



DISCOVER  
easyCOMFORT

Midea Group  
Midea Building Technologies Division  
16C202502

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Midea reserves the right to change the specifications of the product, and to withdraw or replace products without prior notification or public announcement. Midea is constantly developing and improving its products.



# Water Cooled Screw Chiller

## SHWE Series

2025



# MBT

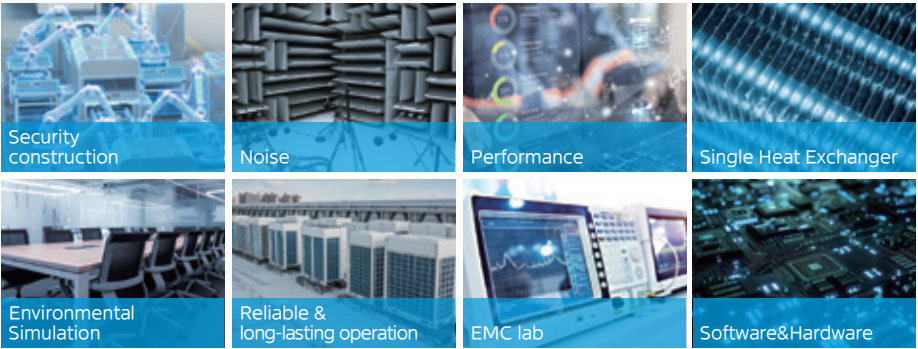
Midea Building Technologies (MBT) is a key division of the Midea Group, a leading provider of comprehensive, intelligent-building solutions including energy sources, elevators, control systems and heating, ventilation and air conditioning.

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.

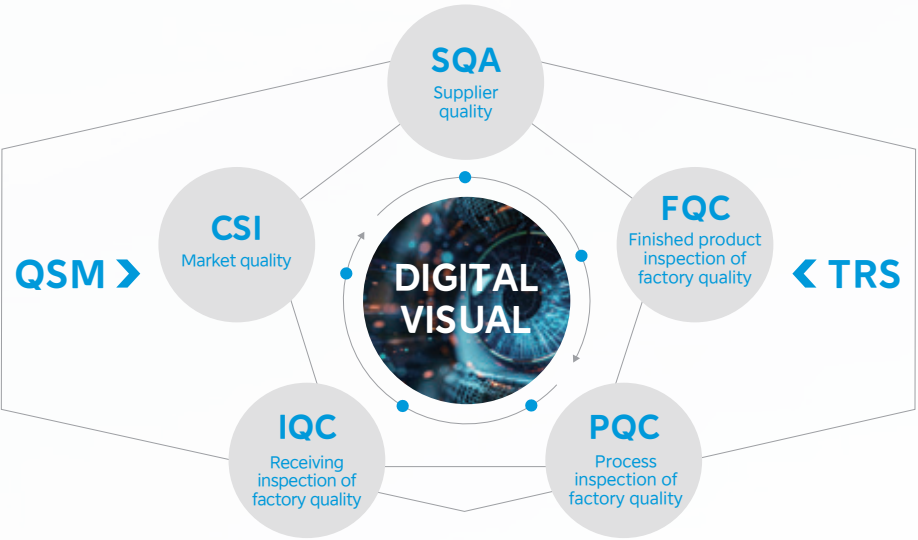
Committed to providing users with intelligent, digital, low carbon overall building solution



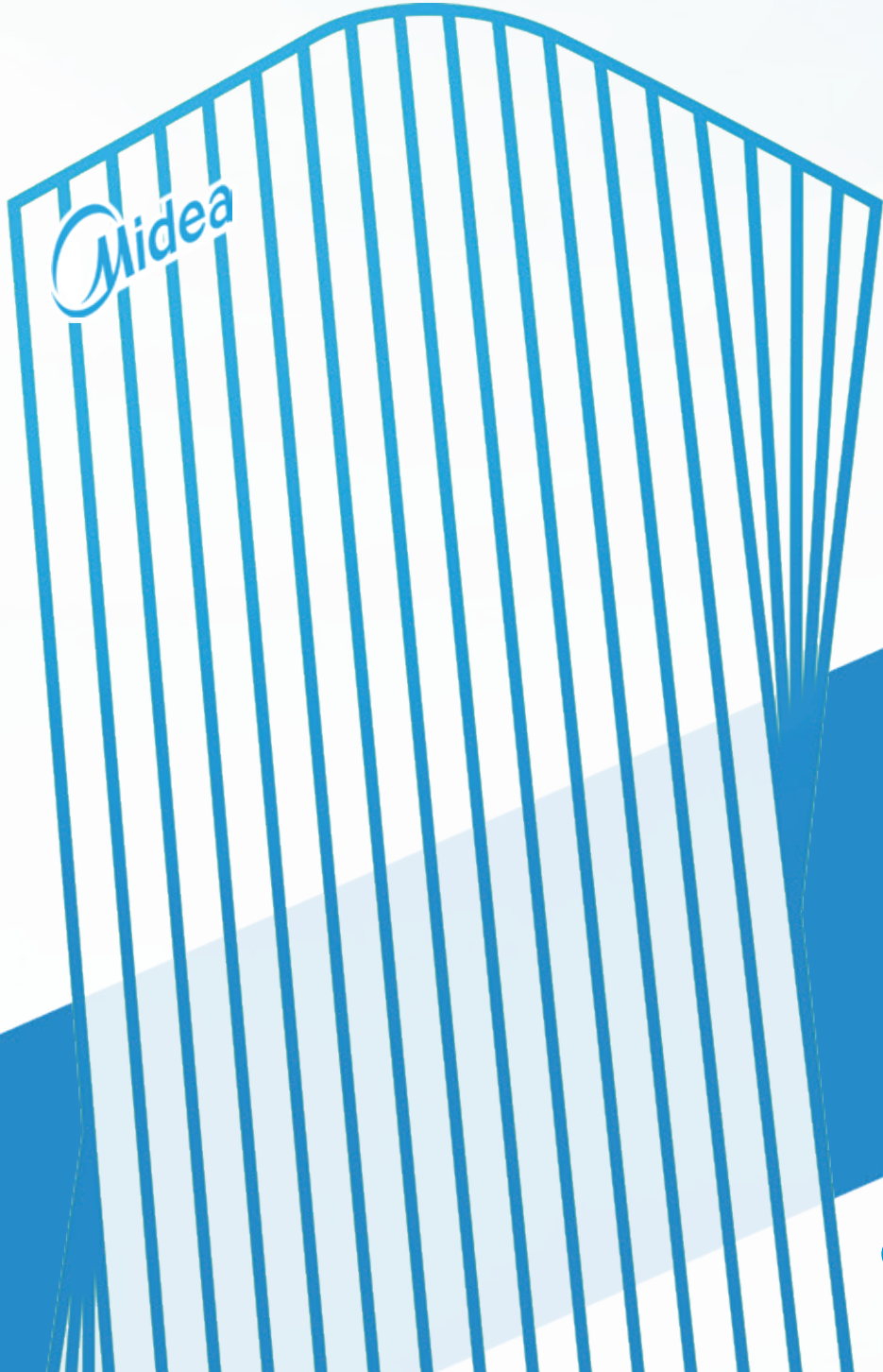
Over 100 testing labs cover a wide range of real application scenarios.



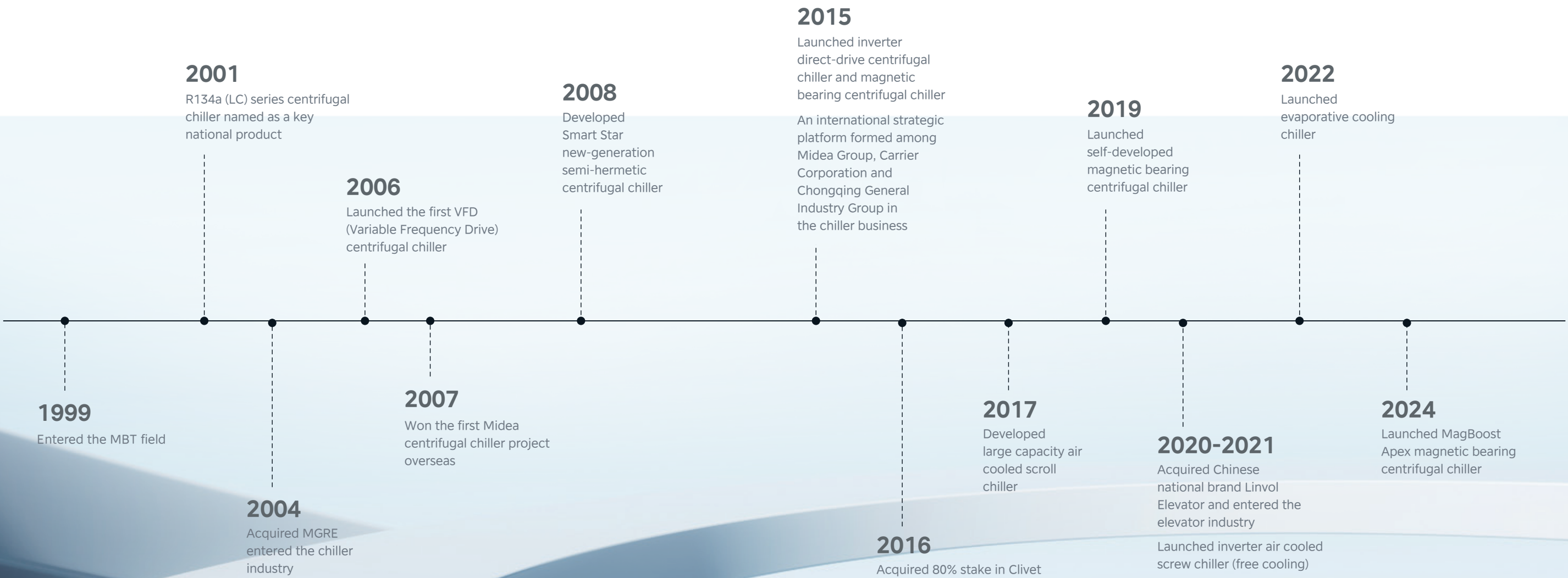
All products can be visualized and digitalized throughout entire process.



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.

🔍 > <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.

🔍 > <https://link.midea.com> 🗣️ 📷



# GLOBAL BULK WAREHOUSE LAYOUT OVERVIEW

## Available Spare Parts centers 30

### Europe (10):

Italy/Germany/France/UK/Spain/Poland/Hungary/Greece/Turkey/Romania

### Asia-Africa (10):

China/Russia/Georgia/UAE/Egypt/Uzbekistan/India/South Africa/Iraq/Qatar

### Latin America (5):

Mexico/Puerto Rico/Venezuela/Brazil/Australia

### South-East Asia (5):

Vietnam/Thailand/Malaysia/Indonesia/Philippines



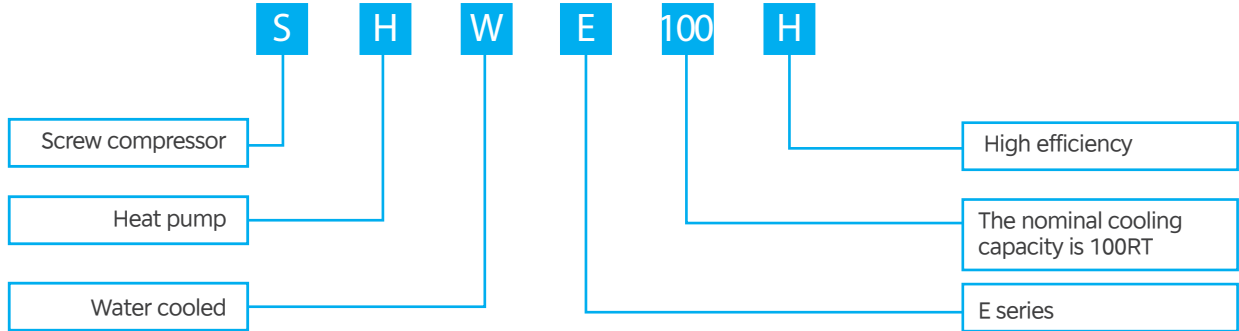


# Water Cooled Screw Chiller

## SHWE Series

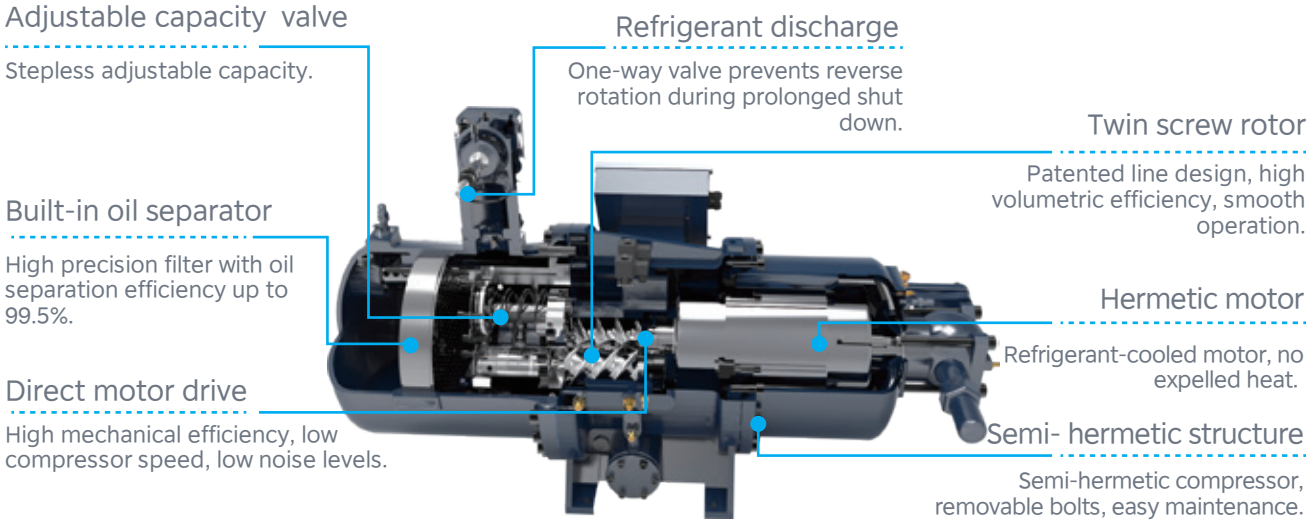


### Nomenclature



### Features

#### Advanced twin-rotor screw compressor



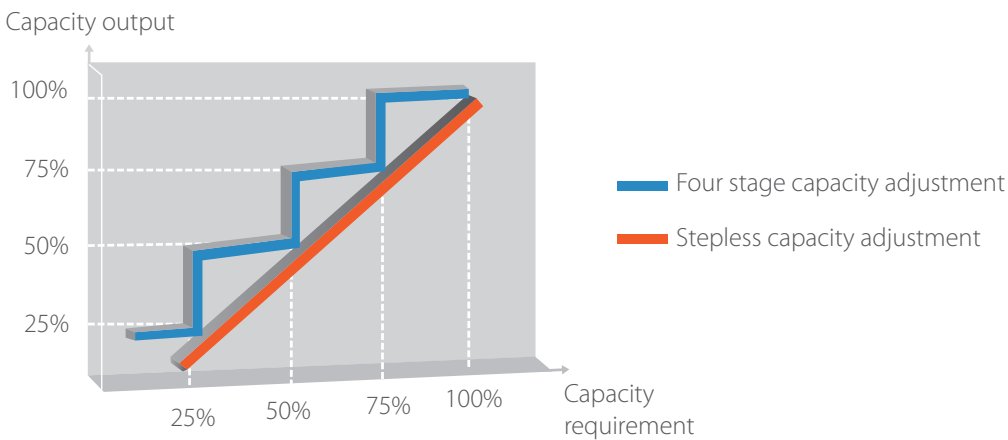
# FEATURES



- Adopting large volume ratio compressor and motors with higher safety factor. The semi-hermetic twin-rotor screw compressor offers advantages such as reduced refrigerant leakage, higher transmission efficiency, and no heat dissipation in the equipment room, compared to open-structure compressors.
- Screw rotor features an innovative profile design which optimizes the compression process to ensure excellent volumetric efficiency and low leakage. The twin-screw rotor also utilizes a five-teeth to six-teeth asymmetric design with machining accuracy down to micron levels which helps ensure stable operation.
- The compressor includes bearings produced by renowned manufacturer SKF, ensuring a long service life and continuous run time up to 50000h.

## Stepless capacity adjustment

Capacity adjustment system consists of capacity adjustment slide valve, solenoid valve and oil pressure piston.

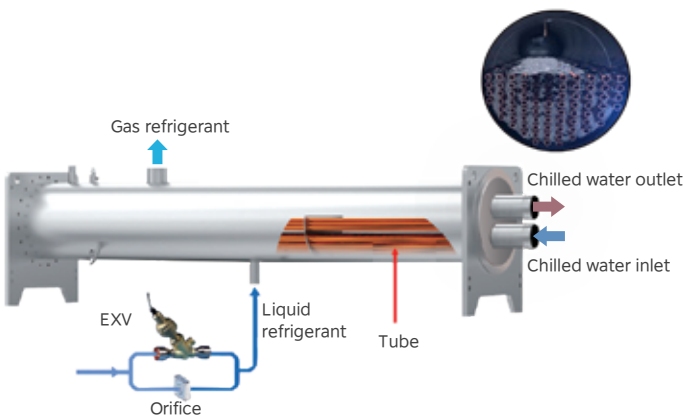


## Enclosed motor design

- The motor is positioned at the compressor gas inlet and is cooled by refrigerant. A specially designed gas inlet flow path enhances this cooling effect. Since the motor does not release heat into the surrounding room, there is no need for additional ventilation.
- The compressor motor is designed for high capacity and features a direct-drive rotor to maximize efficiency.

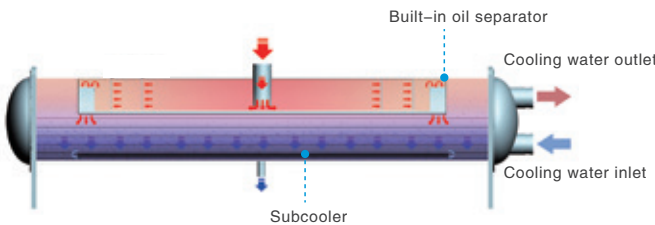
## Flooded evaporator

- High-efficiency flooded evaporator delivers high heat-exchange efficiency.
- Water boxes at both ends can be disassembled to facilitate maintenance.
- Liquid distributor plate design to ensure uniform liquid distribution, improving the temperature field and evaporation temperature, thereby increasing the unit's efficiency.
- Innovative baffle plate prevents the suction of liquid into the system, enhancing the unit's reliability.



## Improved condenser design

- A bundled tube configuration in the condenser is further optimized by a double-sided reinforced condenser tube.
- A specially-designed built-in oil separator effectively separates lubricating oil from the refrigerant, ensuring peak performance with higher efficiency and reduced maintenance.
- An optimized subcooler design enhances supercooling temperature while reducing refrigerant pressure loss, leading to more efficient heat exchange performance.
- The condenser can implement uniform gas transmission without any heat transmission blind spots.

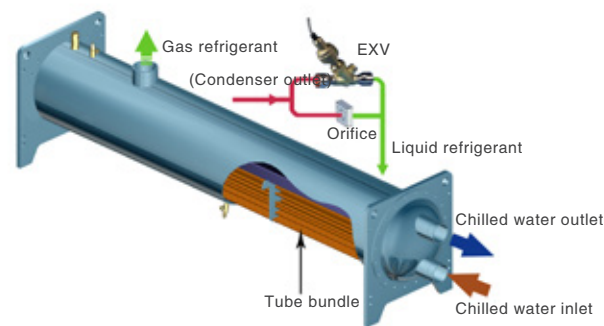




# FEATURES

## Precise cooling capacity control

- An electronic expansion valve and orifice plate work together to enable accurate control of both the evaporator refrigerant and water temperature.
- The electronic expansion valve is designed for quick response, fast regulation, and a wide capacity adjustment range.



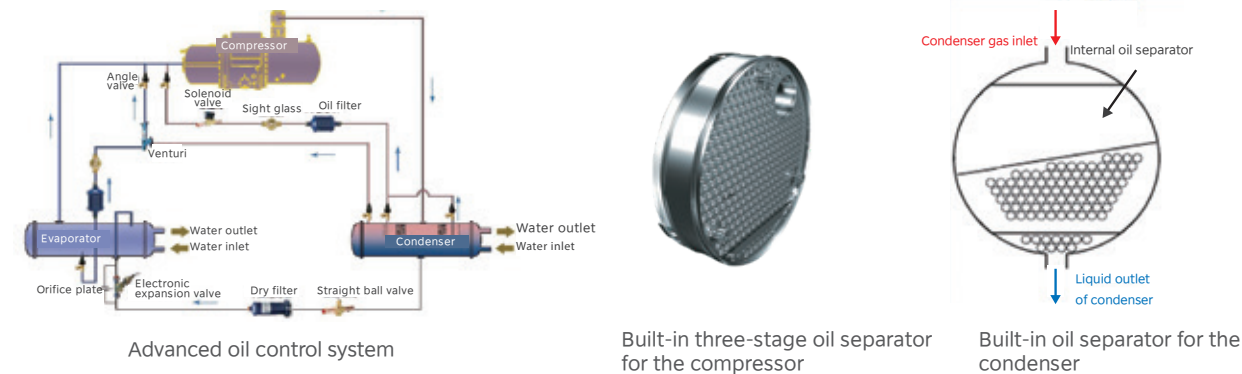
## Water temperature range

Chilled water outlet (°C)	5~15
Cooling water inlet (°C)	19~50

Notes: When the condenser outlet temperature is over 55°C degrees, it is necessary to contact the factory.

## Reliable oil system

Midea water cooled screw chiller has an oil circuit control system that adopts leading technology, which ensures stable operation of the unit.



### Oil supply

A differential pressure-type oil supply keeps all moving parts in the compressor well lubricated and without the need for an external oil pump.

### Multiple oil separation technologies

- The compressor is equipped with a three-stage oil separator, ensuring low oil content.
- The condenser includes a built-in high efficiency oil separator. This ensures normal oil return under both partial and full loads and realizes reliable and stable operation and an extended operating range.
- A double oil return system achieves oil return through oil separation and a Venturi tube injection of high-pressure gas which efficiently keeps oil from coating the evaporator. An oil heater preheats the lubricating oil ensuring it maintains optimal viscosity according to the unit's status. The external oil filter is designed for easy replacement.

## Multiple safeguards

### Intelligent monitoring technology

The system continuously monitors unit parameters and changing trends and proactively adjusts operating status to ensure safe operation.

### Built-in safety features

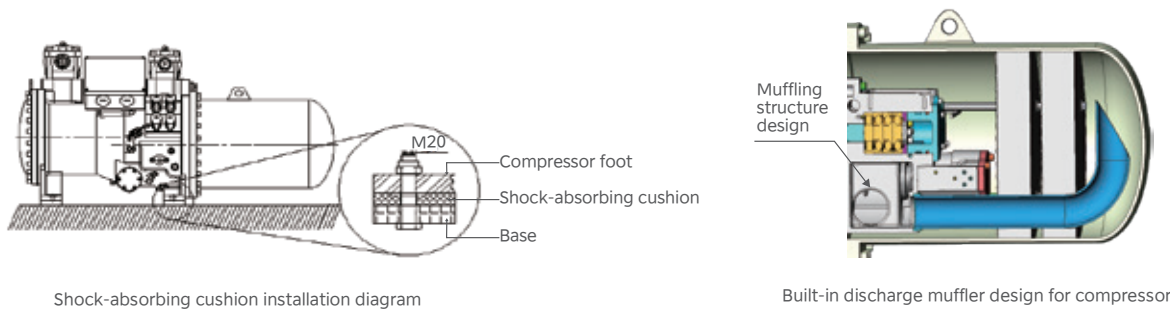
The unit is equipped with multiple protection measures designed to ensure safe and reliable operation.

### Comprehensive factory testing

All units undergo strict testing before delivery. Only the water and power supplies need connecting during installation.

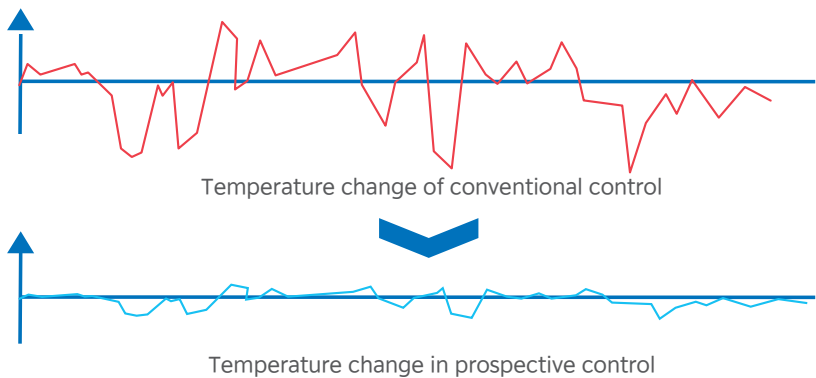
## Quiet operation

- Noise levels as low as 65 dB(A) under partial loads.
- A shock-absorbing cushion between the compressor foot and the metal support provides effective damping.
- A built-in discharge muffler inhibits compressor noise.



## Intelligent control

- Intelligent load control: By predicting real-time load changes using historical data, the system automatically adjusts the load, helping to prevent frequent fluctuations in the unit's water temperature.
- Intelligent safety monitoring: The system monitors unit parameters, detects trends and automatically adjusts operating status to ensure safe operation.
- Intelligent failure response: Unit failure automatically triggers protective measures and records fault data to aid manual inspection and troubleshooting.



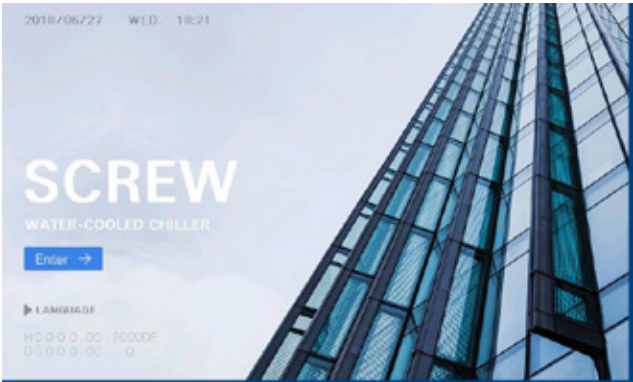


FEATURES

Interface display

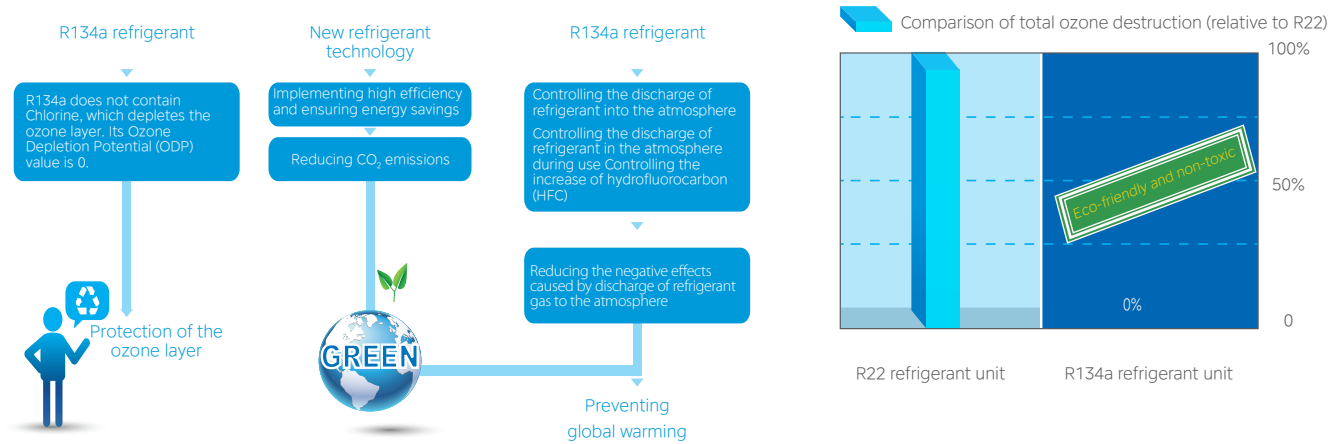
- Controller: MIC
- Interface display: 7-inch touch screen
- Communication interface: RS485
- Communication protocol: Modbus-RTU
- Protection measures: more than 20 protection measures safeguarding the power supply, compressor, pressure and temperature.

Note: The interface and display content vary with each model. Please refer to the actual product.



Eco-friendly refrigerant

R134a eco-friendly refrigerant achieves high cooling efficiency, without depleting the ozone layer. This refrigerant complies with the Montreal Protocol.



Specifications

Model			SHWE 100H	SHWE 130H	SHWE 160H	SHWE 180H	SHWE 210H	SHWE 240H	SHWE 260H	SHWE 300H
Cooling capacity	RT	94.4	120.5	146.6	162.6	191.6	220.8	238.6	279.3	
	kW	331.9	423.6	515.5	571.5	673.7	776.5	839.1	982.1	
Power input	kW	61.45	76.43	94.01	103.7	120.8	141.9	153.4	179.4	
COP	W/W	5.401	5.543	5.484	5.512	5.575	5.474	5.469	5.475	
IPLV	W/W	5.803	5.933	5.920	6.094	5.805	6.127	6.257	5.712	
Compressor	Qty	1	1	1	1	1	1	1	1	
	Type	Semi-hermetic screw compressor								
	Starting method	Wye-Delta Starter								
Capacity adjustment range			Stepless							
Refrigerant	Type	/	R134a							
	Charge amount	kg	120	135	150	175	185	210	230	270
Power supply			380V-3Ph-50Hz							
Rated current	A	106.1	132.0	162.3	179.0	208.6	244.9	264.9	309.7	
Max. operating current	A	199.8	243.1	297.1	319.9	412.4	473.4	515.1	580.0	
Starting current	A	406.7	443.3	663.3	743.3	875.0	1085.0	1085.0	1338.3	
Evaporator	Water flow	m³/h	51.33	65.52	79.72	88.39	104.2	120.1	129.8	151.9
	Pressure drop	kPa	28.9	29.8	28.7	29.0	29.0	28.4	28.3	28.6
	Water pipe connection	mm	DN150	DN150	DN150	DN200	DN200	DN200	DN200	DN200
Condenser	Water flow	m³/h	65.02	82.68	100.8	111.60	131.4	151.8	164.1	192.0
	Pressure drop	kPa	41.4	36.2	40.2	42.5	42.3	41.0	41.1	42.2
	Water pipe connection	mm	DN150	DN150	DN150	DN200	DN200	DN200	DN200	DN200
Unit dimensions	Length	mm	2713	2713	2713	2824	2875	2969	2969	3650
	Width	mm	1200	1200	1200	1400	1400	1400	1400	1500
	Height	mm	1786	1844	1914	2102	2102	2132	2132	2279
Shipping weight	kg	2180	2325	2649	3015	3140	3545	3630	4456	
Running weight	kg	2315	2482	2823	3215	3373	3800	3902	4786	

1. Performance and efficiency are based on AHRI 550/590.  
Evaporator conditions: water inlet=54°F (12.22°C), water outlet=44°F (6.67°C), fouling factor=0.00010h-ft2-°F/Btu (0.0176m2. °C/kW);  
Condenser conditions: water inlet=85°F (29.44°C), water outlet=94.3°F (34.61°C), fouling factor=0.00025h-ft2-°F/Btu (0.0440m2. °C/kW).  
2. The max working pressure for both the evaporator and condenser are 1.0MPa, can be customized for higher pressure if required.  
3. As a result of the continuous improvement of the product, the above parameters may be changed. Please refer to the software selection and the actual product.

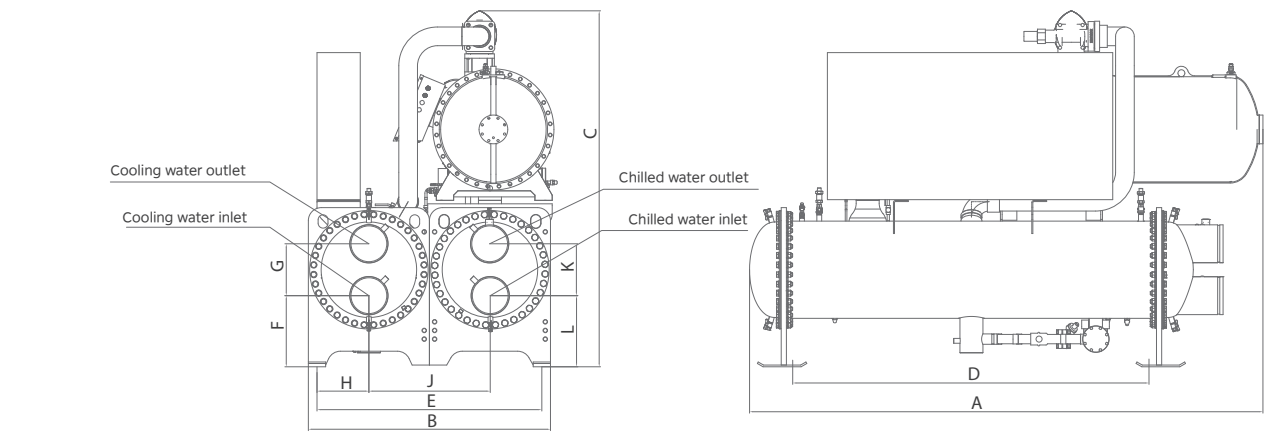
# Specifications

Model			SHWE320H	SHWE350H	SHWE420H	SHWE470H	SHWE520H	SHWE610H
Cooling capacity		RT	291.7	325.2	382.0	431.9	475.2	558.6
		kW	1025	1143	1343	1519	1671	1964
Power input		kW	186.6	207.1	241.1	273.1	304.0	358.5
COP		W/W	5.496	5.522	5.572	5.561	5.496	5.479
IPLV		W/W	6.585	6.821	6.462	6.776	6.763	6.598
Compressor		Qty	2	2	2	2	2	2
		Type	Semi-hermetic screw compressor					
		Starting method	Wye-Delta Starter					
Capacity adjustment range			Stepless					
Refrigerant	Type	/	R134a					
	Charge amount	kg	310	330	350	370	390	500
Power supply			380V-3Ph-50Hz					
Rated current		A	1#: 161.1 2#: 161.1	1#: 178.8 2#: 178.8	1#: 208.1 2#: 208.1	1#: 235.8 2#: 235.8	1#: 262.4 2#: 262.4	1#: 309.5 2#: 309.5
Max. operating current		A	1#: 297.1 2#: 297.1	1#: 319.9 2#: 319.9	1#: 412.4 2#: 412.4	1#: 473.4 2#: 473.4	1#: 515.1 2#: 515.1	1#: 580.0 2#: 580.0
Starting current		A	1#: 663.3 2#: 663.3	1#: 743.3 2#: 743.3	1#: 875 2#: 875	1#: 1085 2#: 1085	1#: 1085 2#: 1085	1#: 1338.3 2#: 1338.3
Evaporator	Water flow	m³/h	158.6	176.8	207.7	234.9	258.4	303.8
	Pressure drop	kPa	43.6	45.4	46.3	46.8	48.0	55.8
	Water pipe connection	mm	DN200	DN200	DN200	DN200	DN200	DN250
Condenser	Water flow	m³/h	200.4	223.3	261.9	296.2	326.5	384.0
	Pressure drop	kPa	82.3	88.5	89.9	90.9	90.7	102.0
	Water pipe connection	mm	DN200	DN200	DN200	DN200	DN200	DN250
Unit dimensions	Length	mm	4360	4360	4360	5196	5196	5669
	Width	mm	1600	1600	1600	1760	1760	1960
	Height	mm	2323	2323	2323	2403	2403	2513
Shipping weight		kg	5137	5386	5666	6737	6932	9086
Running weight		kg	5493	5768	6104	7327	7565	9880

1. Performance and efficiency are based on AHRI 550/590.  
Evaporator conditions: water inlet=54°F (12.22°C), water outlet=44°F (6.67°C), fouling factor=0.00010h-ft2-°F/Btu (0.0176m2. °C/kW);  
Condenser conditions: water inlet=85°F (29.44°C), water outlet=94.3°F (34.61°C), fouling factor=0.00025h-ft2-°F/Btu (0.0440m2. °C/kW).  
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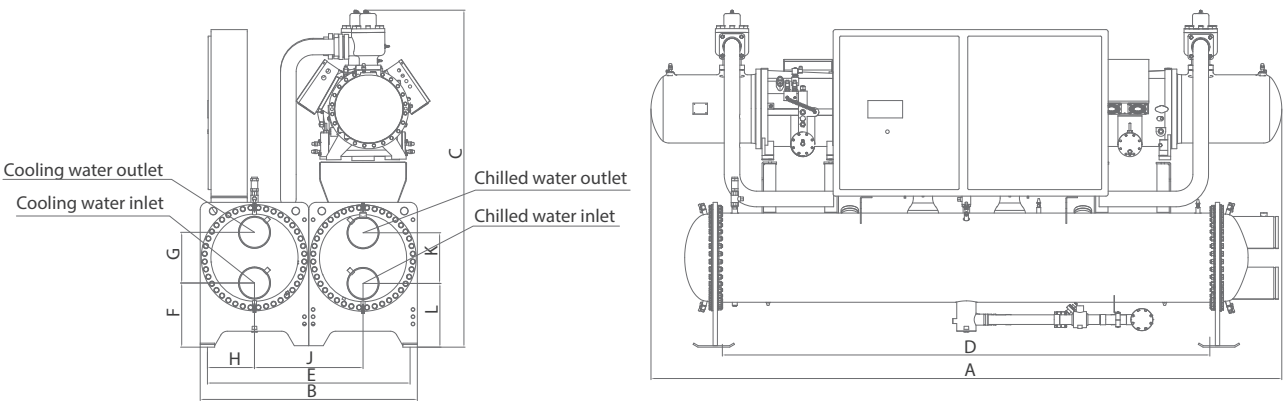
# Dimensions

Single compressor



Model	Dimension			Support		Pipe locate position					
	L(A)	W(B)	H(C)	D	E	F	G	H	J	K	L
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
SHWE100H	2713	1200	1786	2050	1100	381	260	250	600	260	381
SHWE130H	2713	1200	1844	2050	1100	381	260	250	600	260	381
SHWE160H	2713	1200	1914	2050	1100	381	260	250	600	260	381
SHWE180H	2824	1400	2102	2050	1300	411	300	300	700	300	411
SHWE210H	2875	1400	2102	2050	1300	411	300	300	700	300	411
SHWE240H	2969	1400	2132	2050	1300	411	300	300	700	300	411
SHWE260H	2969	1400	2132	2050	1300	411	300	300	700	300	411
SHWE300H	3650	1500	2279	2050	1400	413	350	325	750	350	413

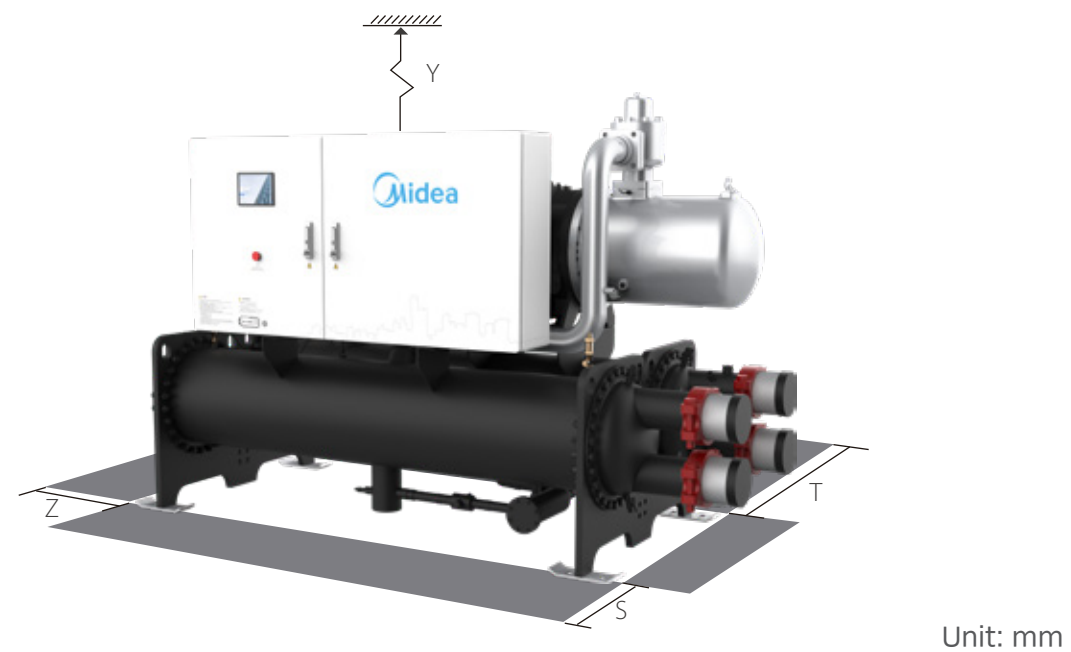
Dual compressor



Model	Dimension			Support		Pipe locate position					
	L(A)	W(B)	H(C)	D	E	F	G	H	J	K	L
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
SHWE320H	4360	1600	2323	3350	1400	413	350	325	750	350	413
SHWE350H	4360	1600	2323	3350	1400	413	350	325	750	350	413
SHWE420H	4360	1600	2323	3350	1400	413	350	325	750	350	413
SHWE470H	5196	1760	2403	3350	1500	436	350	350	800	350	436
SHWE520H	5196	1760	2403	3350	1500	436	350	350	800	350	436
SHWE610H	5669	1960	2513	3850	1700	389	445	400	900	445	389

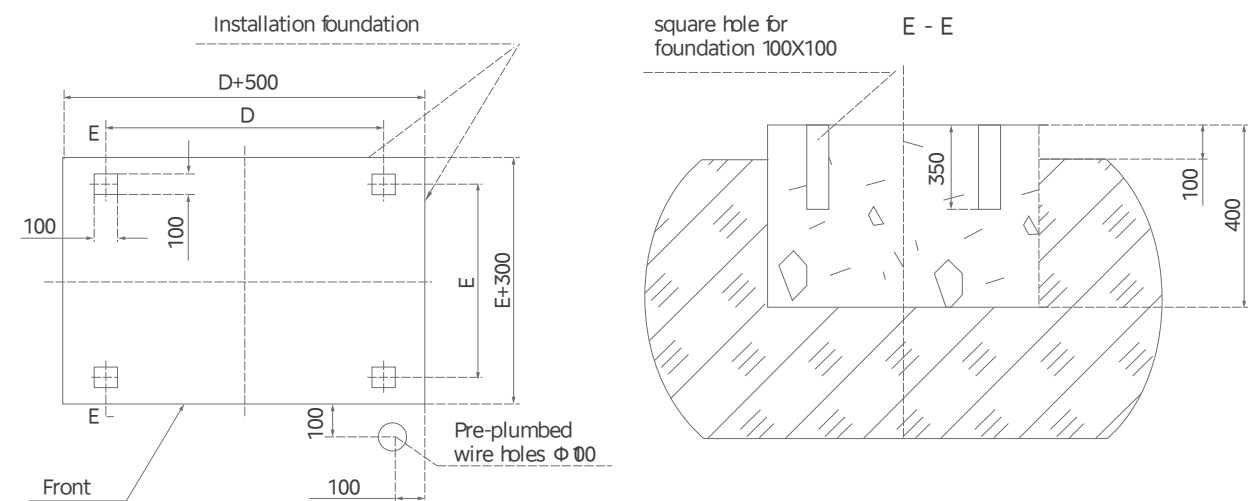


Space layout



Dimensions		Unit: mm			
Model		S	T	Z	Y
SHWE100H-SHWE300H		600	600	3200	1000
SHWE320H-SHWE610H		600	600	4200	1000

Z: Tube removal space for either end.



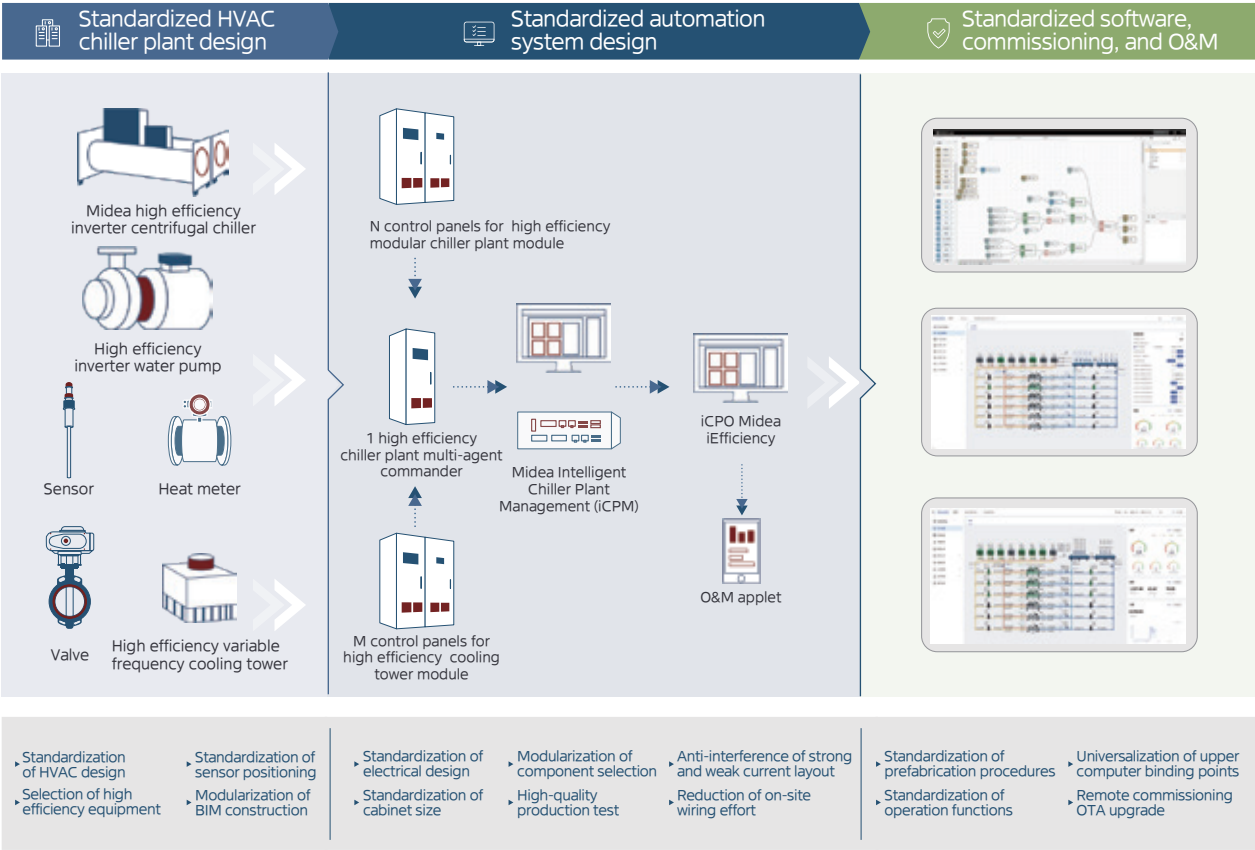
MODEL	SHWE 100H	SHWE 130H	SHWE 160H	SHWE 180H	SHWE 210H	SHWE 240H	SHWE 260H	SHWE 300H	SHWE 320H	SHWE 350H	SHWE 420H	SHWE 470H	SHWE 520H	SHWE 610H
D	2050	2050	2050	2050	2050	2050	2050	2050	3350	3350	3350	3350	3350	3850
E	1100	1100	1100	1300	1300	1300	1300	1400	1400	1400	1400	1500	1500	1700

Notes: Parameters data of "D" and "E" is only for standard unit.  
Please contact factory for parameters of customized unit.

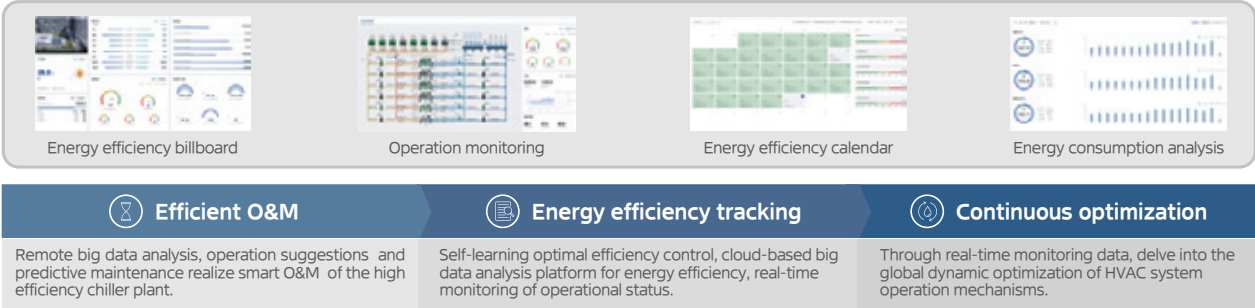
Intelligent management

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




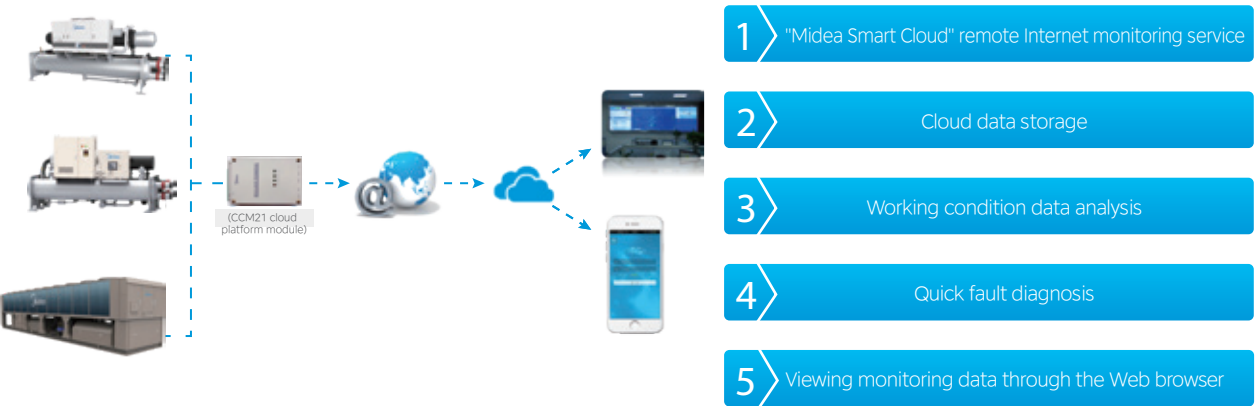
iCPO Smart O&M



# Reference projects

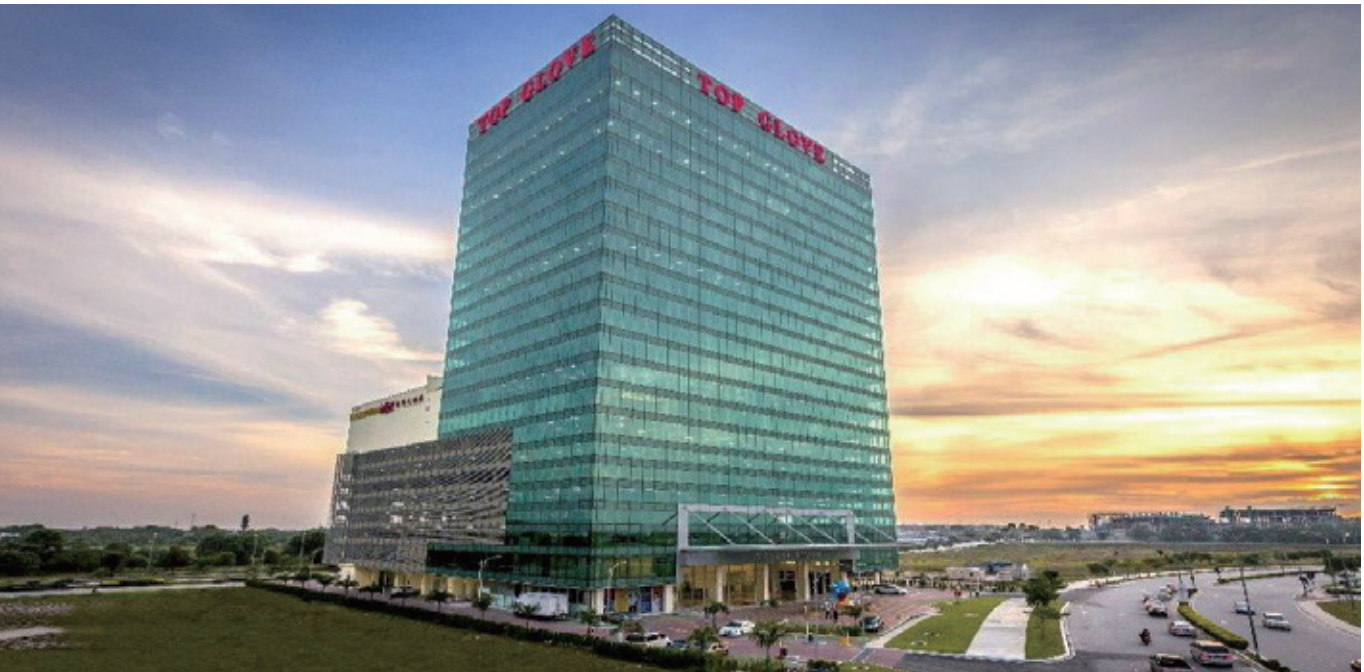
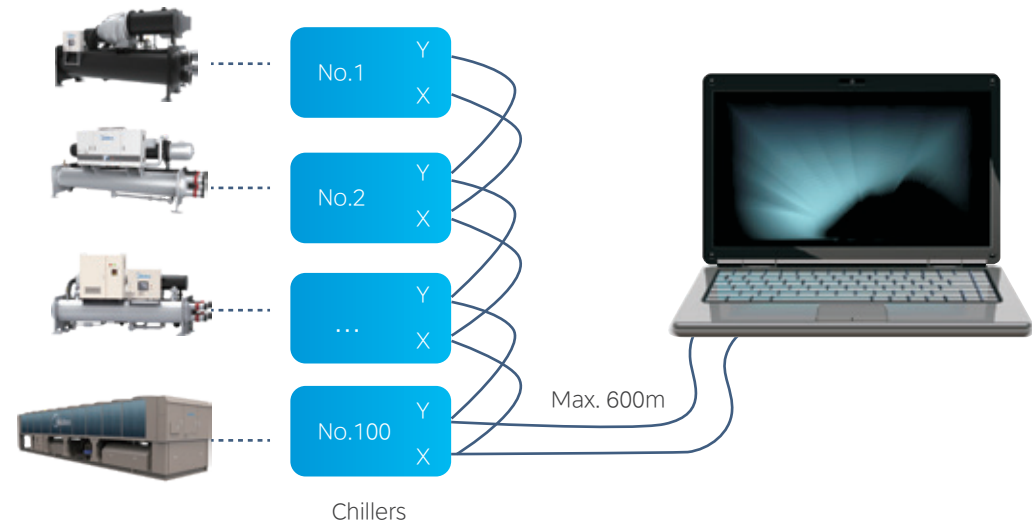
## Midea Smart Cloud platform

 Midea'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.



### Top Glove in Malaysia

Country:	Malaysia
City:	Klang
Outdoor Units:	Water Cooled Screw Chiller
Indoor Units :	FCU & AHU
Total Capacity:	3,400RT



### The University of Georgia

Country:	Georgia
City:	Tbilisi
Outdoor Units:	Water Cooled Screw Chiller
Indoor Units :	FCU
Total Capacity:	1,200kW





### 2018 Russia World Cup Stadiums Nizhny Novgorod Stadium

City: Nizhny Novgorod  
Product: Water Cooled Screw Chiller; Fan Coil Units



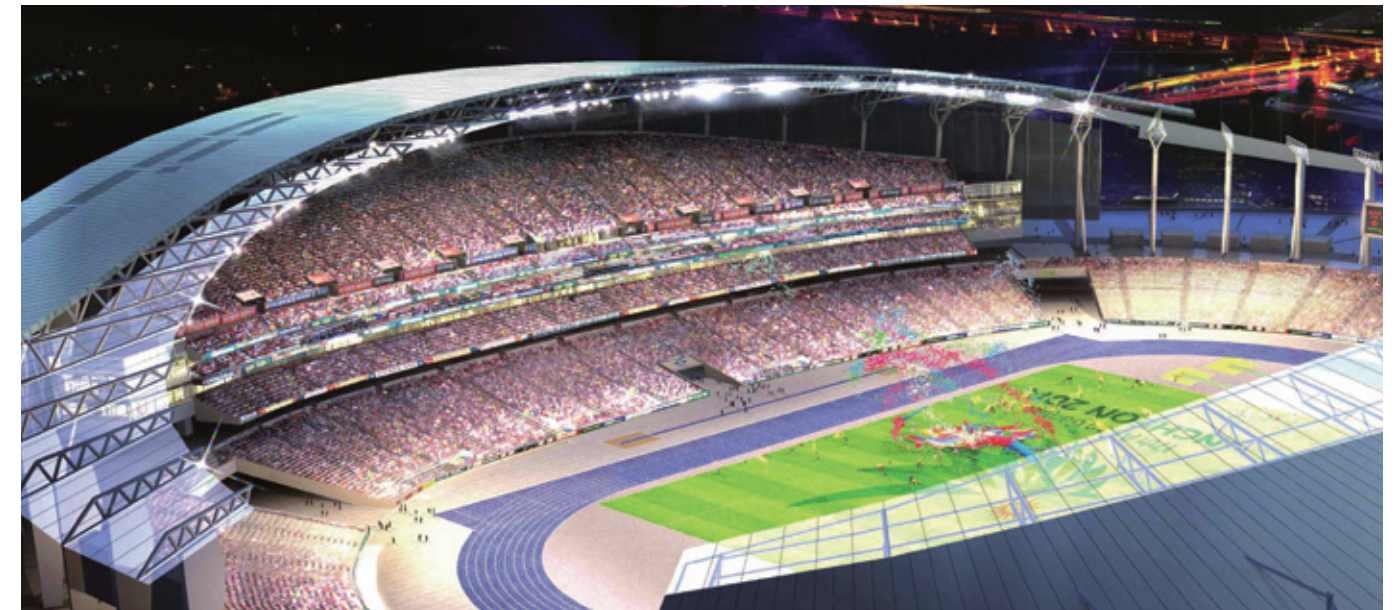
### Cosmos Arena

City: Samara  
Product: Water Cooled Screw Chiller



### Volgograd Arena

City: Volgograd  
Product: Water Cooled Screw Chiller; Fan Coil Units



### The 27th Southeast Asian Games Stadium

Country: Myanmar  
City: Nay Pyi Taw  
Outdoor Units: Water Cooled Screw Chiller  
Indoor Units: MAHU  
Total Capacity: 4,000RT





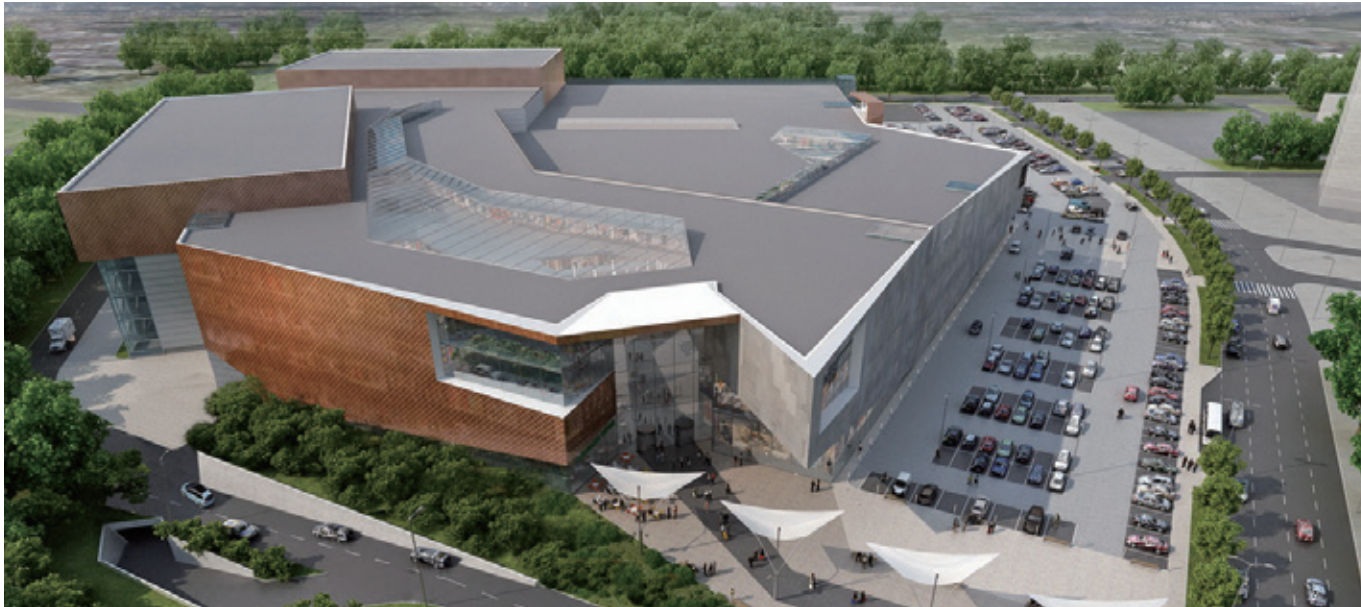
### Pullman Hotel & Resort Mandalika (Five Star)

Country:	Indonesia
City:	Lombok
Outdoor Units:	Water Cooled Screw Chiller
Indoor Units:	FCU & AHU
Total Capacity:	900RT



### The Tier 1 Solar Product Manufacturing Plant-Seraphim

Country:	South Africa
City:	Port Elizabeth
Outdoor Units:	Water Cooled Screw Chiller
Total Capacity:	940RT



### Butovo Mall

Country:	Russia
City:	Moscow
Outdoor Units:	Water Cooled Screw Chiller
Indoor Units:	5,000kW
Total Capacity:	2015



### The Prime Minister Office Building

Country:	Tajikistan
City:	Dushanbe
Outdoor Units:	Water Cooled Screw Chiller
Indoor Units:	FCU & AHU
Total Capacity:	2,880kW