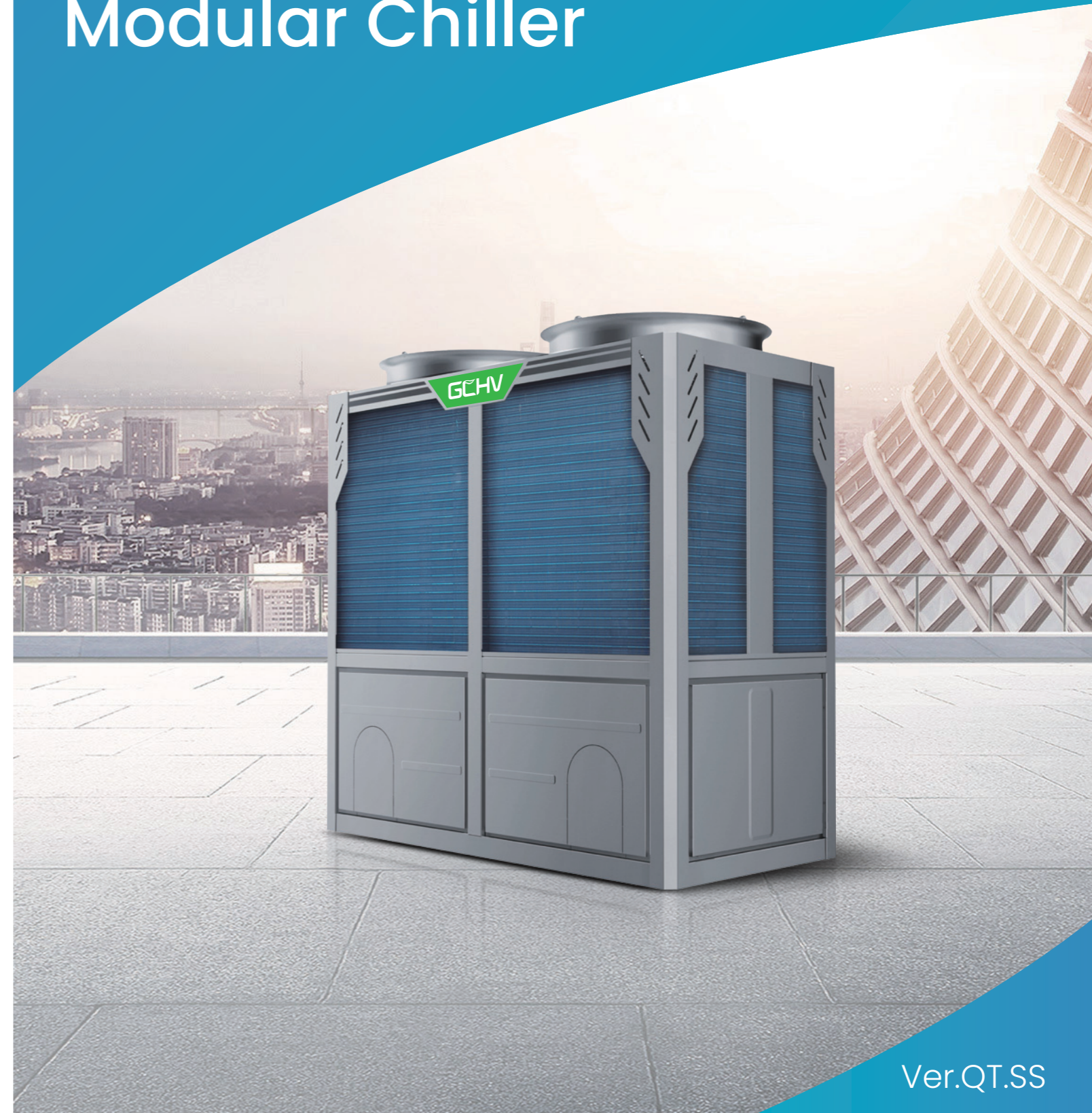


GCHV

Air Cooled Heat Pump Modular Chiller



Giwee Company

📍 No. 28, Eastern Industrial Park, Lishui Town, Nanhai District, Foshan City, Guangdong Province, China, P.C:528244

✉ giwee.vip@giwee.com 🌐 www.giwee.com

☎ 86-757-88781037 📠 86-757-88789825

A Carrier Company

Note: The specifications of this catalog may change for further improvement on quality and performance without prior notice to allow us to incorporate the latest innovations for its customers. The information contained in this catalog is merely informative.

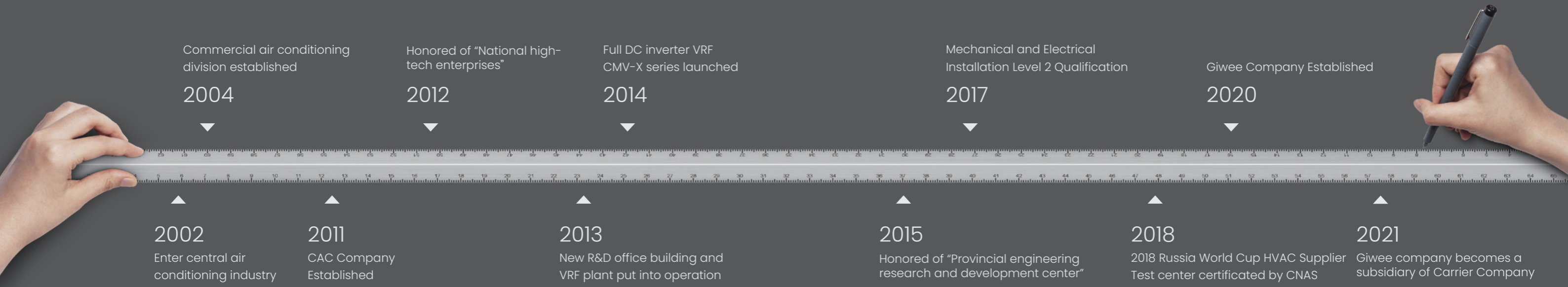
Ver.QT.SS



About Giwee Company

Giwee is a global supplier with integrated advantages in R&D, production and sales in the HVAC field, brand name is GCHV. Giwee has been deeply involved in the air-conditioning field for more than ten years with a rich product lineup and excellent market competitiveness, mainly engaged in RAC, CAC, heat pump and ventilation systems. Giwee is a Carrier company, and Carrier is the leading global provider of innovative healthy, safe, sustainable and intelligent building and cold chain solutions.

Giwee covers an area of 167,000 square meters, with more than 120,000 square meters of plants and 17 modern first class production lines. Annual output exceeds 2.5 million sets, includes VRF, modular chiller, light commercial air conditioners, air source heat pumps and other products. Products are in great demand on 100 more countries and regions and has accomplished thousands of reference projects worldwide.





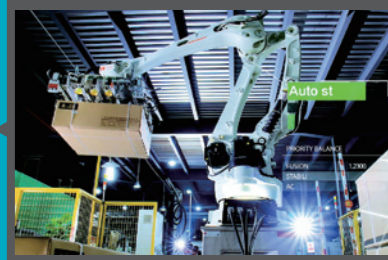
Production Capacity

Giwee has 17 advanced production lines and an annual production capacity of over 2.5 million sets. Introduce lean production management, improve production efficiency. By the use of various robots, AGV system and other equipment, improving the online, offline process, optimizing the logistics distribution technology, improving product quality and production efficiency. Adopts MES system, it helps a lot in tracking production schedule, inventory status, work schedule and other operations management to improve product quality and productivity.

Robotic Assembly Arm



Automatic Packing Robot



AGV System



MES System



Quality Superiority

Giwee has established a strict and scientific quality management system with supplier quality assurance, incoming quality control, process quality control and final quality control to ensure the highest quality of the products.

The industry-leading testing center has been certified by CNAS in 2018, With a full range of professional incoming inspection labs, enthalpy difference labs, EMC labs, 27 national accredited labs for testing and verification.



Certification

ISO9001 quality management system, ISO14001 environmental management system, OHSAS18001 occupational health and safety management system, QC080000 electronic and electrical components and products harmful substances process management system certification

Main product certificated by CCC, energy-saving certification, ETL, AHRI, DOE, CE, CB, SASO, ESMA, MEW and others.



ISO9001

ISO14001

ISO45001

QC 080000

AEO





Enthalpy Difference Lab



Laboratory Control Room

R&D Strength



200kg Transport Simulation Platform



Professional Engineers



EMC Lab



Noise Test Lab



200HP Long-term Running Lab



Modular Chiller Test Lab



Electromagnetic Vibration Lab

The R&D center of Giwee has more than 200 technical engineers, carry out technology collaboration and joint research with postdoctoral research workstations and Guangdong enterprise workstations, at the same time, introducing senior technical experts from Japan to join Giwee and served as senior technical consultants, Giwee pay great attention in R&D and invest 4.5% of annual income every year to develop new technology, by the continuous innovation, Giwee has established a solid development foundation and strength in performance, structure, electronic control, industrial design and other professional aspects.

The test center covers an area of more than 6,000 square meters. It has a series of industry-leading professional laboratories. In 2010, it passed the consistency check of the National Energy Efficiency Label Management Center and obtained certificate, in 2018, the test center obtained CNAS national certification.

Directory

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- 02 • R32 ATW Heat Pump
- 05 • New Modular Chiller
- 08 • EVI Modular Chiller
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- 17 • Fan Coil Unit 2-pipe Cassette
- 19 • Accessories
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How To Read The Model



R32 ATW Heat Pump



5kW/8kW



10kW/12kW

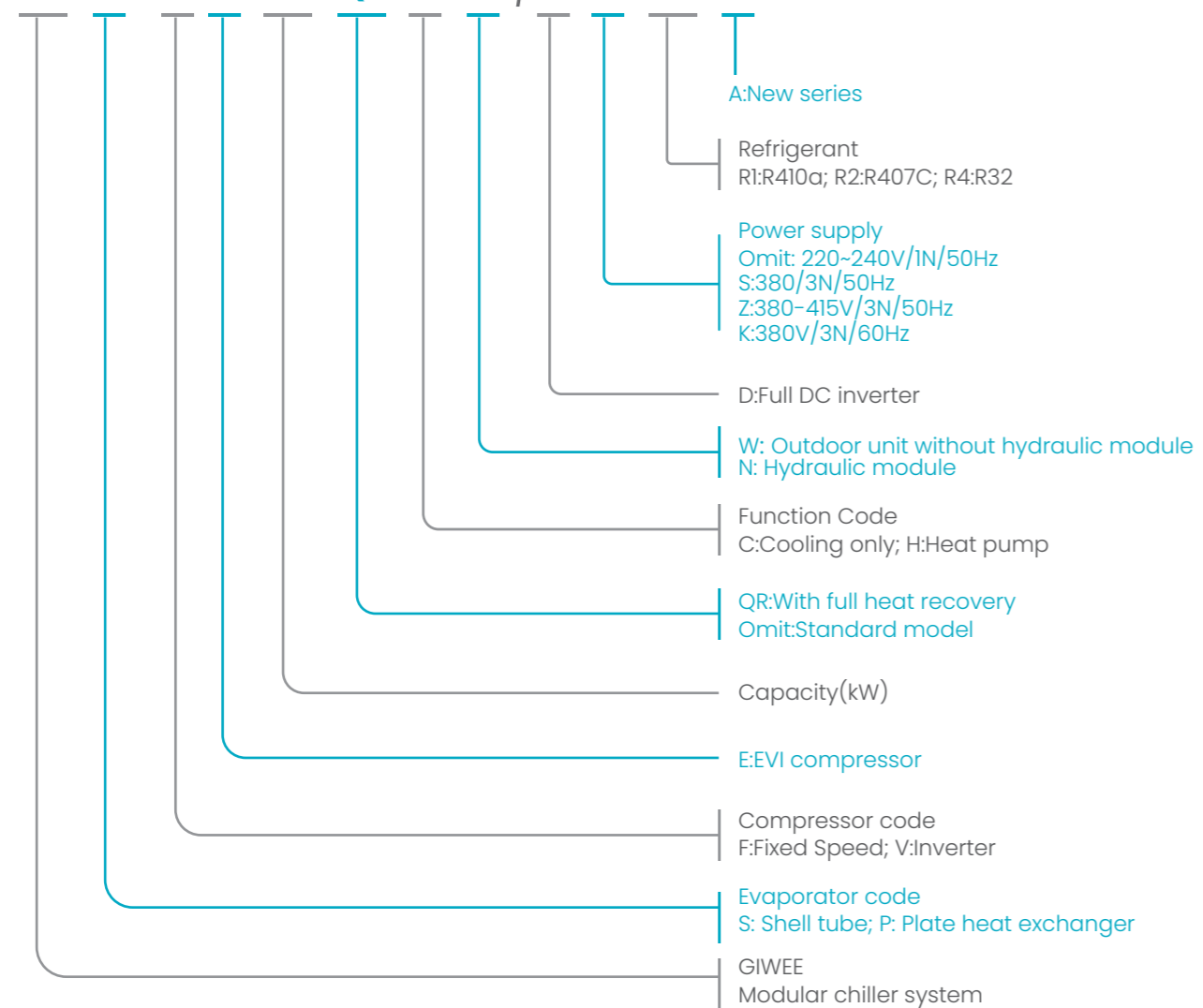


14kW/16kW



8kW/12kW/16kW
Hydronic module

CL S - F E 65 QR H W / D S RI A

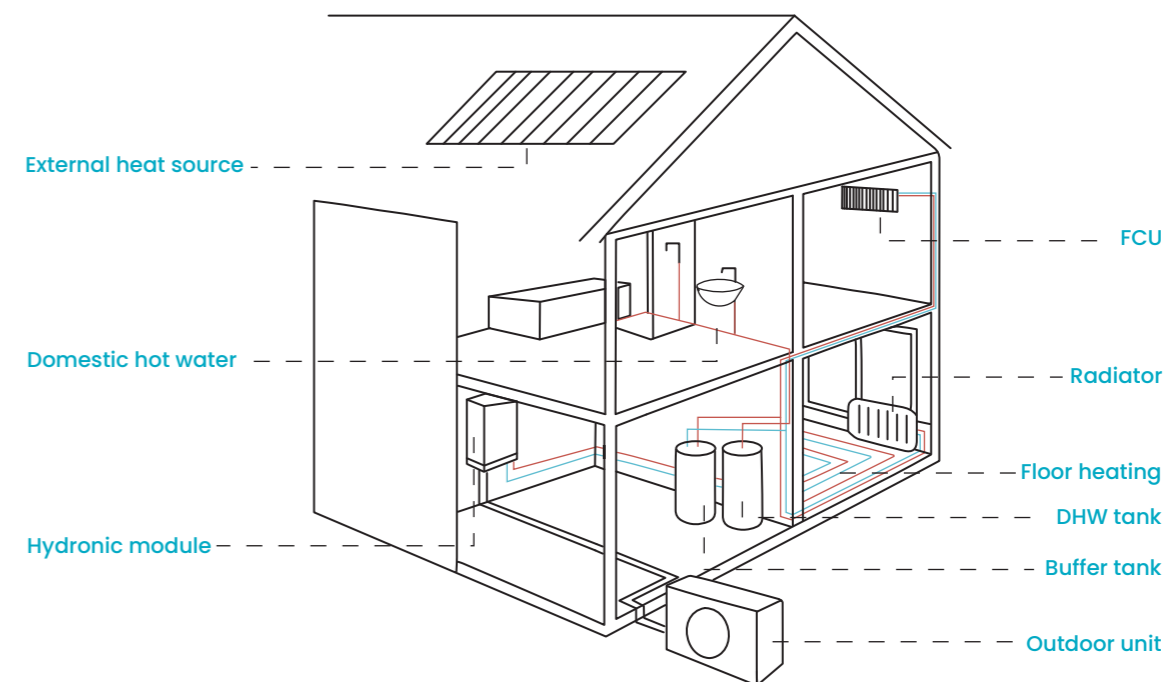


Features



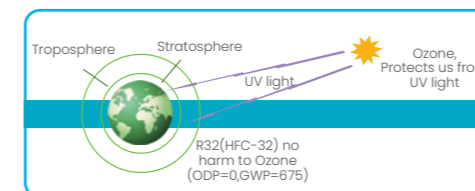
Multi Applications In One System

The system can realize heating in winter and cooling in summer, and can produce domestic hot water throughout the year. Various terminal equipment, floor heating, radiators and fan coils can be connected.



Eco Friendly

R32(HFC-32) is a highly environmentally friendly refrigerant, with 0 ODP and 675 GWP, low carbon footprint, no harm to the Ozone.



High Efficiency



ATW heat pumps are relying on a renewable energy for their functioning, the increased use of renewable energy will also reduce our energy dependency.



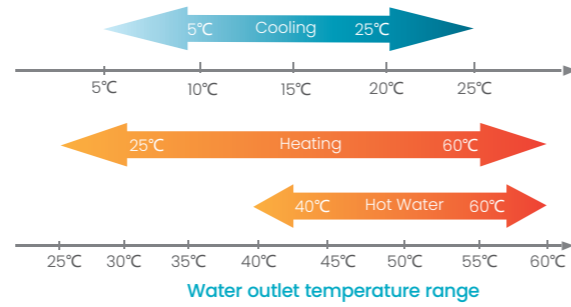
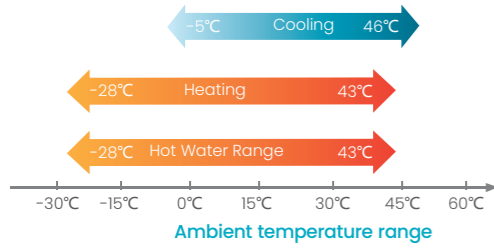
Erp 35°C For Medium Temperature Applications



Erp 35°C For Low Temperature Applications

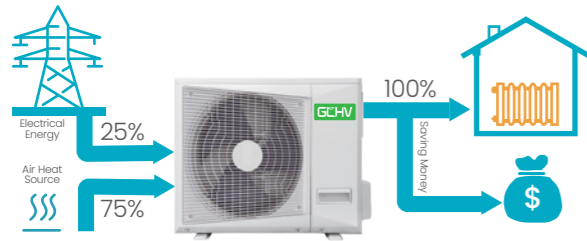
Wide Operation Range

- Cooling operating temperature is up to 46°C
- Heating operating temperature is down to -28°C
- The max. water outlet temperature is up to 60°C



Capture Energy From Ambient Air

Based on Air to Water heat pump technology, it captures heat energy from the ambient air and transfers it to heat the water that is used to warm your home and supply domestic hot water, it can even cool your home as required. Compared to other technologies, up to 75% of the heat energy required is taken from the ambient air.

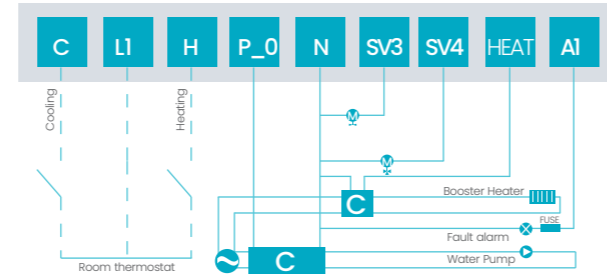


Hydronic Module Components



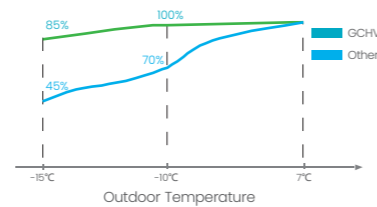
Variable Accessory Connection

- Connect to room thermostat
- Connect to 2-way valve and 3-way valve, to change the water flow direction
- Connect to booster heater to control the heater in DHW tank
- Connect to additional circulation water pump
- Alarm output



High Performance At Low Ambient Temperature

Thanks to the high compression ratio compressor, large heat exchanger and high-precision system control, it is able to maintain a high heat ty and even at -10°C and -15°C.



Controllers



Window design



Additional cover

- Window design, easy to operate and view
- Standard with touch screen wired controller, more functions can be realized and it is easier to operate.
- Controller can be took away from hydronic module, and an additional cover is provided



Touch Screen Wired Controller

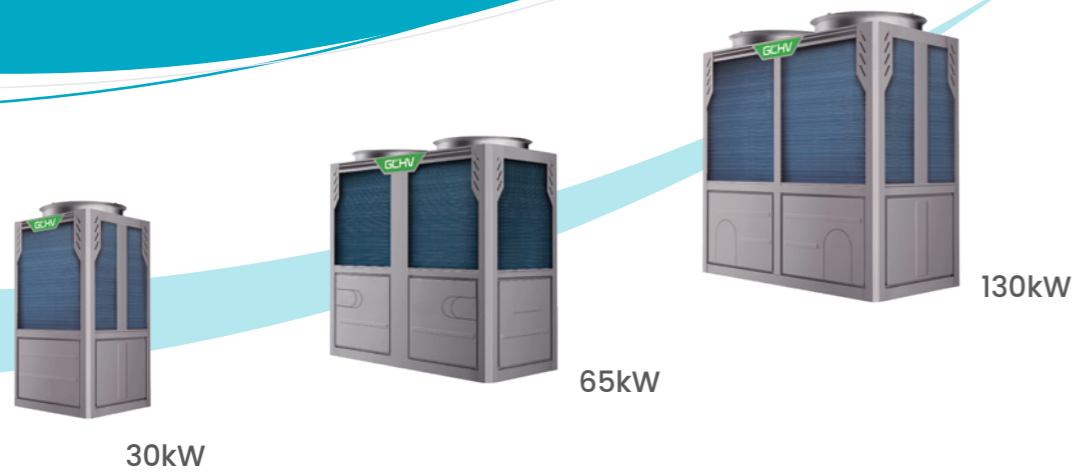
- Mode control
- Weekly timer function
- Electric heater
- Forced defrosting
- Sterilization
- Anti-freezing protection

Specification

Outdoor Unit	CLP-V5HW/DR4	CLP-V8HW/DR4	CLP-V10HW/DR4	CLP-V12HW/DR4	CLP-V14HW/DZR4	CLP-V16HW/DZR4
Indoor Unit	CLP-V8HN/DR4	CLP-V8HN/DR4	CLP-V12HN/DR4	CLP-V12HN/DR4	CLP-V16HN/DR4	CLP-V16HN/DR4
Performance Data						
Heating Capacity/COP(A7°C/W35°C)	kW/COP		kW/COP		kW/COP	
Heating Capacity/COP(A7°C/W55°C)	5.29/3.67	8.26/3.61	10.8/3.84	12.84/3.80	15.26/3.65	17.28/3.64
Heating Capacity/COP(A-7°C/W35°C)	3.90/2.47	6.14/2.42	9.6/2.74	11.4/2.71	13.58/2.61	15.36/2.6
Heating Capacity/COP(A-7°C/W55°C)	5.15/3.34	8.04/3.29	10.2/2.88	12.12/2.85	14.42/2.74	16.32/2.73
Heating Capacity/COP(A-15°C/W35°C)	3.95/2.17	6.20/2.13	7.11/1.73	8.42/1.70	11.2/1.83	12.64/1.82
Heating Capacity/COP(A-15°C/W55°C)	4.38/2.39	6.83/2.36	8.5/2.41	10.2/2.41	12.04/2.3	13.6/2.9
Heating Capacity/COP(A-15°C/W55°C)	2.86/1.79	4.49/1.76	6.75/1.63	7.99/1.61	10.64/1.73	12/1.72
Cooling Capacity/EER(A35°C/W7°C)	kW/EER		kW/EER		kW/EER	
Cooling Capacity/EER(A35°C/W18°C)	4.5/2.7	6.5/2.8	8.5/2.8	10/2.7	13.8/2.82	15.2/2.81
cooling Capacity/EER(A35°C/W18°C)	4.2/3.8	6.5/3.8	8.5/4.8	10/4.8	13.8/4.8	15.2/4.8
Seasonal Energy Efficiency(W35°C/W55°C)	SCOP(kW)		SCOP(kW)		SCOP(kW)	
Heating Average Climate	4.73/3.29	4.42/3.24	5.15/3.35	4.34/3.33	4.08/3.33	4.07/3.38
Seasonal Space Heating Energy eff.Class (Average Climate General) Water Outlet	189.14/131.65	176.8/129.6	203/131.1	170.6/130.2	160.2/130.2	159.7/132.1
Seasonal Space Heating Energy eff.Class (Average Climate General) Water Outlet	35°C	A++	A++	A++	A++	A++
Seasonal Space Heating Energy eff.Class (Average Climate General) Water Outlet	55°C	A++	A++	A++	A++	A++
Hydronic Model						
Power Supply	v/n/Hz		v/n/Hz		v/n/Hz	
Power Supply	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
Sound Power Level	dB(A)		dB(A)		dB(A)	
Sound Power Level	45	45	45	45	45	45
Dimension(WxHxD)	mm		mm		mm	
Dimension(WxHxD)	490x910x340	490x910x340	490x910x340	490x910x340	490x910x340	490x910x340
Packing(WxHxD)	mm		mm		mm	
Packing(WxHxD)	620x1105x425	620x1105x425	620x1105x425	620x1105x425	620x1105x425	620x1105x425
Net/Gross Weight	kg		kg		kg	
Net/Gross Weight	47/55	47/55	48/56	48/56	48/56	48/56
Water Pipe Connector(Inlet/Outlet)	mm		mm		mm	
Water Pipe Connector(Inlet/Outlet)	DN32/DN32	DN32/DN32	DN32/DN32	DN32/DN32	DN32/DN32	DN32/DN32
Water Pump	Variable Speed		Variable Speed		Variable Speed	
Water Pump	Variable Speed	Variable Speed	Variable Speed	Variable Speed	Variable Speed	Variable Speed
Capacity of Electric Heater	kW		kW		kW	
Capacity of Electric Heater	3	3	3	3	3	3
Max.power Input	kW		kW		kW	
Max.power Input	3.6	3.6	3.6	3.6	3.6	3.6
Max.current Input	A		A		A	
Max.current Input	17	17	17	17	17	17
Outdoor Unit						
Power Supply	v/n/Hz		v/n/Hz		v/n/Hz	
Power Supply	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	380-415/3/50	380-415/3/50
Sound Power Level	dB(A)		dB(A)		dB(A)	
Sound Power Level	64	66	68	68	70	70
Max.power Input	kW		kW		kW	
Max.power Input	2.86	4.2	5.0	5.0	5.5	6.4
Max.current Input	A		A		A	
Max.current Input	13	19	22	22	10.5	12.1
Dimension(WxHxD)	mm		mm		mm	
Dimension(WxHxD)	935×702×382	935×702×382	1032×810×445	1032×810×445	1014×1430×450	1014×1430×450
Packing(WxHxD)	mm		mm		mm	
Packing(WxHxD)	975×770×435	975×770×435	1075×875×495	1075×875×495	1095×1545×485	1095×1545×485
Net/Gross Weight	kg		kg		kg	
Net/Gross Weight	47/51	55/58	56.3/61	63.5/68	124/138	124/138
Air Flow	m³/h		m³/h		m³/h	
Air Flow	3200	3200	4000	4000	6100	6100
Pipe Diameter	mm		mm		mm	
Pipe Diameter	Φ9.52/Φ15.88	Φ9.52/Φ15.88	Φ9.52/Φ15.88	Φ9.52/Φ15.88	Φ9.52/Φ15.88	Φ9.52/Φ15.88
Max.piping Length/Height Difference	m		m		m	
Max.piping Length/Height Difference	20/10	20/10	20/10	50/20	50/20	50/20
Refrigerant	Type/Quantity	kg				
Refrigerant	R32/1.1	R32/1.4	R32/3.0	R32/3.1	R32/3.6	R32/3.8
	Additional Charge	g	(Total Pipe Length=5)m*30g/m			
Ambient Temperature Range	Cooling	°C	-5-46°C			
Ambient Temperature Range	Heating	°C	-28-43°C			
Ambient Temperature Range	Domestic Hot Water	°C	-28-43°C			
Water Temperature Range	Cooling	°C	5-25°C			
Water Temperature Range	Heating	°C	25-60°C			
Water Temperature Range	Domestic Hot Water	°C	40-60°C			

Note 1.Integrated value takes into consideration the capacity drop during frosting and defrosting periods. The capacity is tested in free frequency situation.
2.The above data may be changed without notice for future improvement on quality and performance.

New Modular Chiller



Space Saving

Occupied area is decreased by 30% compare with last generation, suitable for projects with narrow installation area.

Old 130kW unit	New 130kW unit
Width: 2000mm	Width: 2200mm
Depth: 1700mm	Depth: 1100mm



Built-in Water Flow Switch

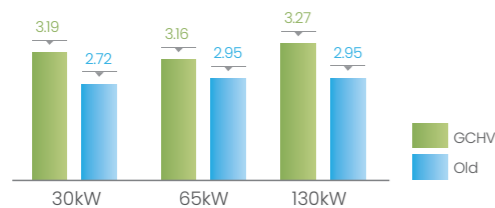
Standard with high quality water flow switch. Convenient for installation, no need to install water flow switch in water system on site. The water flow control will be more precisely.



Features

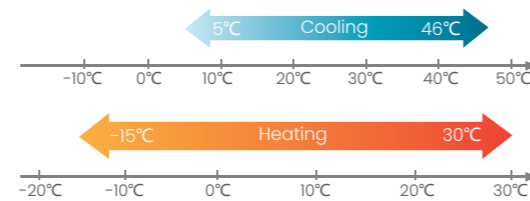
ErP High Cooling Performance

Meet ERP Standard, EER improved greatly compared with previous generation.



Wide Operation Range

Operate from -15°C to 46°C without failure.



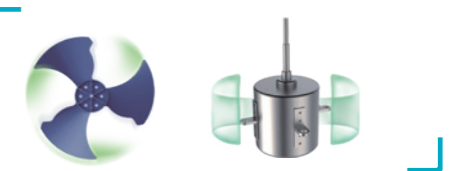
High Efficiency Shell & Tube Heat Exchanger

Shell&tube heat exchanger uses spiral turn-back design and high heat transfer efficiency copper pipes, to avoid rectangular place of dead heat, decrease water pressure drop, and improve heat exchange efficiency.



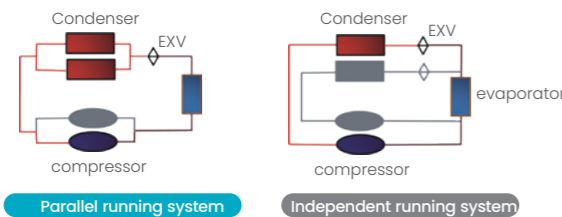
Smart Motor Speed Control

- Two-speed control independently guarantees the best condenser condition and low consumption.
- In part load running condition, the motor will run in low speed and with low consumption.



Parallel Running System

- Efficiency will increase 12% when one compressor full load running because the condenser area is 2 times than independent running system.
- Refrigerant circuit will be simpler and running condition will be more stable.



Unit Back-up Function

If master unit fails, all the units will stop and any of the slave units can be set as master unit manually. If one slave unit fails, this unit will stop but others keep running.



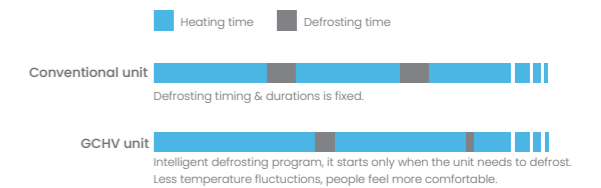
Cycle Operation

In one combination system, according to the accumulated operation time, all slaver units operates as alternative in cycle, which increases reliability and balances units lifespan.



Intelligent Defrosting Program

Defrosting starts only when the unit needs to, which decrease defrosting time and water temperature fluctuation.



Round-designed Condenser



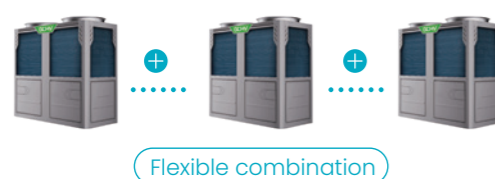
The airflow is even and heat exchange is more sufficient.

Higher thermometric conductivity and increases heat-exchanging efficiency.

Low air resistance and great heat transfer coefficient, and frosting improves a lot.

Modular Design Concept

Max. 32 units can be combined in one group (16 units for 130kW units), max. capacity can be up to 2080kW.



Unique Control Logic

For example, when a system with four 65kW units running at part load and 4 compressors are needed, in ordinary control logic two units will run at full load but in Giwee new control logic, four compressors in four units will run to make full use of all condensers, so the efficiency improves a lot.



Multiple Protections



Specification

Heat pump unit

Model			CLS-F30HW/ZR1B	CLS-F65HW/ZR1B	CLS-F130HW/ZR1B
Power			380-415V/3N/50Hz	380-415V/3N/50Hz	380-415V/3N/50Hz
Capacity	Cooling	kW	30	65	130
	Heating	kW	35	70	132
Rated Power Input	Cooling	kW	9.4	20.6	39.8
	Rated Current	A	18	38	78
Rated Power Input	heating	kW	9.8	21.3	40.8
	Rated Current	A	19	39	80
Max. Power Input		kW	15	28	60
	Max. Current	A	30	51	106
EER			3.18	3.16	3.26
Refrigerant	Type		R410A	R410A	R410A
	Charge	kg	7.3	13.5	15x2
Water Flow		m ³ /h	5.16	11.18	22.36
Pressure Drop		kPa	30	30	40
Max. Pressure		Mpa	1.0	1.0	1.0
Water Inlet/Outlet Diameter		mm	DN40	DN65	DN65
Connection type		m ² /h	12000	24000	48000
Air Flow			1 1/2" inch Male Connection	Flange connection	Flange connection
Acoustic pressure (1m)		dB(A)	62	64	65
Dimension(WxHxD)	Net	mm	1160x1920x900	2000x1920x900	2200x2220x1100
	Packing	mm	1240x2060x950	2080x2060x950	2280x2360x1140
Weight	Net	kg	320	610	1010
	Packing	kg	350	630	1060
Ambient Temperature	Cooling	°C	5-46(-15-46 for 65kW)		
	Heating	°C	-15-30		
Inlet Water	Cooling	°C	9-25		
	Heating	°C	26-48		

Cooling only unit

Model			CLS-F30CW/ZR1	CLS-F65CW/ZR1	CLS-F130CW/ZR1
Power			380-415V/3N/50Hz	380-415V/3N/50Hz	380-415V/3N/50Hz
Capacity	Cooling	kW	33.15	65	130
	Rated Power Input	kW	10.1	19.2	38.4
Rated Current	Cooling	A	18	36	76
	Max. Power Input	kW	32	32	64
Max. Current		A	30	59	120
	EER		3.26	3.38	3.38
Refrigerant	Type		R410A	R410A	R410A
	Weight	kg	7.3	13.0	12x2
Water Flow		m ³ /h	5.16	11.18	22.36
Pressure Drop		kPa	30	30	30
Operation pressure		MPa	4.5	4.5	4.5
Water Inlet/Outlet Diameter		mm	DN40	DN65	DN65
Air Flow		m ³ /h	12000	24000	48000
Noise		dB(A)	62	64	68
Dimension(WxHxD)	Net	mm	1160x1920x900	2000x1920x900	2200x2280x1100
	Packing	mm	1240x2060x950	2080x2060x920	2280x2420x1140
Weight	Net	kg	320	500	1010
	Packing	kg	350	520	1060
Ambient Temperature	Cooling	°C	15-48(5-48 for 65kW)		
Inlet Water	Cooling	°C	9-25		

Note

- Cooling: water inlet/outlet: 12 °C/7°C, outdoor ambient temperature: 35°C DB.
- Heating: water inlet/outlet: 40°C/45°C, outdoor ambient temperature: 7°C DB/6°C WB
- Water side fouling factor: 0.086m²°C/kW.
- The above data may be changed without notice for future improvement on quality and performance.

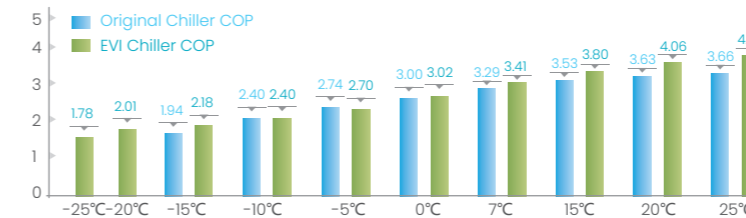
EVI Modular Chiller



Features

High Heating Performance

Low temperature heat pump unit adopts EVI technology. Two-stage compression improves heating capacity and efficiency in low ambient temperature.



EVI Compressor

Low-temperature heat pump unit adopts EVI (Enhanced Vapor Injection) compressor. A part of drawn intermediate pressure gas refrigerant is mixed and compressed with compressed refrigerant, which realizes two-stage compression in one compressor, increases compression efficiency and improves the heating performance in low temperature.

Wide Operation Range

- Cooling operating temperature is up to 46°C
- Heating operating temperature is down to -30°C

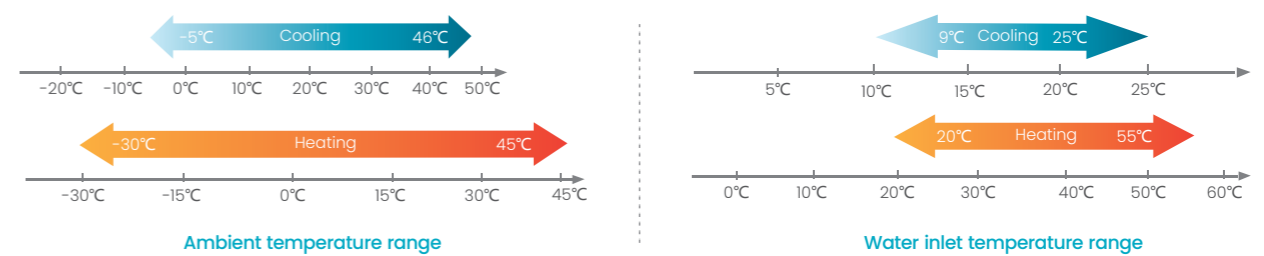
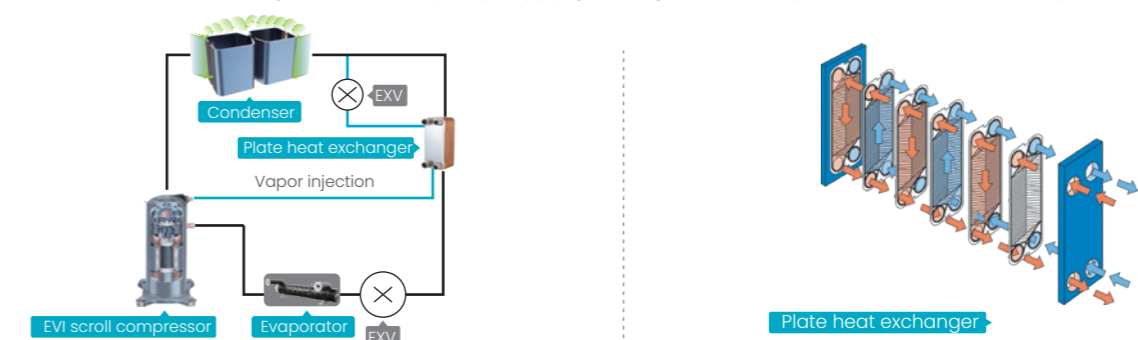


Plate Heat Exchanger

Plate heat exchanger plays an important role in EVI heat pump unit. Sub-cool the refrigerant before throttling in primary loop, increase enthalpy difference. Preheat the throttled refrigerant in auxiliary loop, supply gas refrigerant to compressor for secondary compression.



Specification

Model			CLS-FE35HW/ZR1A	CLS-FE75HW/ZR1A	CLS-FE155HW/ZR1A
Power			380~415V/3N/50Hz		
Rated heating (A7°C/W45°C)	Capacity	kW	36	77	155
	Power input	kW	10.3	22.6	43
	Current input	A	19	40	82
	COP	W/W	3.49	3.41	3.6
Nominal heating (A-12°C/W41°C)	Capacity	kW	24	50	100
	Power input	kW	9.8	20	39.4
	Current input	A	18	37	74
	COP	W/W	2.45	2.5	2.54
Rated Cooling (A35°C/W7°C)	IPLV(H)		2.82	2.82	2.93
	Capacity	kW	30	60	138
	Power input	kW	9.5	20.7	43.1
	Current input	A	18	38	78
	EER	W/W	3.16	2.9	3.2
IPLV(C)			3.42	3.22	3.5
Max. current		A	34	72	125
Max. power input		kW	15	34	70
Basic parameter					
Refrigerant	Type		R410A	R410A	R410A
	Refrigerant control		EXV	EXV	EXV
	Weight	kg	7.5	6.5x2	12.0x2
Water side heat exchanger	Type		Shell tube heat exchanger		
	Max. pressure	MPa	1	1	1
	Water flow	m³/h	6.2	13.2	23.7
	Pressure drop	kPa	30	30	55
	Water inlet diameter	mm	DN40	DN65	DN65
	Water outlet diameter	mm	DN40	DN65	DN65
Joint Type			1 1/2" Male connection	Flange joint	Flange joint
Waterproof grade			IPX4	IPX4	IPX4
Air flow		m³/h	12000	24000	48000
Noise		dB(A)	62	64	69
Dimension (WxHxD)	Net	mm	1160x1920x900	2000x1920x900	2200x2280x1100
	packing	mm	1240x2060x950	2080x2060x950	2280x2300x1120
Weight	Net	kg	320	635	1010
	Packing	kg	350	650	1020
Operation Range					
Ambient Temperature	Cooling	°C	5~46	5~46	5~43
	Heating	°C	-30~45	-30~45	-30~45
Water Inlet Temperature	Cooling	°C	9~25	9~25	9~25
	Heating	°C	20~55	20~55	20~55
Water Outlet Temperature	Cooling	°C	5~20	5~20	5~20
	Heating	°C	25~60	25~60	25~60

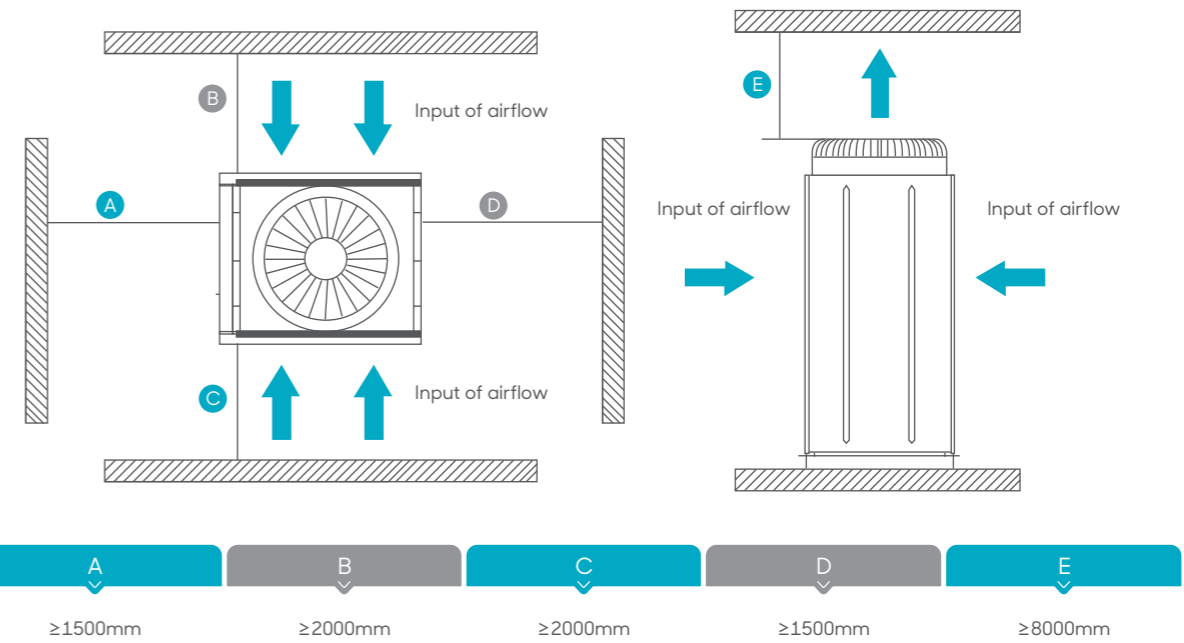
Note

- The rated cooling conditions: water flow 0.172m³/(h·kW), ambient temperature 35°C DB, water outlet temperature 7°C
- The rated heating conditions: water flow 0.172m³/(h·kW), ambient temperature 7°C DB, water outlet temperature 45°C
- The nominal heating conditions: water flow 0.172m³/(h·kW), ambient temperature -12°C DB, indoor side water outlet temperature 41°C
- The above data may be changed without notice for future improvement on quality and performance.

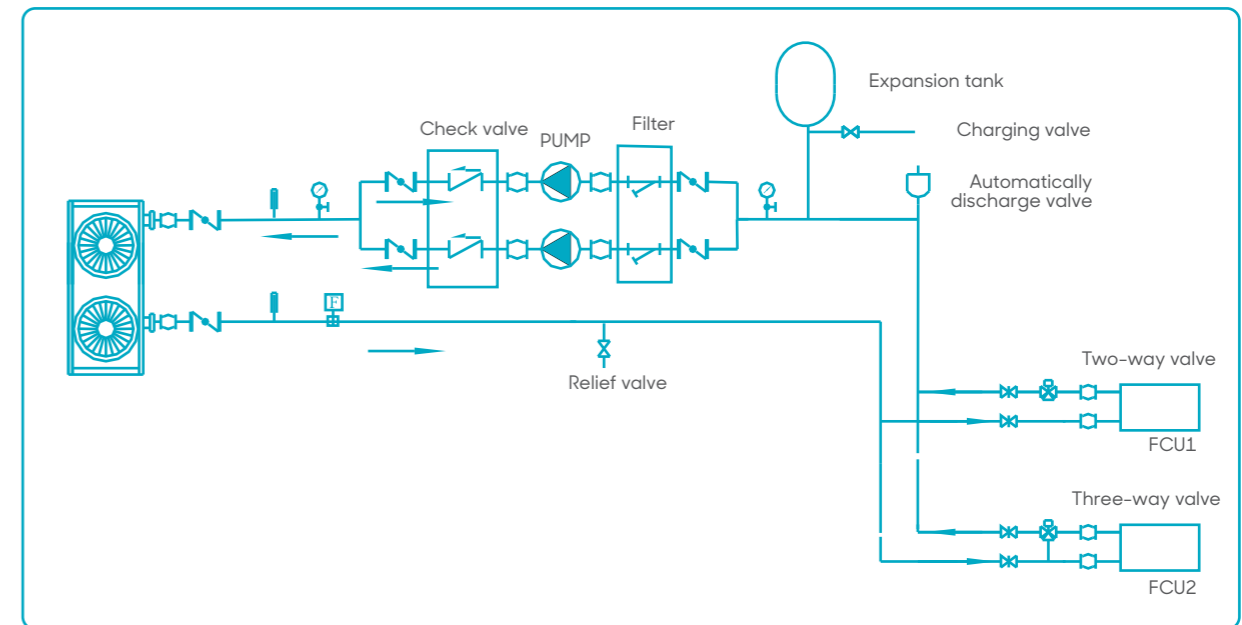
Installation



Installation space requirement



Connection of pipeline system



- ⊗ > Stop valve
- ⊕ > Pressure gauge
- ⊗ > Gate valve
- ⊞ > Flexible joint
- ⊞ > Water flow switch
- ⊞ > Y-shaped filter
- ⊞ > Thermometer
- ⊞ > Circulation Pump
- ⊞ > Check Valve
- ⊞ > Automatically discharge valve

Modular Chiller with Heat Recovery



30kW

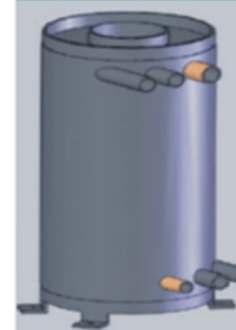


65kW

High Efficiency Pot

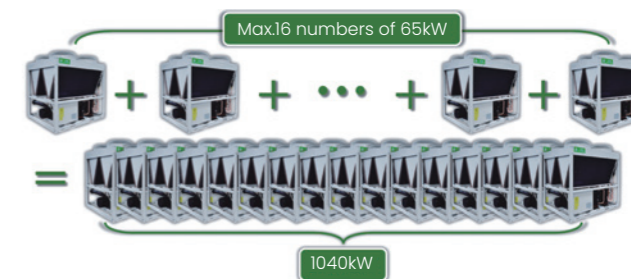
Specially designed high efficiency pot, compact structure and great heat exchange efficiency.

High efficiency pot



Modular Design Concept

Modular design concept, a good solution for agencies to make stocks. Excellent flexibility in installation, max.16 units can be combined in a group, max. Capacity can be up to 1040kW.



Features



Multi Function

Multi function, offering air conditioning and hot living water whole year.



High Reliable Compressor

Adopting high reliable Copeland compressor.

Better liquid handling

Radial compliance allows the scroll members to separate in the presence of liquid refrigerant, thus, providing protection against liquid damage.

Greater efficiency

With axial compliance, optimized force between two scrolls can be obtained, leading to high efficiency over the entire operating range.

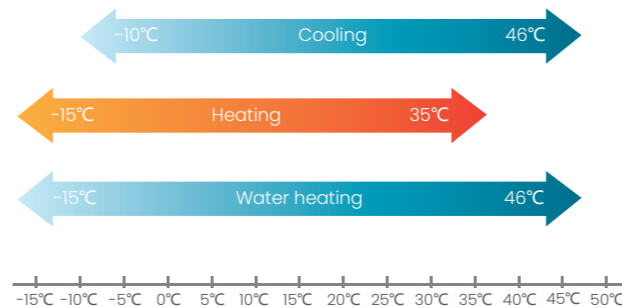
Unmatched reliability

Ability to start under any system load, without start components. Easy to service and maintain due to their compact size and light weight, simple design. Engineered for optimum performance with today's chlorine-free refrigerants. No complex internal suction and discharge valves for quieter operation and higher reliability.

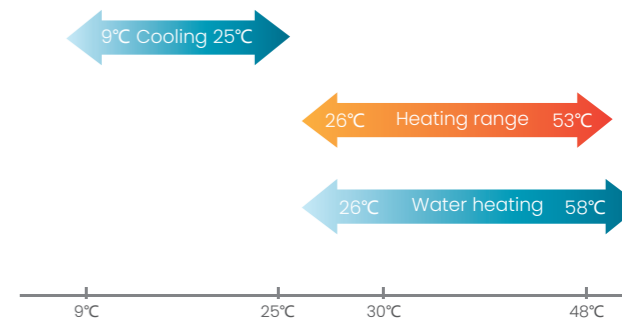


Wide Operation Range

Ambient temperature range

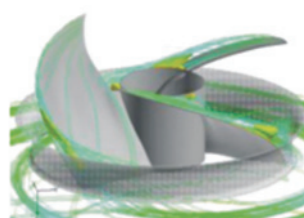


Water inlet temperature range



Full Heat Recovery

Full heat recovery, using total condensation heat to produce hot living water, high efficiency and great energy saving.



Full heat recovery Zero discharge



500 Steps EXV From Famous Brand

Compare to TXV, it controls refrigerant flow as per operation mode and temperature condition, because EXV has faster load reaction speed, bigger regulation range, higher refrigerant control, accuracy, so the water outlet temperature can be controlled more precisely.



Multi Protections

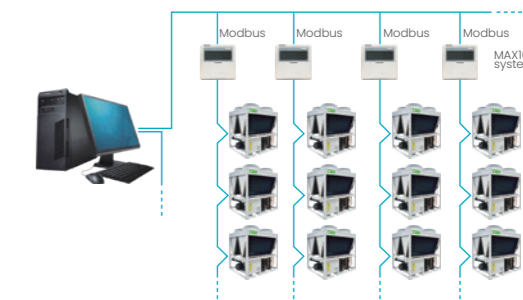
Comprehensive protections to guarantee system's safety.

- Low/High pressure protection of compressor
- Compressor malfunction protection
- Compressor overload protection
- Overheat protection of condenser
- Phase sequence protection
- Water flow cut off protection



Modbus Gateway

Modbus gateway is built in the control logical for standard. it can realize BMS control without any device.



Specification

Type			R407C/50Hz	R407C/50Hz
Model			CLS-F30QRHW/ZR2	CLS-F65QRHW/ZR2
Power supply	V/N/Hz		380-415V/3N/50Hz	380-415V/3N/50Hz
Capacity				
Cooling	kW		30	65
Heating	kW		35	70
Water heating	kW		38	76
Electrical data				
Power input	Cooling	kW	11	22
	Heating	kW	12	23
	Water heating	kW	10.2	20.5
	Max. Power Input	kW	20	40
Rated current	Cooling	A	19	39
	Heating	A	21	41
	Water heating	A	18	36
	Max. Current	A	38	76
Physical data				
Refrigerant	Weight	kg	7	7x2
	Refrigerant control		EXV+ Capillary throttle	EXV+Capillary throttle
Compressor	Type		R407C	R407C
	Brand		Emerson	Emerson
	Type		Scroll	Scroll
Fan motor	Quantity	pcs	1	2
	Quantity	pcs	1	2
Evaporator (Water side)	Air flow volume	m³/h	12000/6000	24000/18000/12000/6000
	Heat-exchanger type		Shell and tube evaporator	Shell and tube evaporator
	Water pressure drop	kPa	30	30
	Water inlet/outlet diameter	mm	DN40	DN65
	Water flow volume	m³/h	6	11.18
	Max. Pressure	Mpa	1.00	1.15
High efficiency pot (hot water side)	Connection type		Thread + rubber gasket	Flange + rubber gasket
	Heat-exchanger type		Shell and tube evaporator	Shell and tube evaporator
	Water pressure drop	kPa	50	65
	Water inlet/outlet diameter	inch	1.5	2
	Water flow volume	m³/h	6.5	13.07
	Max. Pressure	MPa	1	1
Dimension (WxHxD)	Water pipe connection type		Thread connection	Thread connection
	Net	mm	1160x2090x900	2000x2090x900
Weight	Packing	mm	1240x2245x950	2080x2245x950
	Net	kg	360	650
Control type	Gross	kg	380	680
	Wired controller		Wired controller	Wired controller
Sound level(semi-anechoic)	dB(A)		58-62	60-65
Operation range				
Water inlet temperature	Cooling	°C	(Water return)9-25	(Water return)9-25
	Heating	°C	(Water return)26-53	(Water return)26-53
	Water heating	°C	(Water return)26-58	(Water return)26-58
Ambient temperature	Cooling	°C	-10-46	-10-46
	Water heating	°C	-15-35	-15-35
	Heating	°C	-15-46	-15-46

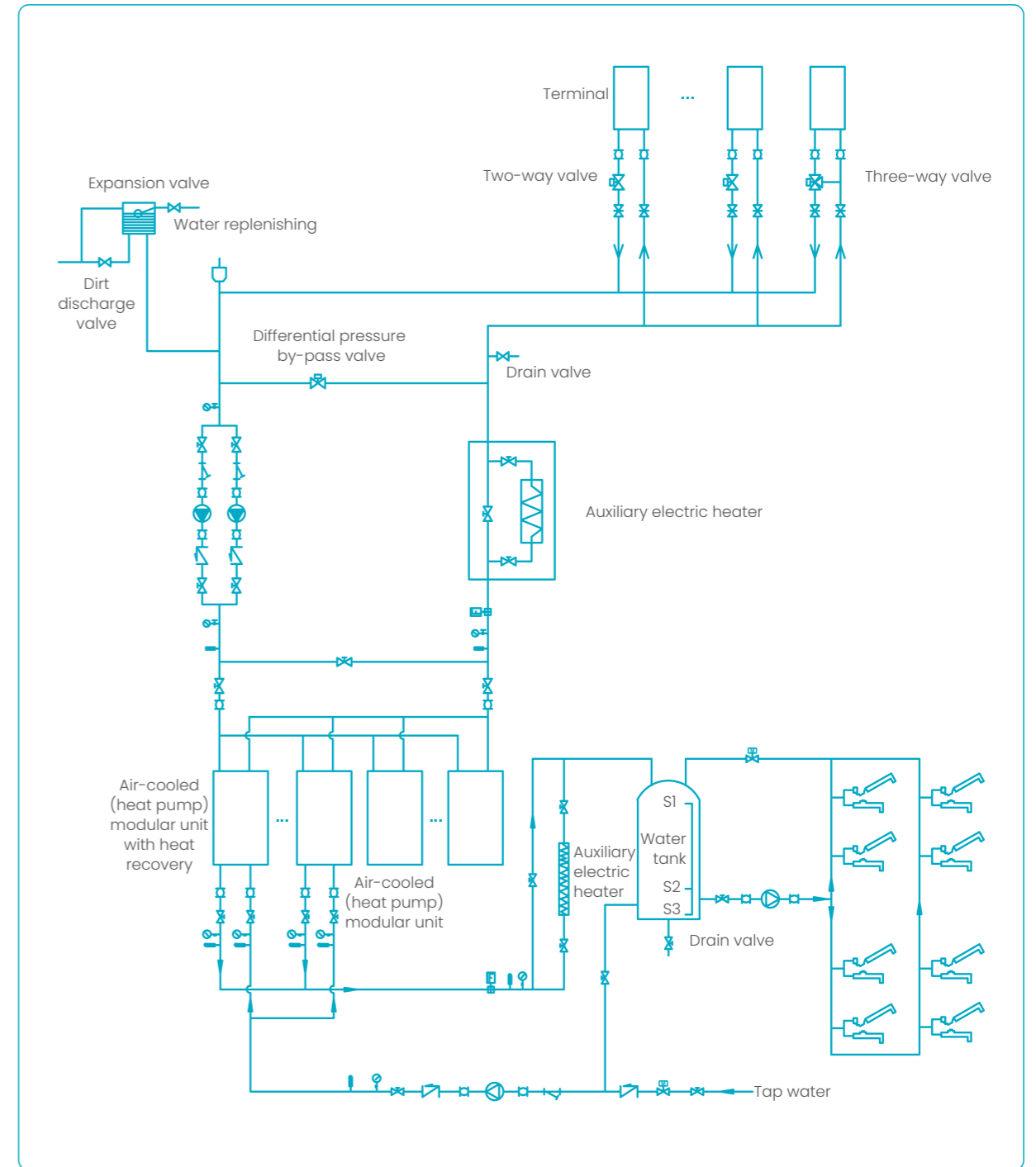
Remarks

(Specifications are based on the following conditions):

- Cooling: water inlet/outlet: 12°C/7°C, outdoor ambient temperature is 35°C DB.
- Heating: water inlet/outlet: 40°C/45°C, outdoor ambient temperature is 7°C DB/6°C WB.
- Water heating: water inlet/outlet: 40°C/45°C, outdoor ambient temperature is 20°C DB/15°C WB.

Installation

Connection of pipeline system



- > Stop valve
 > Pressure gauge
 > Gate valve
 > Flexible joint
 > Water flow switch
 > Solenoid valve
- > Y-shaped filter
 > Thermometer
 > Pump
 > Check Valve
 > Automatic discharge valve

Fan Coil Unit

4-pipe Cassette



Round Flow Cassette
600-1000CFM

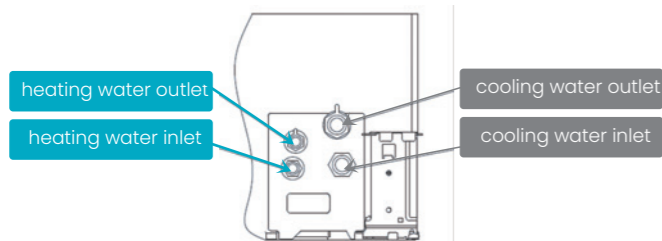


Compact 4-way Cassette
300~470CFM

Features

4-Pipe Design

The 4-pipe unit consists of two separate cooling and heating water coils. Each coil has its own dedicated set of pipes (supply and return) and valve. This type of fan coil can cool and heat at the same time and is not dependent of the actual mode of the building.



360° Round Panel

For big cassette type unit, 360° panel is standard. The cold or warm air can reach each corner of the room, providing a stable and comfortable environment. For compact cassette, 4-way panel is standard.



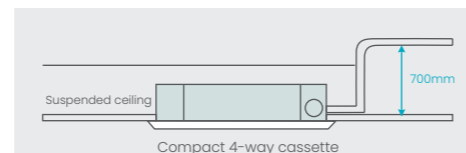
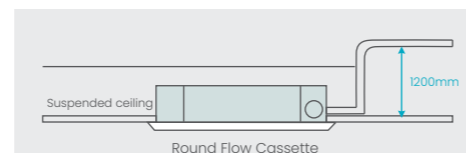
Various Selections

Digital display board, wired controller, different wired controllers are optional.



Built-in With Drainage Pump

Built-in with low noise and long life drainage pump. The pump head is 1200mm for big cassette and 700mm for compact cassette, flexible for drainage pipe design.



Specification

FCU type			Round Flow Cassette			
Model			CSQ-600R-F	CSQ-760R-F	CSQ-880R-F	CSQ-1000R-F
Power supply	V/N/Hz		220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
Capacity						
Air flow volume	Hi/Med/Lo	CFM	600/500/410	760/700/530	880/790/645	1000/880/700
		m ³ /h	1000/850/700	1300/1200/900	1500/1350/1100	1700/1500/1200
Cooling capacity	Hi/Med/Lo	kW	4.5/4.0/3.5	4.8/4.3/3.8	5.5/5.0/4.5	5.8/5.3/4.8
Heating capacity	Hi/Med/Lo	kW	8.5/7.6/6.0	10.5/9.6/8.0	12.5/11.0/9.5	13.0/11.5/10.0
Physical data						
Rated power input	W		127	127	130	134
Noise level(high speed)	dB(A)		40-49	40-49	40-49	40-49
Water flow volume	Cooling	m ³ /h	0.72	0.79	0.86	0.95
	Heating	m ³ /h	0.73	0.90	1.07	1.12
Water pressure drop	Cooling	kPa	32	35	24	26
	Heating	kPa	43	46	40	42
Waterproof grade			IP24	IP24	IP24	IP24
Indoor unit	Dimension(WxHxD)	mm	840x230x840	840x230x840	840x285x840	840x285x840
	Packing(WxHxD)	mm	920x265x920	920x265x920	920x310x920	920x310x920
	Net/Gross weight	kg	23.6/27.7	23.6/27.7	28.2/32.6	28.2/32.6
Panel	Dimension(WxHxD)	mm	950x50x950	950x50x950	950x50x950	950x50x950
	Packing(WxHxD)	mm	1030x100x1030	1030x100x1030	1030x100x1030	1030x100x1030
	Net/Gross weight	kg	6.5/9.5	6.5/9.5	6.5/9.5	6.5/9.5
Pipe	Cooling water-inlet pipe	mm	DN20	DN20	DN20	DN20
	Cooling water-outlet pipe	mm	DN20	DN20	DN20	DN20
	Heating water-inlet pipe	mm	DN15	DN15	DN15	DN15
	Heating water-outlet pipe	mm	DN15	DN15	DN15	DN15
	Drainage pipe	mm	DN25	DN25	DN25	DN25
Controller			Remote controller(standard), wired controller(optional)			

FCU type			Compact 4-way Cassette		
Model			CSQ4-300R-F	CSQ4-350R-F	CSQ4-470R-F
Power supply	V/N/Hz		220-240/1/50	220-240/1/50	220-240/1/50
Capacity					
Air flow volume	Hi/Med/Lo	CFM	295/220/175	350/280/235	470/320/245
		m ³ /h	500/380/300	600/480/400	800/550/420
Cooling capacity	Hi/Med/Lo	kW	1.90/1.7/1.5	2.1/1.85/1.6	2.4/2.05/1.7
Heating capacity	Hi/Med/Lo	kW	4.4/3.45/2.5	4.8/3.55/2.9	5.5/4.5/3.2
Physical data					
Rated power input	W		48	58	65
Noise level(high speed)	dB(A)		43	43	43
Water flow volume	Cooling	m ³ /h	0.33	0.38	0.45
	Heating	m ³ /h	0.38	0.41	0.47
Water pressure drop	Cooling	kPa	15	15	20
	Heating	kPa	15	15	20
Waterproof grade			IP24	IP24	IP24
Indoor unit	Dimension(WxHxD)	mm	580x260x580	580x260x580	580x260x580
	Packing(WxHxD)	mm	745x375x675	745x375x675	745x375x675
	Net/Gross weight	kg	16.5/22	16.5/22	16.5/22
Panel	Dimension(WxHxD)	mm	650x30x650	650x30x650	650x30x650
	Packing(WxHxD)	mm	750x95x750	750x95x750	750x95x750
	Net/Gross weight	kg	2.7/4.0	2.7/4.0	2.7/4.0
Pipe	Cooling water-inlet pipe	mm	DN20	DN20	DN20
	Cooling water-outlet pipe	mm	DN20	DN20	DN20
	Heating water-inlet pipe	mm	DN15	DN15	DN15
	Heating water-outlet pipe	mm	DN15	DN15	DN15
	Drainage pipe	mm	DN25	DN25	DN25
Controller			Remote controller(standard), wired controller(optional)		

Remarks
 1. Cooling capacity test condition: air side temperature:27D8°C/19WB°C, water inlet temperature 7°C, water temperature difference 5°C.
 2. Heating capacity test condition: air side temperature:21D8°C, water inlet temperature 65°C, water temperature difference 10°C.
 3. The above data may be changed without notice for future improvement on quality and performance.

Fan Coil Unit

2-pipe Cassette



4-way Cassette
600~1000CFM



Compact 4-way Cassette
300~470CFM

Features

Low Operation Noise

- Streamline plate ensures quietness.
- Creating natural and comfortable environment.

Optimized Structure

Optimized structure enhances air volume and capacity greatly.

3D Centrifugal Fan

- Adopting the most advanced 3D centrifugal fan.
- Reduce air resistance and smooth air flow.
- Making air flow distributed uniformly to the heat exchanger.

Easy Installation And Maintenance

There are several improvements for easy installation and maintenance:

- Less space is required for installation in the shallow ceiling.
- Thanks to the compactness and weight reduction, all models can be installed without hoists.

Full Series Of Controllers

Full series of controllers offer the most suitable solution according to different requirements of different customers.

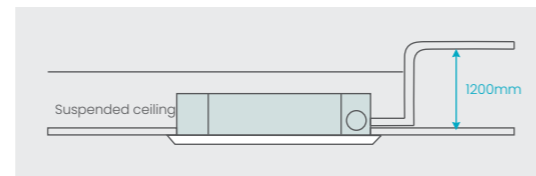
Optional Controllers

For standard cassette, wired controller and digital display panel are optional.



Built-in Drainage Pump

With the help of built-in drainage pump, the pump lift can reach to 1200mm.



Specification

FCU type			Compact 4-way Cassette		
Model			CSQ4-300R-A	CSQ4-350R-A	CSQ4-470R-A
Power supply		V/N/Hz	220-240/1/150	220-240/1/50	220-240/1/150
Capacity					
Air flow volume	Hi/Med/Lo	CFM	295	350	440
		m ³ /h	500/340/260	600/420/330	750/560/420
Cooling capacity	Hi/Med/Lo	kW	2.5/2.2/1.8	3.5/3.0/2.3	4.5/3.9/2.9
Heating capacity	Hi/Med/Lo	kW	3/2.6/2.0	4/3.2/2.4	5.2/4.2/3.3
Physical data					
Noise level(High-speed)		dB(A)	40	42	44
Water flow volume		m ³ /h	0.43	0.60	0.78
Water pressure drop		kPa	25	28	30
Indoor coil	Number of Rows		1	2	2
	Max.Pressure	Mpa	1.0	1.0	1.0
	Fin type		copper tube, aluminum fin		
Fan motor	Quantity	pcs	1	1	1
	Power Input	W	55	58	90
Indoor unit	Dimension(WxHxD)	mm	580x260x580	580x260x580	580x260x580
	Packing(WxHxD)	mm	745x375x675	745x375x675	745x375x675
	Net/Gross weight	kg	16/21.5	17/22.5	17/22.5
Panel	Dimension(WxHxD)	mm	650x30x650	650x30x650	650x30x650
	Packing(WxHxD)	mm	750x95x750	750x95x750	750x95x750
	Net/Gross weight	kg	2.7/4.0	2.7/4.0	2.7/4.0
Pipe	Water inlet pipe	mm	DN20	DN20	DN20
	Water outlet pipe	mm	DN20	DN20	DN20
	Drainage pipe	mm	DN25	DN25	DN25
Controller			remote controller(standard)		

FCU type		4-way Cassette				
Model		CSQ-600R	CSQ-760R	CSQ-880R	CSQ-1000R	
Power supply		V/N/Hz	220-240/1/150	220-240/1/150	220-240/1/150	220-240/1/150
Capacity						
Air flow volume	Hi/Med/Lo	CFM	600/510/360	760/646/456	880/748/528	1000/850/600
		m ³ /h	1000/867/612	1300/1098/775	1500/1272/898	1700/1445/1020
Cooling capacity	Hi/Med/Lo	kW	5.3/4.6/3.4	7.2/6.3/4.7	8.5/7.4/5.5	10.0/8.7/6.5
Heating capacity	Hi/Med/Lo	kW	8.0/7.0/5.2	10.8/9.4/7.0	12.8/11.1/8.3	15.0/13.1/9.8
Physical data						
Noise level(High-speed)		dB(A)	43-48	44-48	45-52	45-53
Water flow volume		m ³ /h	1.10	1.24	1.46	1.55
Water pressure drop		kPa	36	36	38	40
Indoor coil	Number of Rows		2	2	2	2
	Fin type		Copper tube,aluminum fin			
Fan motor	Quantity	pcs	1	1	1	1
	Power Input	W	140	150	160	180
Indoor unit	Dimension(WxHxD)	mm	840x230x840	840x230x840	840x285x840	840x285x840
	Packing(WxHxD)	mm	920x265x920	920x265x920	920x310x920	920x310x920
	Net/Gross weight	kg	23/28	23/28	26/31.5	28/33.5
Panel	Dimension(WxHxD)	mm	950x50x950	950x50x950	950x50x950	950x50x950
	Packing(WxHxD)	mm	1030x105x1030	1030x105x1030	1030x105x1030	1030x105x1030
	Net/Gross weight	kg	5.4/8.0	5.4/8.0	5.4/8.0	5.4/8.0
Pipe	Water inlet pipe	mm	DN20	DN20	DN20	DN20
	Water outlet pipe	mm	DN20	DN20	DN20	DN20
	Drainage pipe	mm	DN25	DN25	DN25	DN25
Controller			Remote controller(standard),wired controller(optional)			

Remarks 1. Cooling capacity test condition: air side temperature:27DB°C/19WB°C, water inlet temperature7°C, water temperature difference 5°C.
2. Heating capacity test condition: air side temperature:21DB°C, water inlet temperature 45°C, water temperature difference 5°C.
3. The above data may be changed without notice for future improvement on quality and performance.

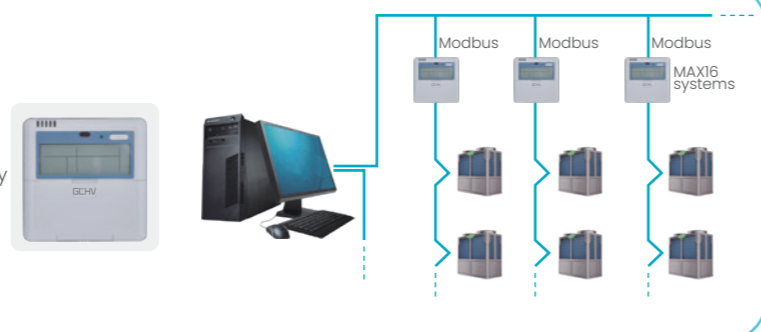


Wireless Controller (In Package Of Cassette FCUs)

- Wireless 8m transmission
- 5 operation mode: Auto, Cooling, Dehumidification, Heating, Fan
- Timer ON/OFF setting up to 24Hr
- Temperature control range 16-32°C
- Three fan speed selection

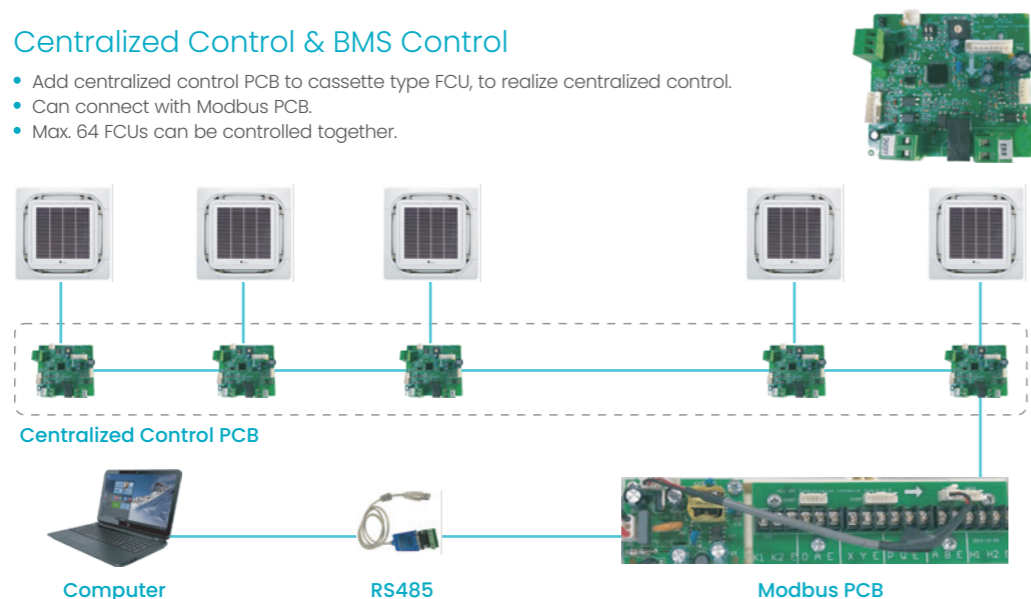
Wired Controller

- 2 operation mode
- Timer function
- Operation and error information inquiry
- Forced defrosting operation
- Button lock
- MODBUS function

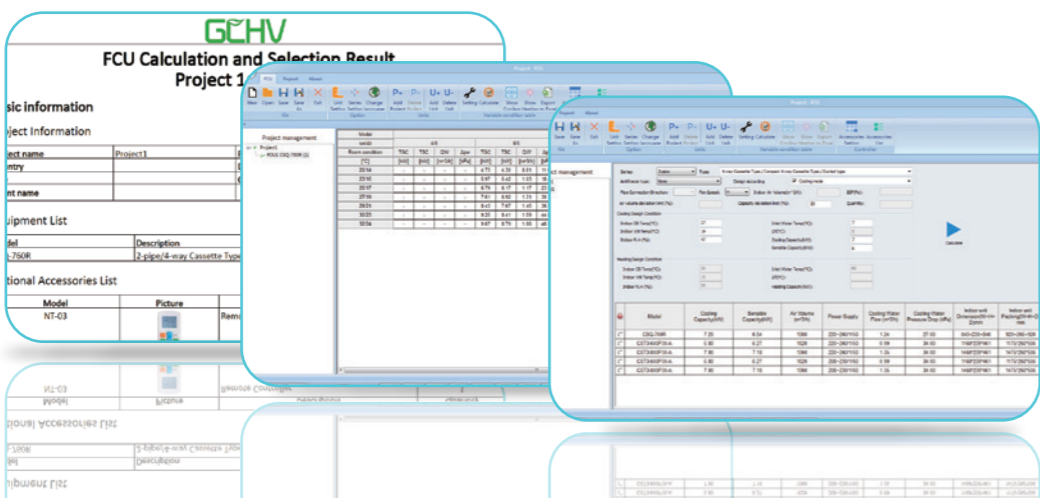


Centralized Control & BMS Control

- Add centralized control PCB to cassette type FCU, to realize centralized control.
- Can connect with Modbus PCB.
- Max. 64 FCUs can be controlled together.



FCU Selection Software



Reference Projects



Government building in Inner Mongolia, China.



Office building in Istanbul, Turkey.



Production hall in Zarnovica, Slovakia.



University of Mitrovica, Kosovo