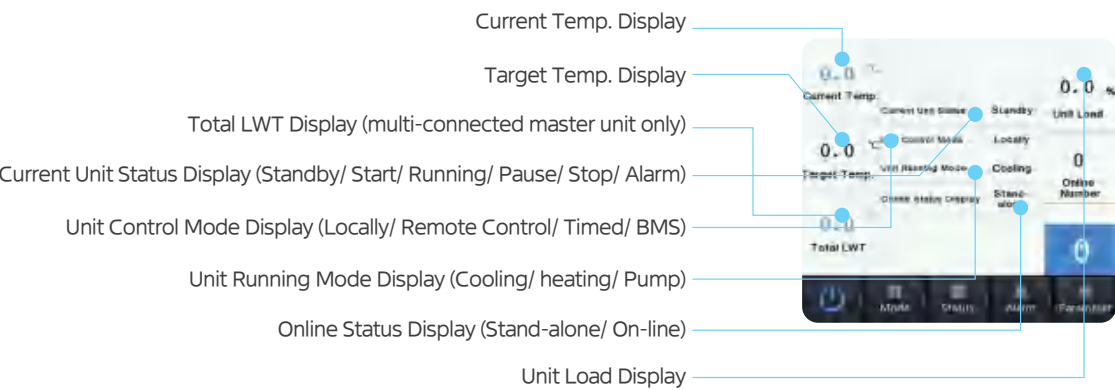


Built-in hydraulic module

- A built-in hydraulic module integrates all necessary components such as the water pump, filter, expansion water tank, flow switch, safety valve, air discharge valve, pressure gauge and flow control valve. This greatly reduces initial capital investment and also design and installation workloads, saving time, effort and money.
- Convenient and reliable Victaulic water pipe connection not only simplifies installation but also reduces vibrations.
- High-lift and ultra-high lift options offer flexibility to meet different requirements.



Wired controller



Specifications

380V-3Ph-50Hz, Heat pump

Model		RHAE	90HA	120HA	180HA	210HA	240HA	
Nominal parameters	Cooling capacity		kW	319.9	430.0	639.9	749.9	860.0
	Cooling power input		kW	105.8	142.8	211.7	248.6	285.6
	Cooling COP		W/W	3.021	3.011	3.021	3.015	3.011
	IPLV		W/W	4.711	4.72	4.711	4.716	4.72
	Heating capacity		kW	339.9	455.0	679.9	794.9	910.0
	Heating power input		kW	105.4	142.0	210.9	247.4	284.0
	Heating COP		W/W	3.222	3.204	3.222	3.212	3.204
	Partial heat recovery*		kW	96.0	129.0	192.0	225.0	258.0
Compressor	Type		/					Hermetic scroll compressor
	Quantity	System 1	/	2	2	2	2	2
		System 2	/	1	2	1	1	2
		System 3	/	-	-	2	2	2
		System 4	/	-	-	1	2	2
Energy regulation mode		/						Adaptive energy regulation
Refrigerant	Type		/					R410A
	Charge amount	System 1	kg	38	38	38	38	38
		System 2	kg	18	38	18	18	38
		System 3	kg	-	-	38	38	38
		System 4	kg	-	-	18	38	38
Power supply		/						380V-3Ph-50Hz
Rated current		A	187.4	252.6	187.4/187.4	187.4/252.6	252.6/252.6	
Start current		A	589.0	673.0	589.0/589.0	589.0/673.0	673.0/673.0	
Max. operating current		A	257.7	343.6	257.7/257.7	257.7/343.6	343.6/343.6	
Air side heat exchanger	Type		/					High efficiency internal thread pipe + hydrophilic aluminum fin
	No. of fans		/	6	8	12	14	16
	Airflow rate		m³/h	20000×6	20000×8	20000×12	20000×14	20000×16
	Motor power input		kW	1.300×6	1.300×8	1.300×12	1.300×14	1.300×16
Water side heat exchanger	Type		/					Shell and tube
	Water flow rate		m³/h	55.03	73.96	55.03/55.03	55.03/73.96	73.96/73.96
	Pressure drop		kPa	56.3	55.7	56.3	56.3	55.7
	Water pipe connection		mm	DN125	DN125	DN125/DN125	DN125/DN125	DN125/DN125
	Max. working pressure		kPa	1000				
	Fouling factor		m².°C/kW	0.018				
Built-in hydraulic module (optional)*	Pump type		/					Single-stage piping centrifugal pump
	No. of pumps		/	1	1	2	2	2
	Pump power input (high-lift)		kW	7.5	11	7.5/7.5	7.5/11	11/11
	Pump power input (ultra-high lift)		kW	11	15	11/11	11/15	15/15
	External water head (high-lift/nominal flow)		kPa	210.8	224.4	210.8/210.8	210.8/224.4	224.4/224.4
	External water head (ultra-high lift/nominal flow)		kPa	321.2	323.7	321.2/321.2	321.2/323.7	323.7/323.7
	Expansion tank capacity		L	80	80	80/80	80/80	80/80
	Max. water side pressure (with built-in hydraulic module)		kPa	1000	1000	1000	1000	1000
	Inlet and outlet pipe (with built-in hydraulic module)		mm	DN125	DN125	DN125/DN125	DN125/DN125	DN125/DN125
Partial heat recovery heat exchanger (optional)*	Type		/					Plate heat exchanger
	Water flow rate		m³/h	5.8	7.3	5.5/5.5	5.5/7.3	7.3/7.3
	Pressure drop		kPa	10.1	11.2	10.1/10.1	10.1/11.2	11.2/11.2
	Connecting pipe diameter		mm	DN50	DN50	DN50/DN50	DN50/DN50	DN50/DN50
Unit dimensions	Length		mm	3530	4700	7060	8230	9400
	Width		mm	2300	2300	2300	2300	2300
	Height		mm	2500	2500	2500	2500	2500
Unit weight		kg	2560	3300	2560/2560	2560/3300	3300/3300	
Operating weight		kg	2660	3450	2660/2660	2660/3450	3450/3450	

Notes:  
1. Cooling: chilled water outlet temperature 7°C, water flow=cooling capacity×0.172m³/(h·kW), outdoor ambient temperature 35°C DB. Heating: hot water outle temperature 45°C, water flow=water flow under cooling mode, outdoor ambient temperature is 7°C DB/6°C WB. Partial heat recovery: hot water inlet/outlet temperature=40°C/55°C, chilled water outlet temperature 7°C, water flow=cooling capacity×0.172m³/(h·kW), outdoor ambient temperature 35°C DB.  
2. IPLV calculations according to standard performances (in accordance with AHRI 550/590).  
3. Partial heat recovery is optional, adding this function will affect the weight of the unit and other parameters. Please consult Midea technical personnel for details.  
4. The built-in hydraulic module is optional. The parameters in the table above (cooling power input, heating power input, rated current, start current, max. operating current) do not include the water pump parameters of the built-in hydraulic module. Please consult Midea technical personnel for details.  
5. As a result of the continuous improvement of the product, the above parameters may be changed. Please refer to the product nameplate and in-kind.



# Specifications

## 380V-3Ph-50Hz, Cooling only

Model		RCAE	90HA	120HA	180HA	210HA	240HA	
Nominal parameters	Cooling capacity	kW	319.9	430.0	639.9	749.9	860.0	
	Cooling power input	kW	105.8	142.8	211.7	248.6	285.6	
	Cooling COP	W/W	3.021	3.011	3.021	3.015	3.011	
	IPLV	W/W	4.711	4.72	4.711	4.716	4.72	
	Partial heat recovery*	kW	96.0	129.0	192.0	225.0	258.0	
Compressor	Type	/ Hermetic scroll compressor						
	Quantity	System 1	/	2	2	2	2	
		System 2	/	1	2	1	1	2
		System 3	/	-	-	2	2	2
		System 4	/	-	-	1	2	2
Energy regulation mode		/ Adaptive energy regulation						
Refrigerant	Type	/ R410A						
	Charge amount	System 1	kg	38	38	38	38	38
		System 2	kg	18	38	18	18	38
		System 3	kg	-	-	38	38	38
		System 4	kg	-	-	18	38	38
Power supply		/ 380V-3Ph-50Hz						
Rated current		A	187.4	252.6	187.4/187.4	187.4/252.6	252.6/252.6	
Start current		A	589.0	673.0	589.0/589.0	589.0/673.0	673.0/673.0	
Max. operating current		A	257.7	343.6	257.7/257.7	257.7/343.6	343.6/343.6	
Air side heat exchanger	Type	/ High efficiency internal thread pipe + hydrophilic aluminum fin						
	No. of fans	/	6	8	12	14	16	
	Airflow rate	m³/h	20000×6	20000×8	20000×12	20000×14	20000×16	
	Motor power input	kW	1.300×6	1.300×8	1.300×12	1.300×14	1.300×16	
Water side heat exchanger	Type	/ Shell and tube						
	Water flow rate	m³/h	55.03	73.96	55.03/55.03	55.03/73.96	73.96/73.96	
	Pressure drop	kPa	56.3	55.7	56.3	56.3	55.7	
	Water pipe connection	mm	DN125	DN125	DN125/DN125	DN125/DN125	DN125/DN125	
	Max. working pressure	kPa	1000					
Fouling factor		m².°C/kW	0.018					
Built-in hydraulic module (optional)*	Pump type	/ Single-stage piping centrifugal pump						
	No. of pumps	/	1	1	2	2	2	
	Pump power input (high-lift)	kW	7.5	11	7.5/7.5	7.5/11	11/11	
	Pump power input (ultra-high lift)	kW	11	15	11/11	11/15	15/15	
	External water head (high-lift/nominal flow)	kPa	210.8	234.4	210.8/210.8	210.8/234.4	234.4/234.4	
	External water head (ultra-high lift/nominal flow)	kPa	321.2	323.7	321.2/321.2	321.2/323.7	323.7/323.7	
	Expansion tank capacity	L	80	80	80/80	80/80	80/80	
	Max. water side pressure (with built-in hydraulic module)	kPa	1000	1000	1000	1000	1000	
	Inlet and outlet pipe (with built-in hydraulic module)	mm	DN125	DN125	DN125/DN125	DN125/DN125	DN125/DN125	
Partial heat recovery heat exchanger (optional)*	Type	/ Plate heat exchanger						
	Water flow rate	m³/h	5.8	7.3	5.5/5.5	5.5/7.3	7.3/7.3	
	Pressure drop	kPa	10.1	11.2	10.1/10.1	10.1/11.2	11.2/11.2	
	Connecting pipe diameter	mm	DN50	DN50	DN50/DN50	DN50/DN50	DN50/DN50	
Unit dimensions	Length	mm	3530	4700	7060	8230	9400	
	Width	mm	2300	2300	2300	2300	2300	
	Height	mm	2500	2500	2500	2500	2500	
Unit weight		kg	2500	3470	2500/2500	2500/3470	3470/3470	
Operating weight		kg	2600	3620	2600/2600	2600/3620	3620/3620	

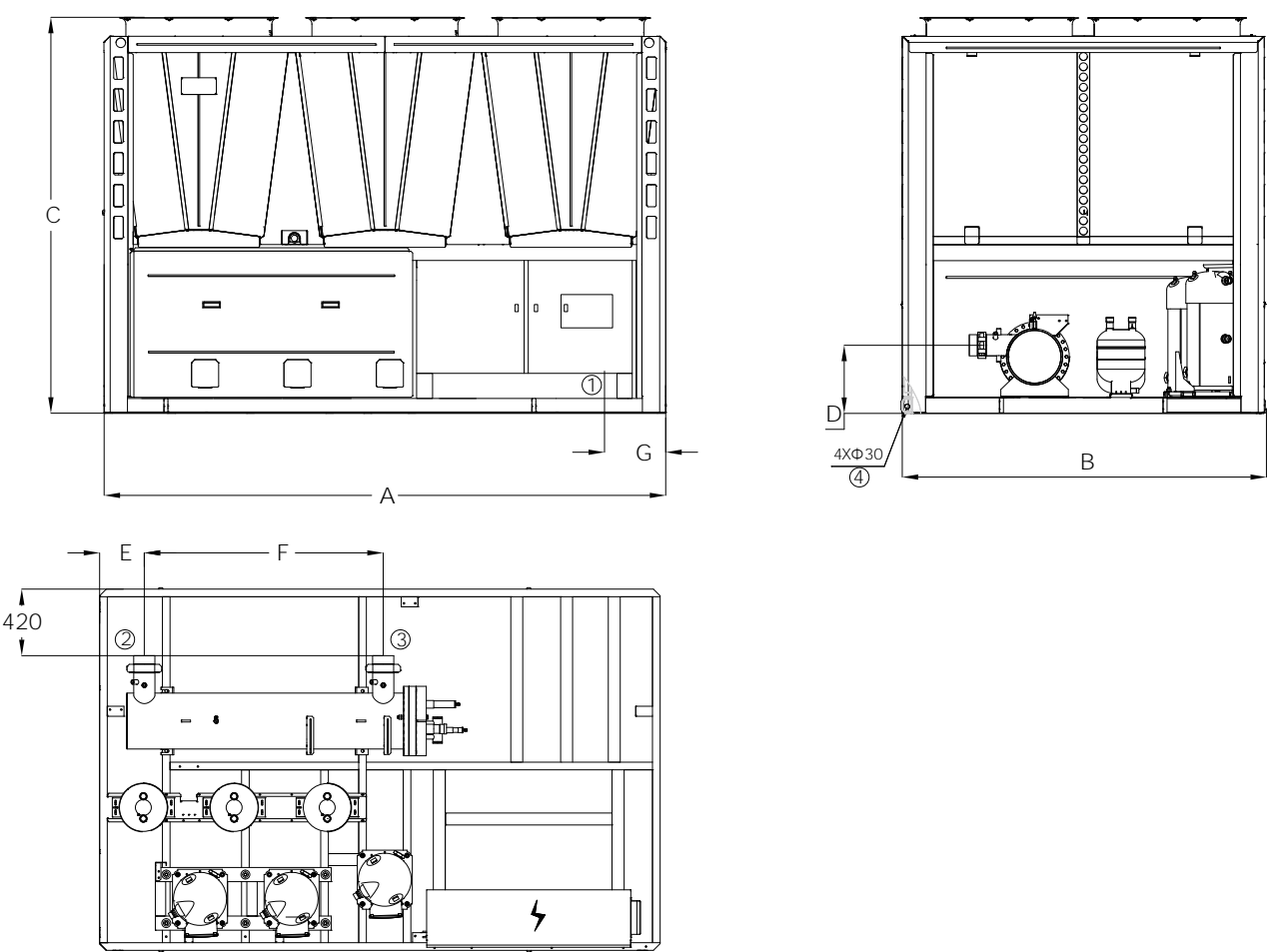
Notes:  
1. Cooling: chilled water outlet temperature 7°C, water flow=cooling capacity×0.172m³/(h·kW), outdoor ambient temperature 35°C DB; Partial heat recovery: hot water inlet/outlet temperature=40°C/55°C, chilled water outlet temperature 7°C, water flow=cooling capacity×0.172m³/(h·kW), outdoor ambient temperature 35°C DB.  
2. IPLV calculations according to standard performances (in accordance with AHRI 550/590).  
3. Partial heat recovery is optional, adding this function will affect the weight of the unit and other parameters. Please consult Midea technical personnel for details.  
4. The built-in hydraulic module is optional. The parameters in the table above (cooling power input, heating power input, rated current, start current, max. operating current) do not include the water pump parameters of the built-in hydraulic module. Please consult Midea technical personnel for details.  
5. As a result of the continuous improvement of the product, the above parameters may be changed. Please refer to the product nameplate and in-kind.

## 460V-3Ph-60Hz, Cooling only

Model		RCAE	115HA22	150HA22	230HA22	265HA22	300HA22	
Nominal parameters	Cooling capacity	kW	400.0	535.0	800.0	935.0	1070.0	
	Cooling power input	kW	134.0	179.0	268.0	313.0	358.0	
	Cooling COP	W/W	2.985	2.989	2.985	2.987	2.989	
	IPLV	W/W	4.028	4.130	4.028	4.086	4.130	
	Partial heat recovery*	kW	112.0	150.0	224.0	262.0	300.0	
Compressor	Type	/ Hermetic scroll compressor						
	Quantity	System 1	/	2	2	2	2	
		System 2	/	1	2	1	1	2
		System 3	/	-	-	2	2	2
		System 4	/	-	-	1	2	2
Energy regulation mode		/ Adaptive energy regulation						
Refrigerant	Type	/ R410A						
	Charge amount	System 1	kg	38	38	38	38	38
		System 2	kg	18	38	18	18	38
		System 3	kg	-	-	38	38	38
		System 4	kg	-	-	18	38	38
Power supply		/ 460V-3Ph-60Hz						
Rated current		A	196.1	261.9	196.1/196.1	196.1/261.9	261.9/261.9	
Start current		A	589.0	673.0	589.0/589.0	589.0/673.0	673.0/673.0	
Max. operating current		A	256.5	342.0	256.5/256.5	256.5/342.0	342.0/342.0	
Air side heat exchanger	Type	/ High efficiency internal thread pipe + hydrophilic aluminum fin						
	No. of fans	/	6	8	12	14	16	
	Airflow rate	m³/h	20000×6	20000×8	20000×12	20000×14	20000×16	
	Motor power input	kW	1.300×6	1.300×8	1.300×12	1.300×14	1.300×16	
Water side heat exchanger	Type	/ Shell and tube						
	Water flow rate	m³/h	68.80	92.02	137.6	160.8	184.0	
	Pressure drop	kPa	85.6	83.1	85.6	85.6	83.1	
	Water pipe connection	mm	DN125	DN125	DN125+DN125	DN125+DN125	DN125DDN125	
	Max. working pressure	kPa	1000					
	Fouling factor	m².°C/kW	0.018					
Partial heat recovery heat exchanger (optional)*	Type	/ Plate heat exchanger						
	Water flow rate	m³/h	6.5	8.6	6.5+6.5	6.5+8.6	8.6+8.6	
	Pressure drop	kPa	13.9	15.1	13.9+13.9	13.9+15.1	15.1+15.1	
	Connecting pipe diameter	mm	DN50	DN50	DN50S5DN50	DN50S5DN50	DN50S5DN50	
Unit dimensions	Length	mm	3530	4700	7060	8230	9400	
	Width	mm	2300	2300	2300	2300	2300	
	Height	mm	2500	2500	2500	2500	2500	
Unit weight		kg	2500	3470	5000	5970	6940	
Operating weight		kg	2600	3620	5200	6220	7240	

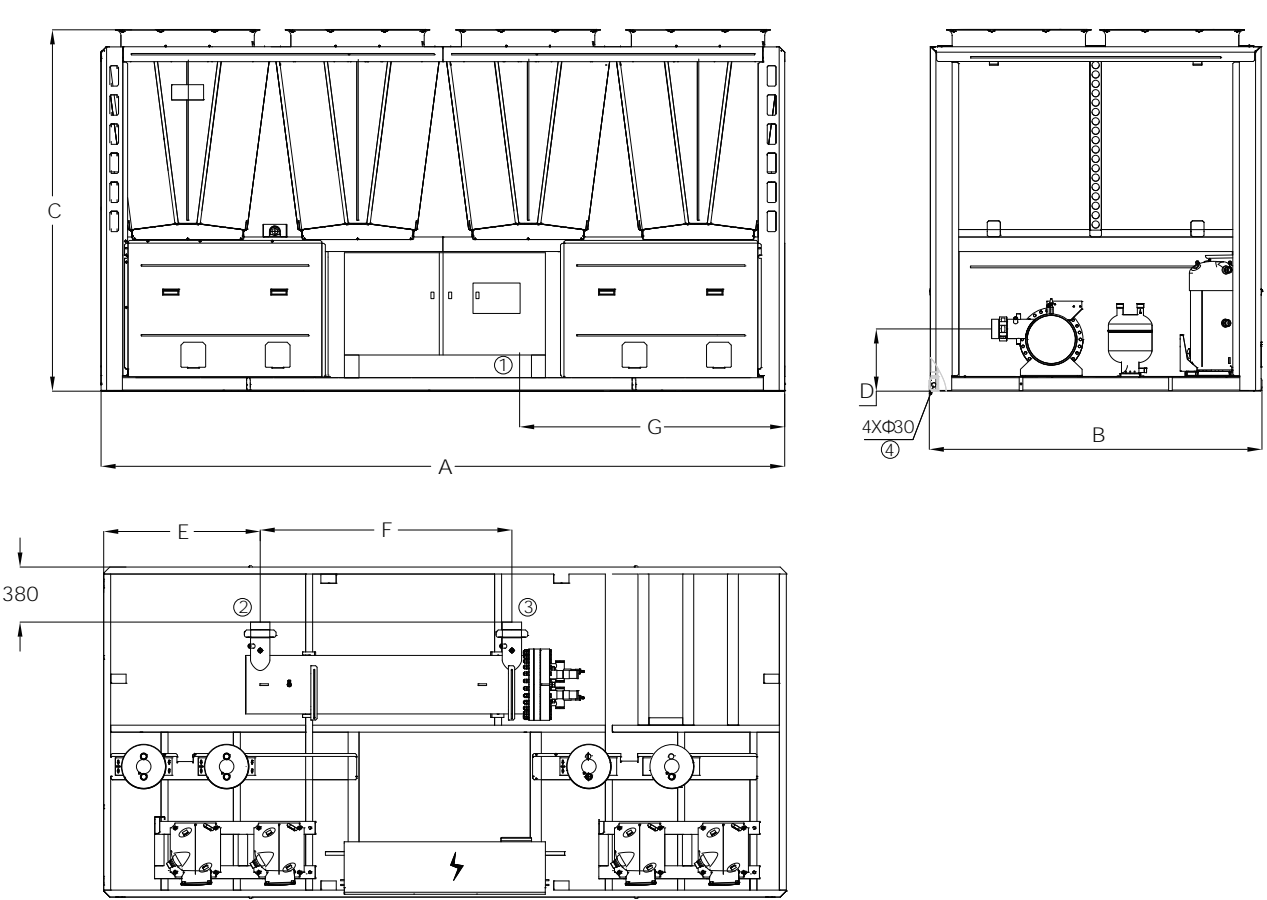
Notes:  
1. Cooling: chilled water outlet temperature 7°C, water flow=cooling capacity×0.172m³/(h·kW), outdoor ambient temperature 35°C DB; Partial heat recovery: hot water inlet/outlet temperature=40°C/55°C, chilled water outlet temperature 7°C, water flow=cooling capacity×0.172m³/(h·kW), outdoor ambient temperature 35°C DB.  
2. IPLV calculations according to standard performances (in accordance with AHRI 550/590).  
3. Partial heat recovery is optional, adding this function will affect the weight of the unit and other parameters. Please consult Midea technical personnel for details.  
4. As a result of the continuous improvement of the product, the above parameters may be changed. Please refer to the product nameplate and in-kind.

Dimensions



Note: ① Incoming power line ②Water outlet (DN125) - victaulic connection ③ Water inlet (DN125) -victaulic connection ④ Lifting point

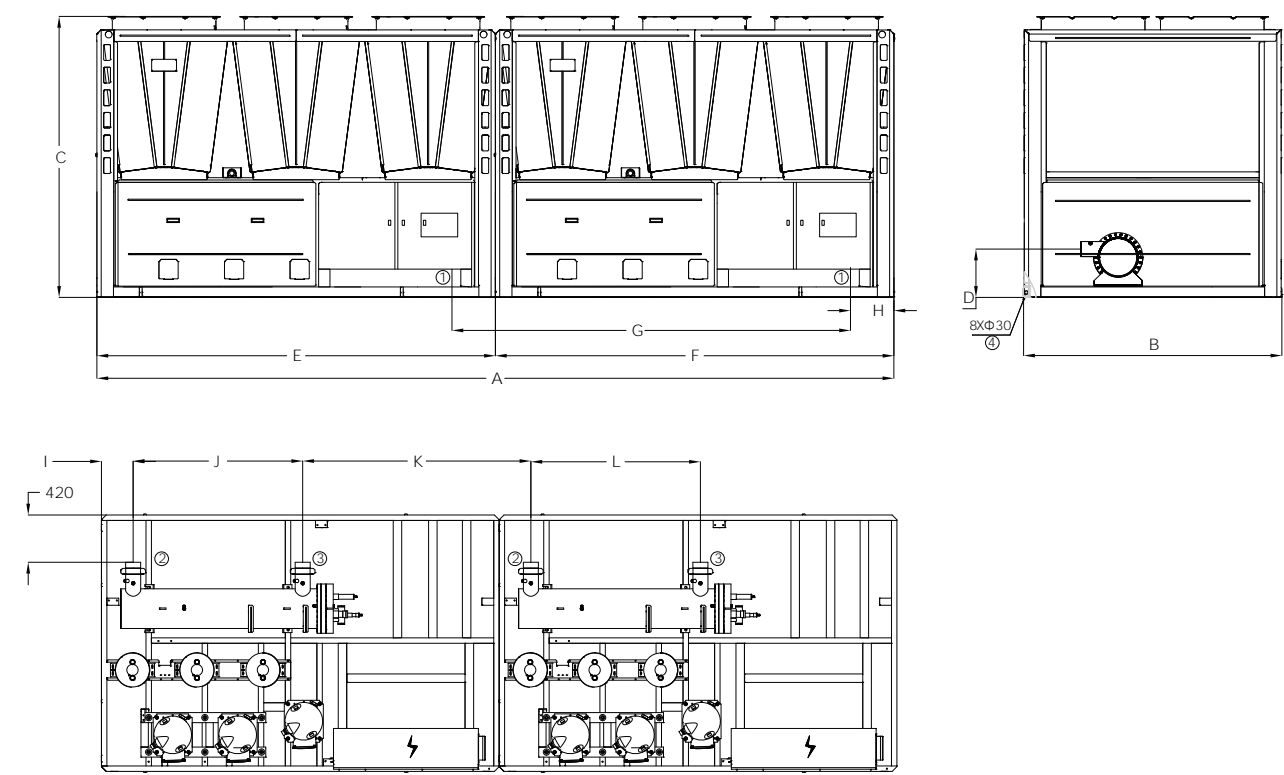
Model	Dimensions (unit: mm)						
	A	B	C	D	E	F	G
RHAE90HA RCAE90HA RCAE115HA22	3530	2300	2500	430	280	1500	385



Note: ① Incoming power line ②Water outlet (DN125) - victaulic connection ③ Water inlet (DN125) -victaulic connection ④ Lifting point

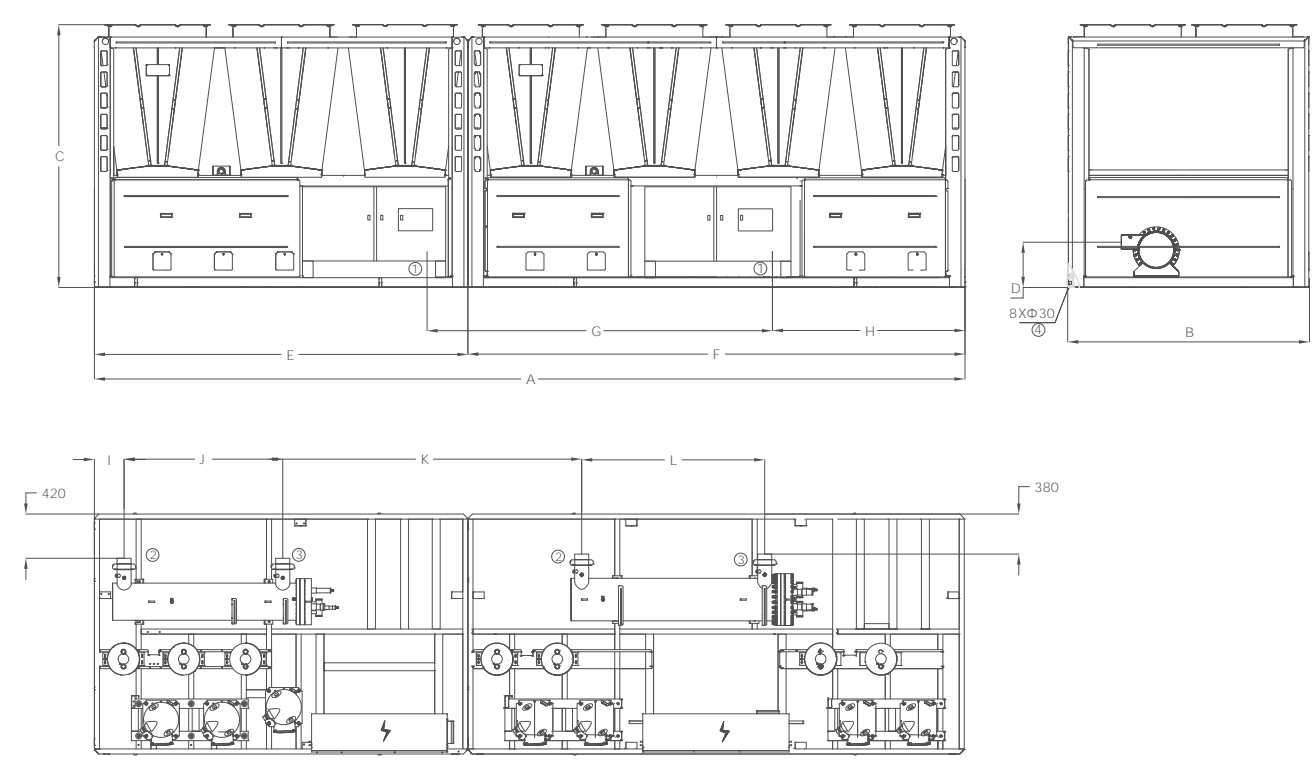
Model	Dimensions (unit: mm)						
	A	B	C	D	E	F	G
RHAE120HA RCAE120HA RCAE150HA22	4700	2300	2500	430	1080	1730	1820

Dimensions



Note: ① Incoming power line ②Water outlet (DN125) - victaulic connection ③ Water inlet (DN125) -victaulic connection ④ Lifting point

Model	Dimensions (unit: mm)											
	A	B	C	D	E	F	G	H	I	J	K	L
RHAE180HA RCAE180HA RCAE230HA22	7060	2300	2500	430	3530	3530	3530	385	280	1500	2030	1500

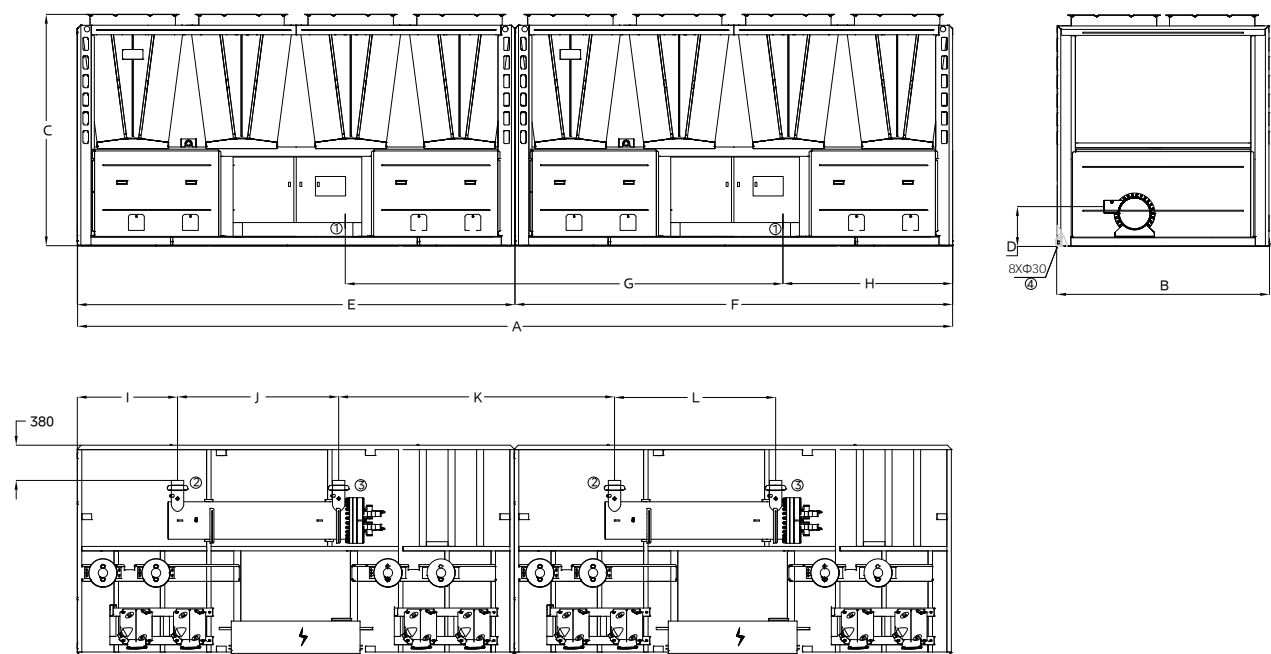


Note: ① Incoming power line ②Water outlet (DN125) - victaulic connection ③ Water inlet (DN125) -victaulic connection ④ Lifting point

Model	Dimensions (unit: mm)											
	A	B	C	D	E	F	G	H	I	J	K	L
RHAE210HA RCAE210HA RCAE265HA22	8230	2300	2500	430	3530	4700	3265	1820	280	1500	2830	1730



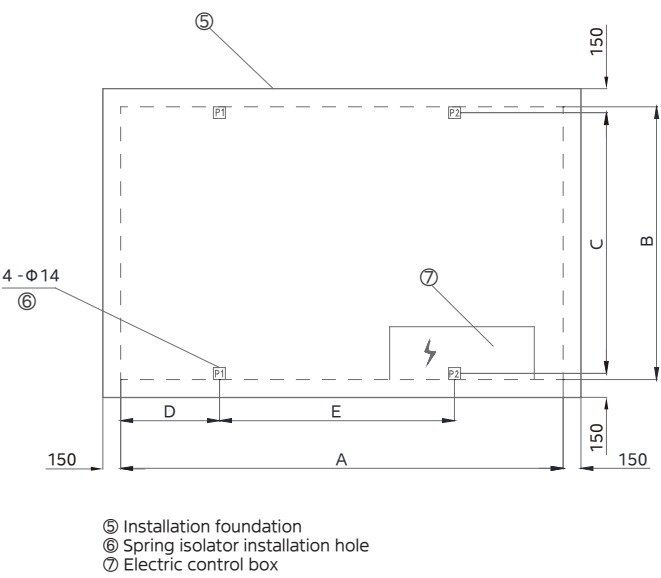
Dimensions



Note: ① Incoming power line ② Water outlet (DN125) - victaulic connection ③ Water inlet (DN125) -victaulic connection ④ Lifting point

Model	Dimensions (unit: mm)											
	A	B	C	D	E	F	G	H	I	J	K	L
RHAE240HA RCAE240HA RCAE300HA22	9400	2300	2500	430	4700	4700	4700	1820	1080	1730	2970	1730

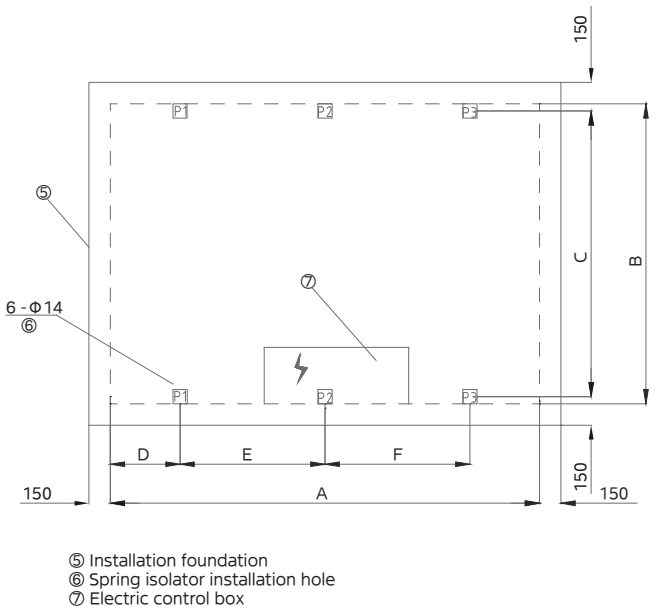
Base diagrams



Model	Dimensions (unit: mm)				
	A	B	C	D	E
RHAE90HA RCAE90HA RCAE115HA22	3530	2300	2220	644	2200

Model	Spring isolator at all points	
	P1	P2
RHAE90HA RCAE90HA RCAE115HA22	MHD-850	MHD-850

Note:  
1. Spring Isolator is optional.  
2. Value in Spring Isolator model indicates the bearable weight (unit: kg). For example, "850" in "MHD-850" indicates 850kg.

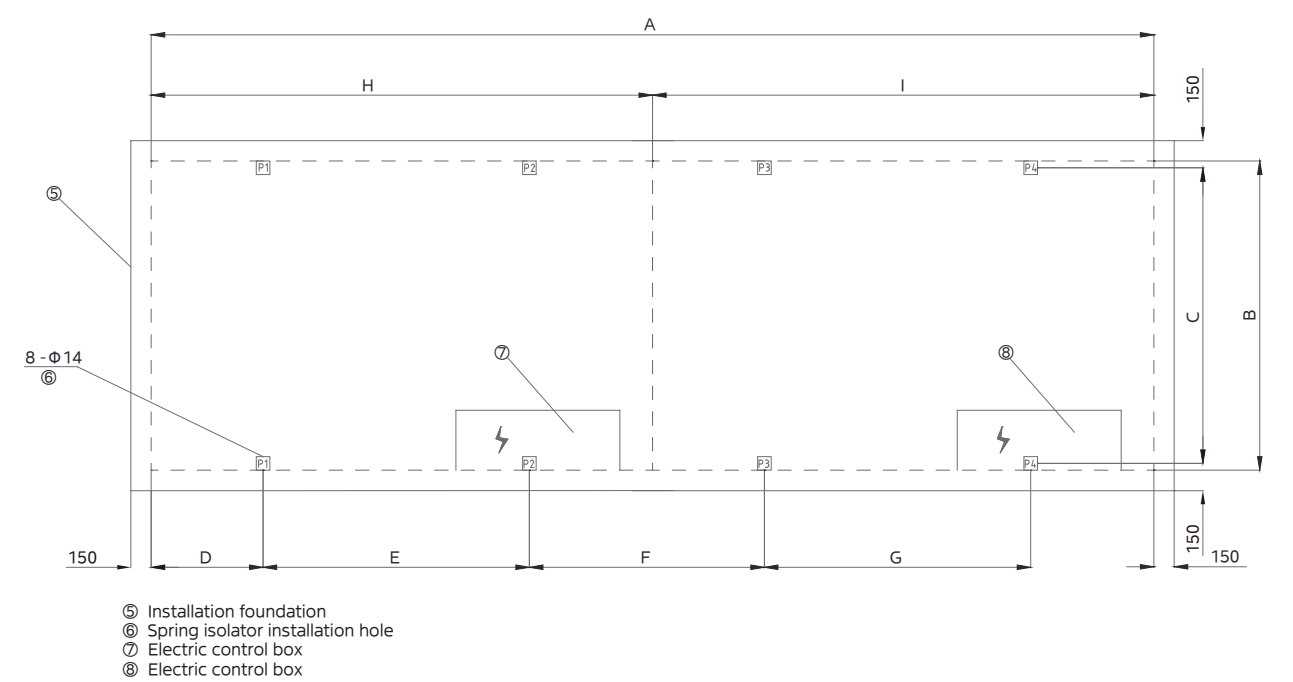


Model	Dimensions (unit: mm)					
	A	B	C	D	E	F
RHAE120HA RCAE120HA RCAE150HA22	4700	2300	2220	844	1412	1600

Model	Spring isolator at all points		
	P1	P2	P3
RHAE120HA RCAE120HA RCAE150HA22	MHD-850	MHD-850	MHD-850

Note:  
1. Spring Isolator is optional.  
2. Value in Spring Isolator model indicates the bearable weight (unit: kg). For example, "850" in "MHD-850" indicates 850kg.

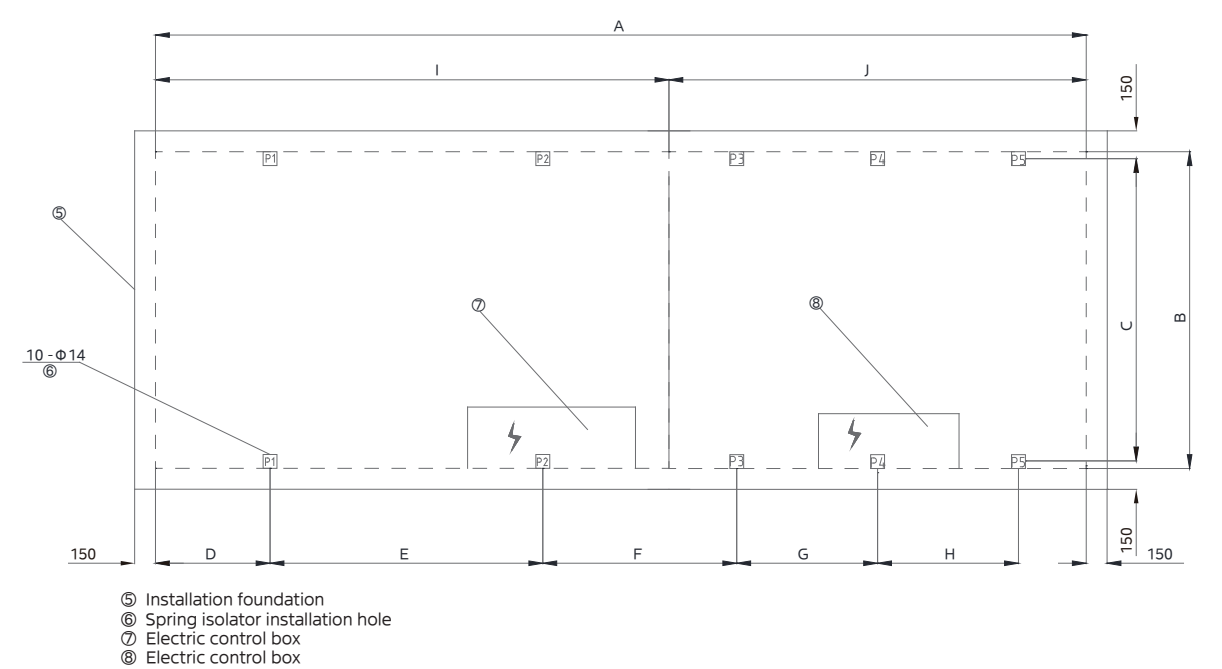
Base diagrams



Model	Dimensions (unit: mm)								
	A	B	C	D	E	F	G	H	I
RHAE180HA RCAE180HA RCAE230HA22	7060	2300	2220	644	2200	1330	2200	3530	3530

Model	Spring isolator at all points			
	P1	P2	P3	P4
RHAE180HA RCAE180HA RCAE230HA22	MHD-850	MHD-850	MHD-850	MHD-850

Note:  
1. Spring isolator is optional.  
2. Value in Spring isolator model indicates the bearable weight (unit: kg). For example, "850" in "MHD-850" indicates 850kg.

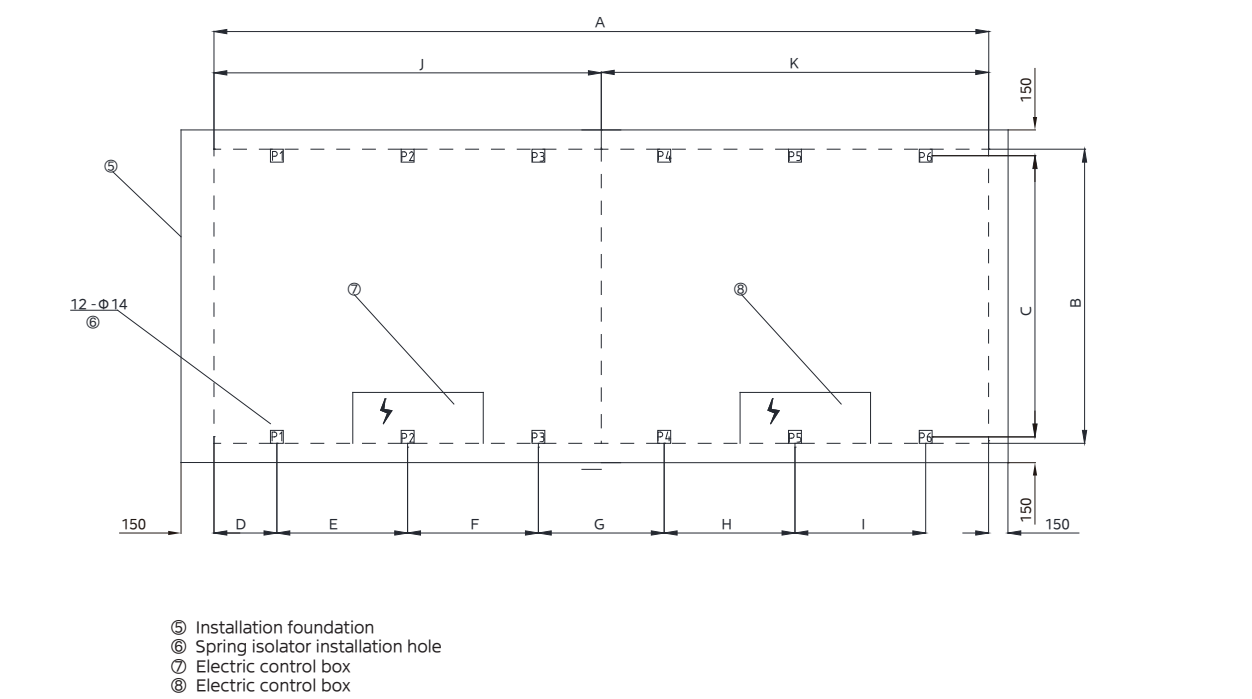


Model	Dimensions (unit: mm)									
	A	B	C	D	E	F	G	H	I	J
RHAE210HA RCAE210HA RCAE265HA22	8230	2300	2220	644	2200	1530	1412	1600	3530	4700

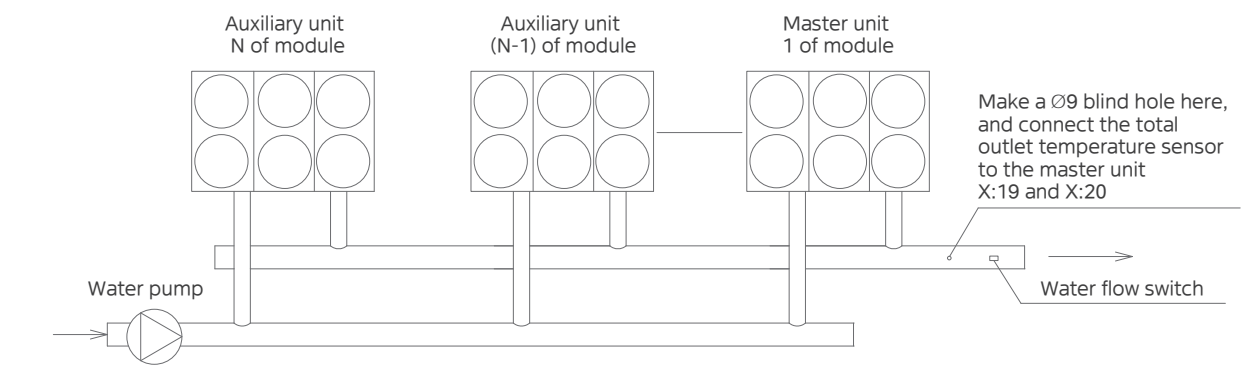
Model	Spring isolator at all points				
	P1	P2	P3	P4	P5
RHAE210HA RCAE210HA RCAE265HA22	MHD-850	MHD-850	MHD-850	MHD-850	MHD-850

Note:  
1. Spring isolator is optional.  
2. Value in Spring isolator model indicates the bearable weight (unit: kg). For example, "850" in "MHD-850" indicates 850kg.

Base diagrams



When several modular units are combined for use, the total water outlet temperature sensor must be added to the general water outlet pipe.  
The specific operations are as follows: (Remarks: The total water temperature sensor is a unit accessory.)



Model	Dimensions (unit: mm)										
	A	B	C	D	E	F	G	H	I	J	K
RHAE240HA RCAE240HA RCAE300HA22	9400	2300	2220	844	1412	1600	1688	1412	1600	4700	4700

Model	Spring isolator at all points					
	P1	P2	P3	P4	P5	P6
RHAE240HA RCAE240HA RCAE300HA22	MHD-850	MHD-850	MHD-850	MHD-850	MHD-850	MHD-850

Note:  
1. Spring isolator is optional.  
2. Value in Spring isolator model indicates the bearable weight (unit: kg). For example, "850" in "MHD-850" indicates 850kg.

Options

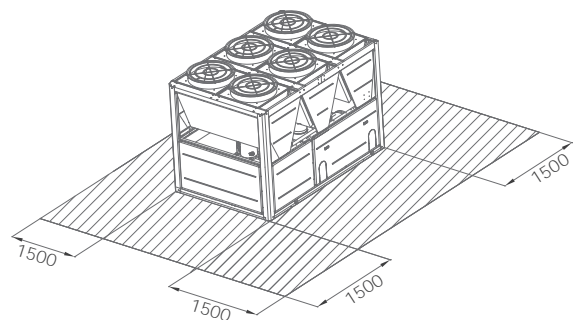
Items	Standard	Optional
Power supply	380V-3Ph-50Hz	50Hz: 400V, 415V (Cooling only and Heat pump)
		60Hz: 460V (Cooling only)
Water side pressure	1.0MPa	1.6MPa, 2.0MPa
Anti-corrosion treatment	×	✓
Communication	Modbus-RTU (RS485 port)	BACnet IP, BACnet MS/TP (RJ-45 port)
Water pipe connection	Victaulic	Flange
Spring isolator	×	✓
Water flow switch	×	✓
Insulation	20mm	40mm
Noise reduction box for compressor	60Hz unit	50Hz unit; unit without noise reduction box (60Hz)
Built-in hydraulic module	×	✓ (50Hz)
Heat recovery	×	Hot water inlet/outlet temperature 40/55°C
Low ambient temperature cooling	×	-20°C
Low water outlet temperature (cooling)	×	-6°C(with ethylene glycol or propylene glycol)
Remote control panel	×	✓
Midea Intelligent Chiller Plant Management (iCPM)	×	✓
Midea Smart Cloud Platform	×	✓
QuickView	×	✓
Wired controller	×	✓

Note: For other options, please contact with a Midea engineer.

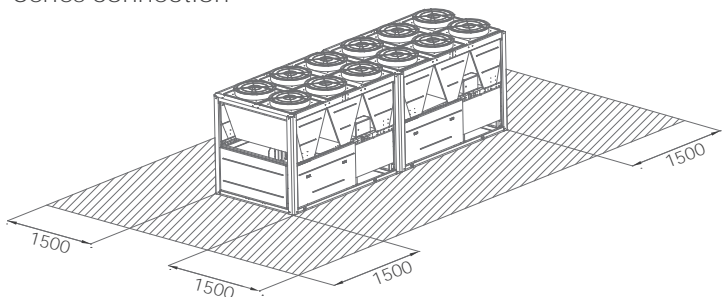


# Installation and Maintenance

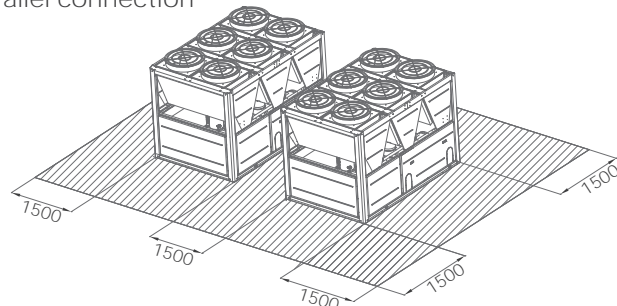
## Single installation



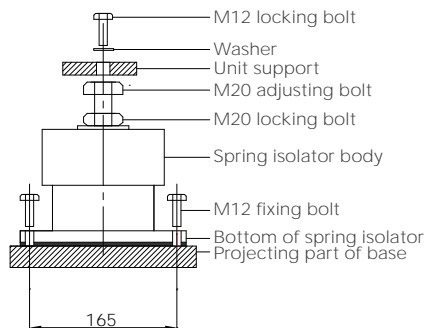
## Series connection



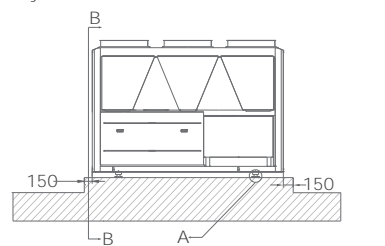
## Parallel connection



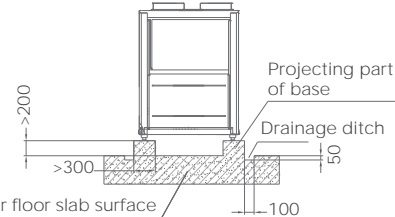
## Layout A



Note: The distance is 165 mm when the optional spring isolator provided by Midea is used.



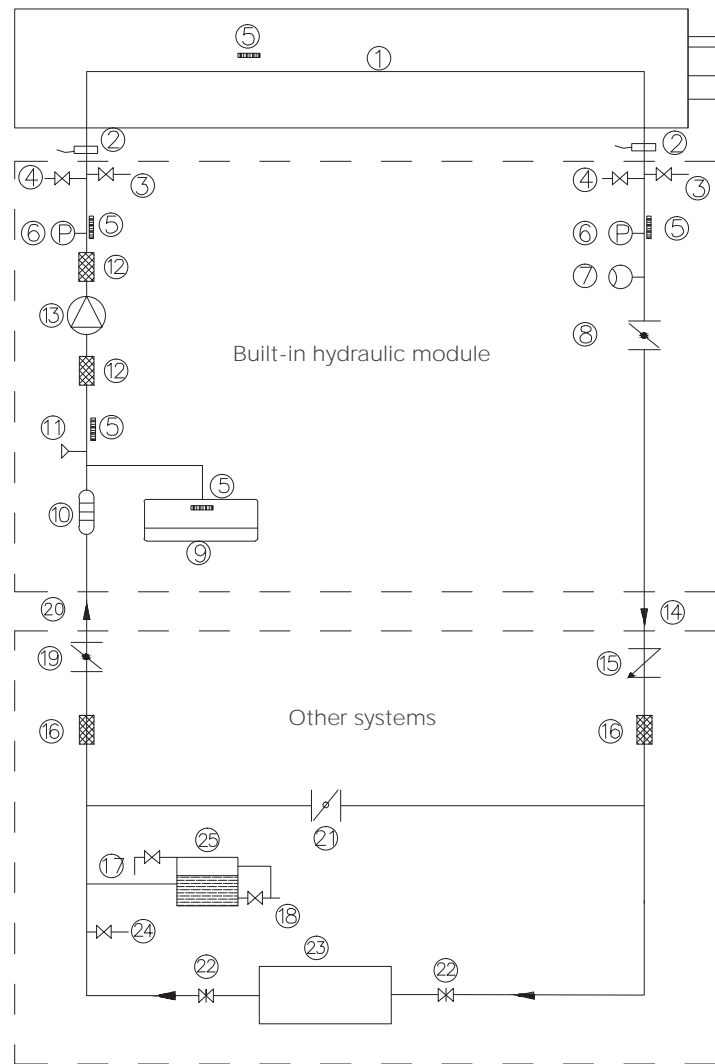
Sectional view B-B



### Notes:

1. The unit should be installed on the base due to vibration, and the base should be strong enough to bear the operating weight of the unit.
2. When the concrete base is constructed, A drainage ditch around the base is required.
3. When the unit is installed, a spring isolator is required. See the unit base diagram for the size and location of the spring isolator.
4. Standard products do not come with ground bolts. Customers may buy and install bolts according to the situation on site. Ground bolts can be installed in the pre-embedded holes, or expansion bolts can be used.

## Built-in hydraulic module



### Built-in hydraulic module Component

1. Shell-and-tube heat exchanger
2. Water temperature sensor
3. Drain valve
4. Air discharge valve
5. Antifreeze electric heater
6. Water pressure gauge
7. Electronic flow switch
8. Butterfly valve
9. Expansion tank
10. Filter (Victaulic fixing)
11. Safety valve
12. Rubber soft joint
13. Water pump

### Flow direction

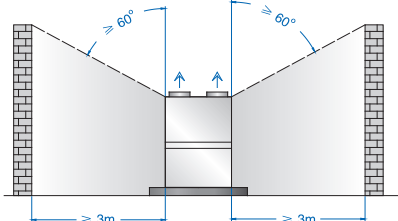
14. Water outlet of hydraulic module
20. Water inlet of hydraulic module

### Other system components (Installed by customer)

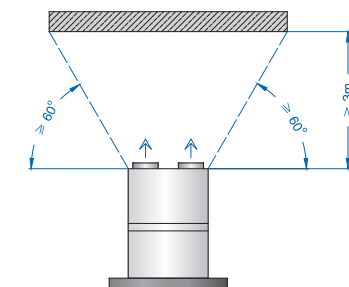
15. Check valve
16. Rubber soft joint
17. Water replenishing valve
18. Drain valve
19. Butterfly valve
21. Bypass valve
22. Stop valve
23. Air conditioning terminal
24. Air discharge valve
25. Expansion tank

## Special installation requirements

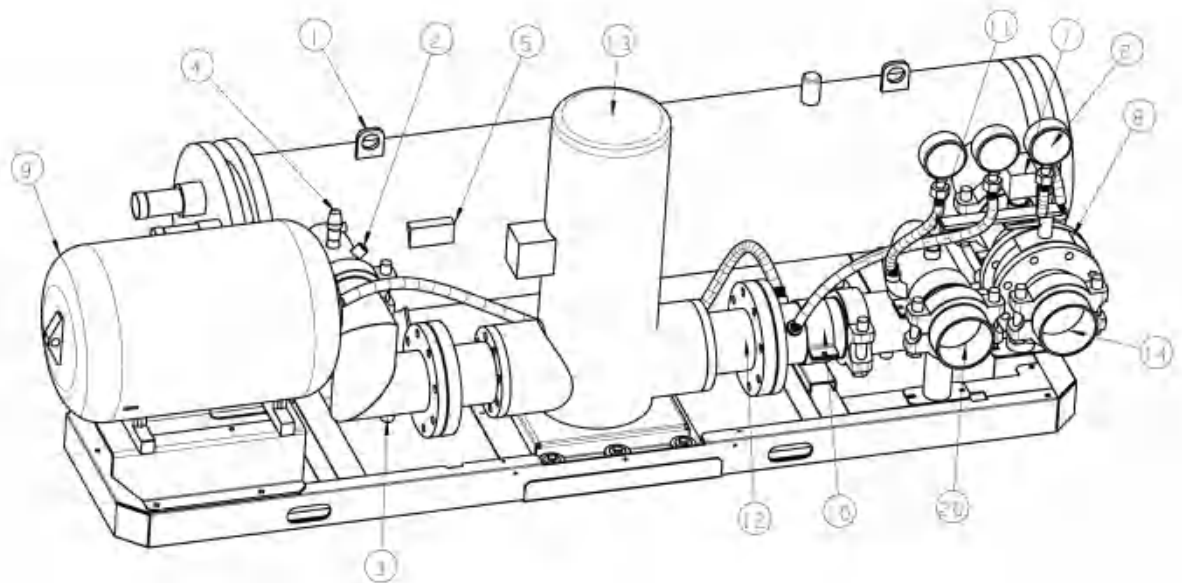
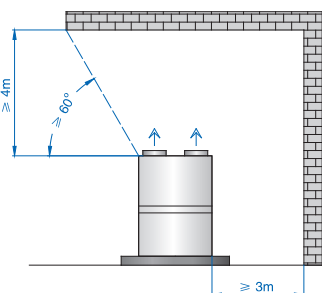
- The unit should be installed at a well-ventilated outdoor location. When installation is close to a wall, observe the minimum installation distances shown below:



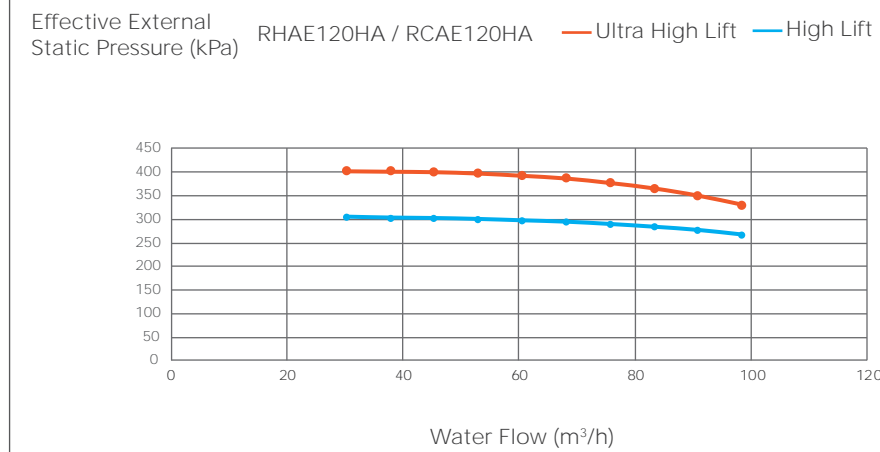
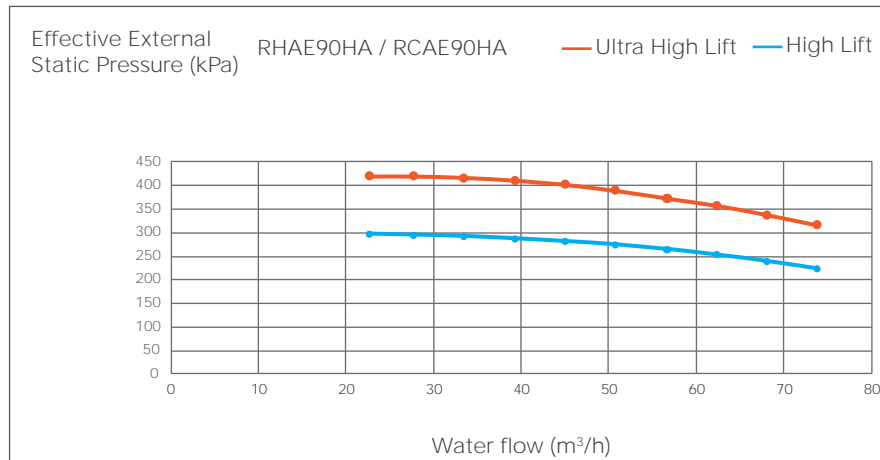
- If there are structures such as a canopy above the unit, the distances from the structure to the unit top must meet the requirements of the following diagram (without enclosing wall around the unit).



- When the unit requires installation under eaves, the distances must meet the requirements of the following diagram:



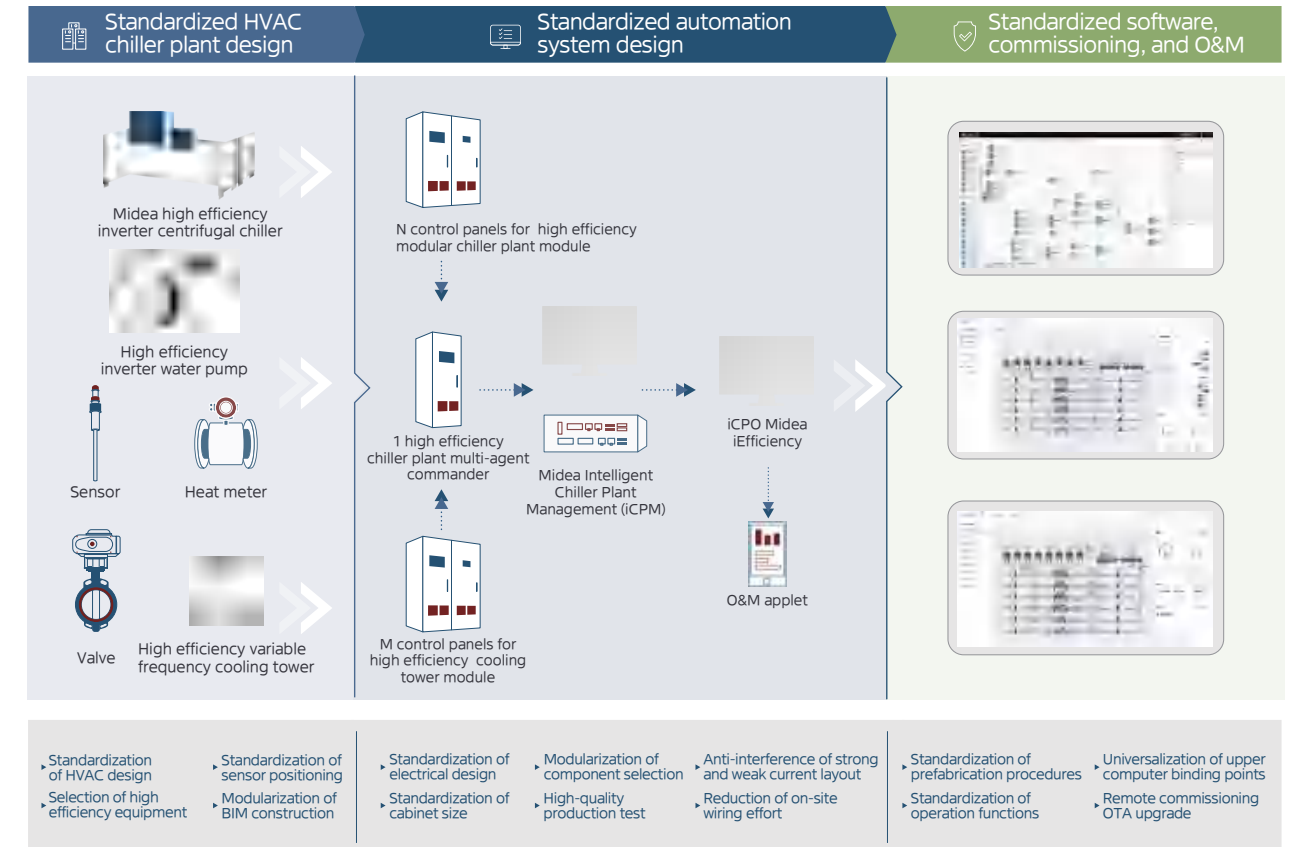
## Effective external pump lift



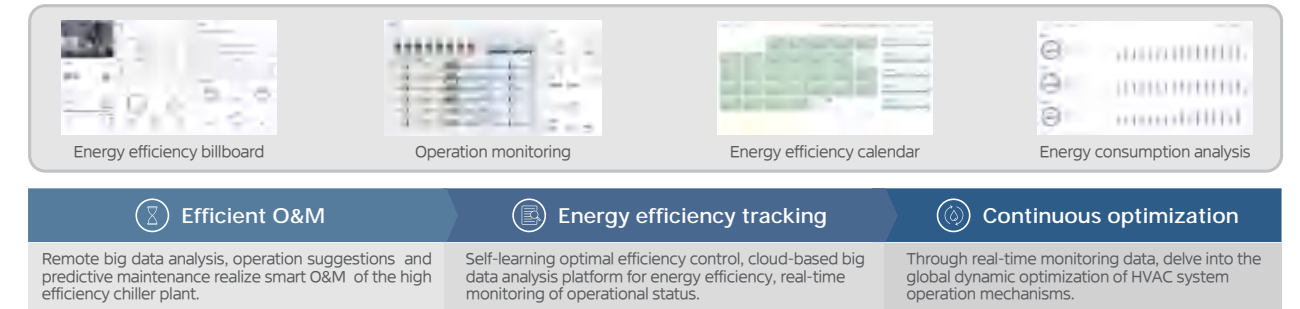
## Intelligent management

### Midea Intelligent Chiller Plant Management (iCPM)

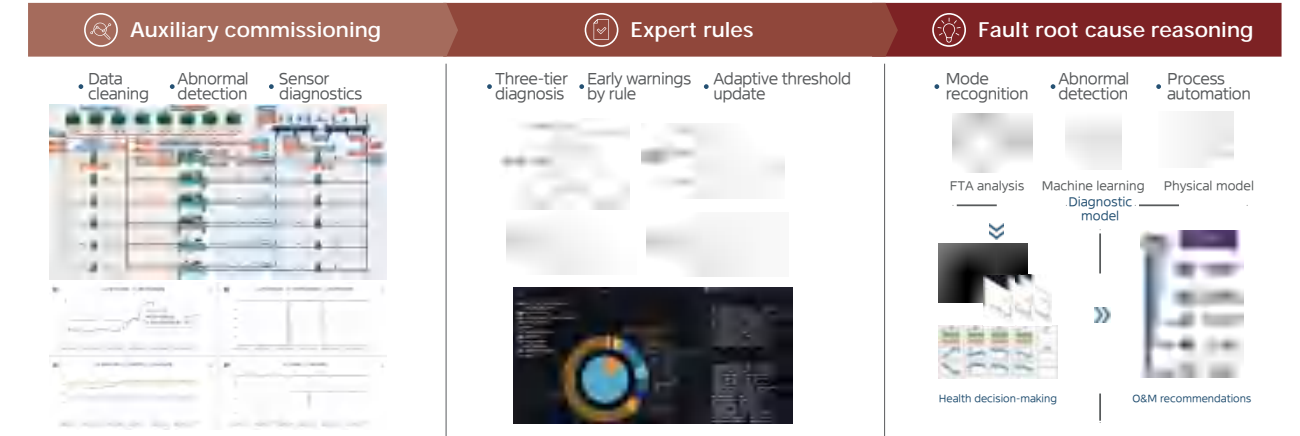
Through the integration of HVAC, automatic control, and software-hardware delivery, the virtual debugging platform optimizes the parameters of the intelligent chiller plant management. Midea's i-Efficiency platform ensures full-link energy efficiency with smart operations and maintenance, achieving efficient design, construction, and delivery with an end-to-end approach.



### Full Life Cycle Scenario-based Smart Operation Application - Midea iEfficiency




### iCPO Smart O&M



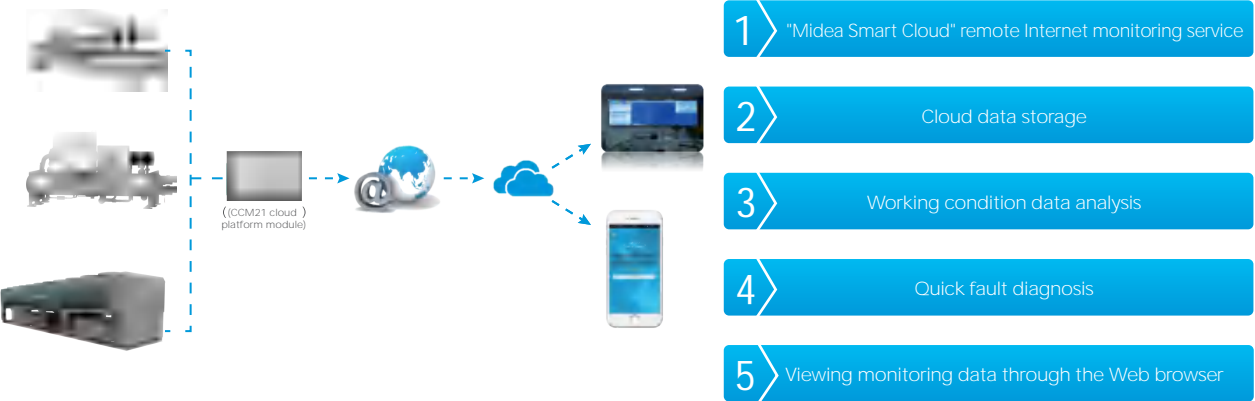
# Reference Projects

## Midea Smart Cloud platform



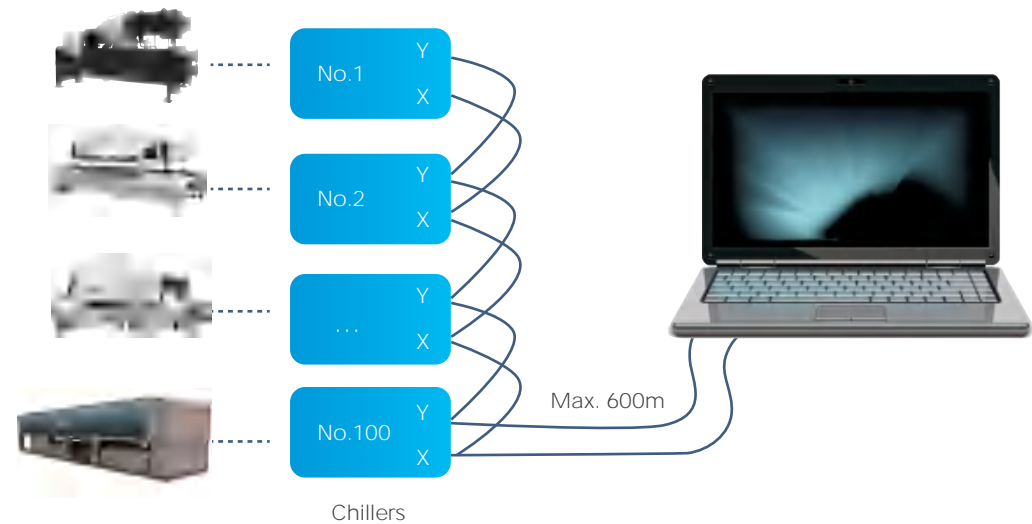
**MIDEA**  
SmartCloud

Midea's proprietary internet-based remote monitoring system offers customers a suite of cloud-based tools powered by advanced technology. By connecting their Midea air conditioning system via the IMU smart data acquisition terminal, customers receive professional support for remote fault diagnosis, analysis, and early failure warnings to ensure optimal equipment performance. Real-time monitoring data can be accessed through any web browser, providing customers with up-to-the-minute insights into their system's operation.



## QuickView

Midea's proprietary QuickView smart software control system enhances real-time efficiency, stability, and reliability, while offering advanced visualization and scalability. It provides powerful features such as real-time monitoring of individual units, unit equipment management, remote control, curve display, data storage, alarm query, fault diagnosis, automatic cloud data upload, and external data analysis. This system significantly improves operational management efficiency while reducing the need for human input, as well as operations and maintenance costs.



## Energy Station of Hubin New District, Suqian

Country:	China
City:	Suqian
Outdoor Units:	Air cooled scroll chiller
Total Capacity:	1,375 RT



## Guiyang International Trade Mart

Country:	China
City:	Guiyang
Outdoor Units:	Air cooled scroll chiller
Total Capacity:	1,820 RT





Shijiazhuang Fifteenth High School

Country: China  
City: Shijiazhuang  
Outdoor Units: Air cooled scroll chiller  
Total Capacity: 2,125 RT



White Sails Batumi

Country: Georgia  
City: Batumi  
Outdoor Units: Air cooled scroll chiller  
Total Capacity: 855 RT

NTP Novi Sad Scientific and Technological Centre

Country: Serbia  
City: Novi Sad  
Outdoor Units: Air cooled scroll chiller  
Total Capacity: 600 RT



Sport Complex Batumi

Country: Georgia  
City: Batumi  
Outdoor Units: Air cooled scroll chiller  
Total Capacity: 1,000 RT

Jerarsi Hospital

Country: Georgia  
City: Tbilisi  
Outdoor Units: Air cooled scroll chiller  
Total Capacity: 750 RT