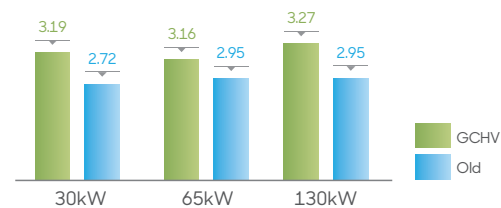




Features

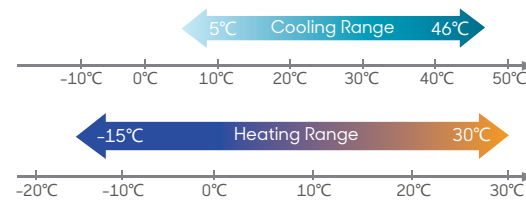
ErP High Cooling Performance

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



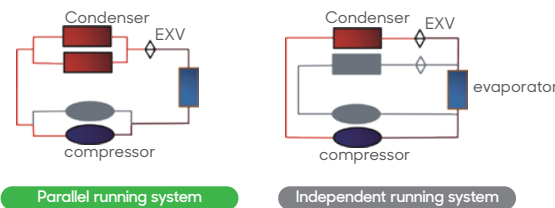
Wide Operation Range

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



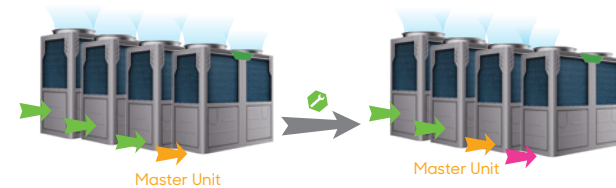
Parallel Running System

- 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.



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

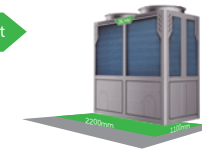
For example, when a system with four 65kW units running at part load and 4 compressors are needed, in ordinary control logic two units will run at full load but in Chigo new control logic, four compressors in four units will run to make full use of all condensers, so the efficiency improves a lot.



Space Saving

Occupied area is decreased by 30% compare with last generation.

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



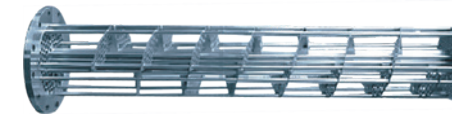
Built-in Water Flow Switch

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.



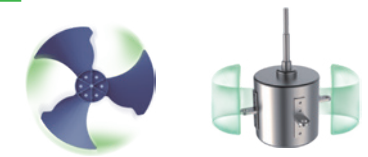
High Efficiency Shell & Tube Heat Exchanger

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.



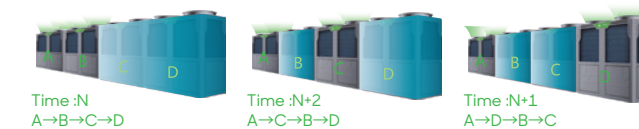
Smart Motor Speed Control

- 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.



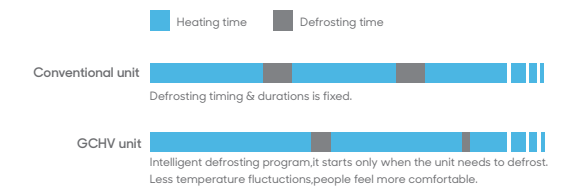
Cycle Operation

In one combination system, according to unit's 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.



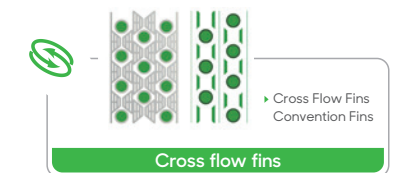
Round-designed Condenser



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.

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 Input	Cooling	kW	9.4	20.6	39.8
Rated Current	Cooling	A	18	38	78
Rated Input	heating	kW	9.8	21.3	40.8
Rated Current	heating	A	19	39	80
Max. 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	15*2
Water Flow		m³/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
Air Flow		m³/h	12000	24000	48000
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 Input	Cooling	kW	10.1	19.2	38.4
Rated Current	Cooling	A	18	36	76
Max. 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	12*2
Water Flow		m³/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		m³/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

1. Cooling: water inlet/outlet: 12 °C/7°C , outdoor ambient temperature:35°C DB.
2. Heating: water inlet/outlet: 40°C/45°C, outdoor ambient temperature: 7°C DB/6°C WB
3. Water side fouling factor: 0.086m²C /kW.
4. The above data may be changed without notice for future improvement on quality and performance.

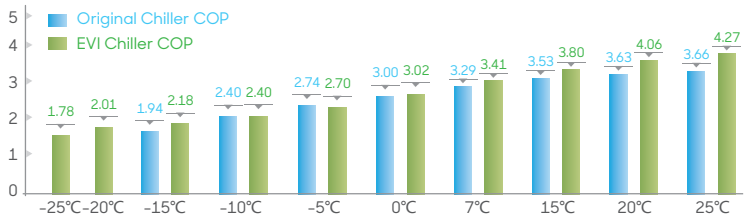


Features



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

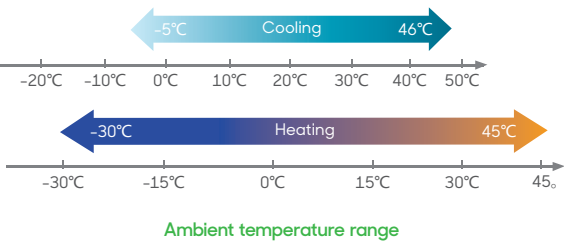
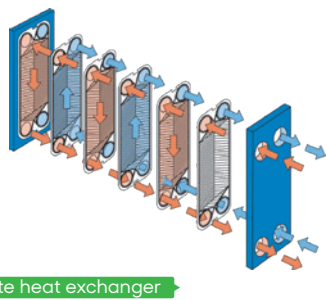
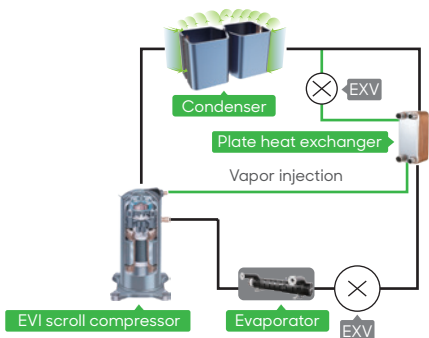


Plate Heat Exchanger

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-FE140HW/ZR1A
Power			380~415V/3N/50Hz		
Rated heating (A7°C/W45°C)	Capacity	kW	36	77	142
	Power input	kW	10.3	22.6	44.3
	Current input	A	19	40	82
	COP	W/W	3.49	3.41	3.21
Nominal heating (A-12°C/W41°C)	Capacity	kW	24	50	94
	Power input	kW	9.8	20	39.2
	Current input	A	18	37	74
	COP	W/W	2.45	2.50	2.40
Rated Cooling (A35°C/W7°C)	Capacity	kW	30	60	120
	Power input	kW	9.5	20.7	41.4
	Current input	A	18	38	76
	EER	W/W	3.16	2.90	2.90
	IPLV(H))		2.82	2.82	2.82
	IPLV(C)		3.42	3.22	3.26
Max. current		A	34	72	150
Max. power input		kW	15	34	68
Basic parameter			▽	▽	▽
Refrigerant	Type		R410A	R410A	R410A
	Refrigerant control		EXV	EXV	EXV
	Charge	kg	7.5	6.5x2	6.5x4
Water side heat exchanger	Type		Shell tube heat exchanger		
	Max. pressure	MPa	1	1	1
	Water flow	m³/h	6.2	13.2	24.4
	Pressure drop	kPa	30	30	40
	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	65
Dimension (WxHxD)	Net	mm	1160x1920x900	2000x1920x900	2200x2220x1100
	packing	mm	1240x2060x950	2080x2060x950	2280x2360x1140
Weight	Net	kg	320	635	1010
	Packing	kg	350	650	1060
Operation Range			▽	▽	▽
Ambient Temperature	Cooling	°C	-5~46°C		
	Heating	°C	-30~45°C		
Water Inlet Temperature	Cooling	°C	9~25°C		
	Heating	°C	20~55°C		

Note

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



Features



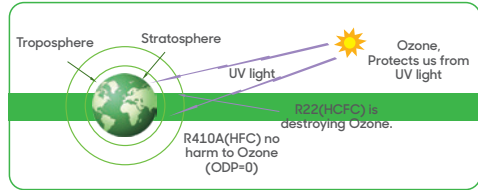
High Reliability

- **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**
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.



Eco Friendly

R410a(HFC) refrigerant, low carbon footprint, no harm to the Ozone.



Larger Loading Quantity

Optimized structure and compact size provided a larger load quantity, for a 20' container, 65kW unit could be loaded 12 sets, and 130kW can be loaded 6 sets.



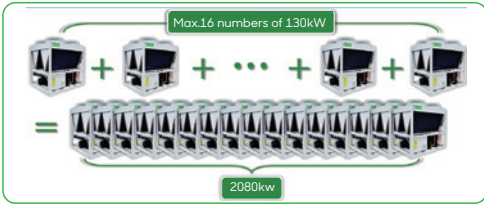
500 Steps EXV From Famous Brand

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.



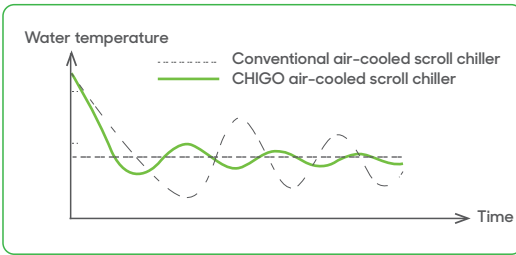
Modular Design Concept

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 2080kW.



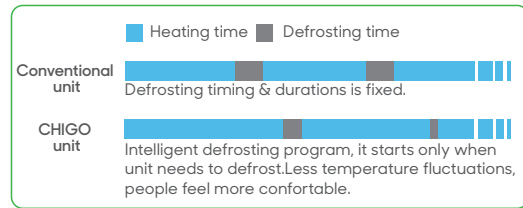
Precise Temperature Control

Precise water temperature control, keeps room temperature stable. compressors in each unit auto respond to the real capacity needs, system provides precisely water temperature controls.



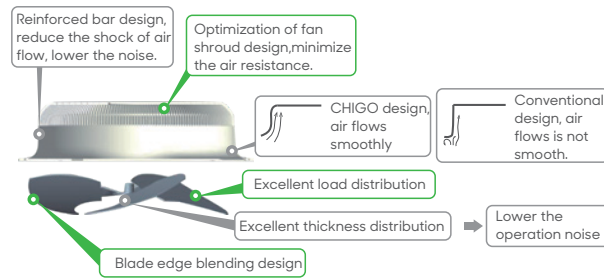
Intelligent Defrosting Program

Intelligent defrosting program, it starts only when unit needs to. Defrosting program starts according to ambient temperature, fin heat exchanger temperature, and water outlet temperature, whereas conventional units defrosting timing & duration is fixed, causing fluctuations in temperature and personal comfort.



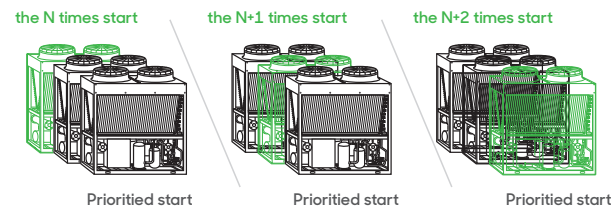
Optimize Fan Blade Design

Optimization of fan blade and fan shroud design, bigger air flow, lower noise.



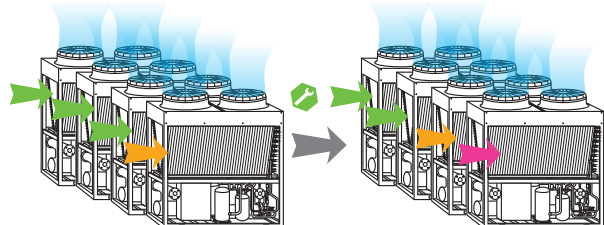
Balance Operation Program

Balance operation program, it balances the operation time of every unit according to the unit's accumulated operation time.



Backup Function

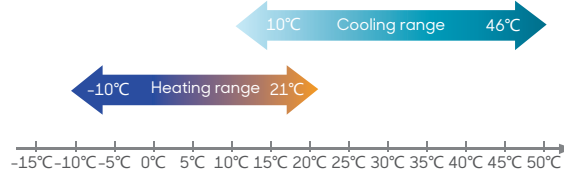
If master unit fails all the units will stop, any one of the slave units can be set as master unit manually. If one slave unit fails, this unit will stop but others keep running.



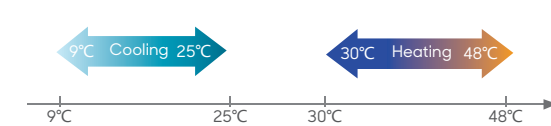
Wide Operation Range

R410A

- Ambient temperature range

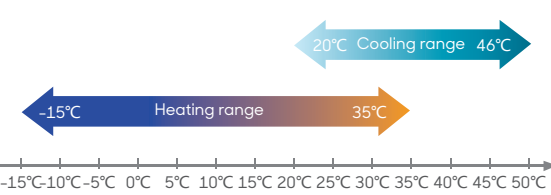


- Water inlet temperature range

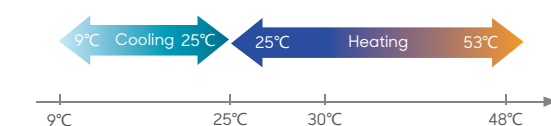


R407C

- Ambient temperature range



- Water inlet temperature range

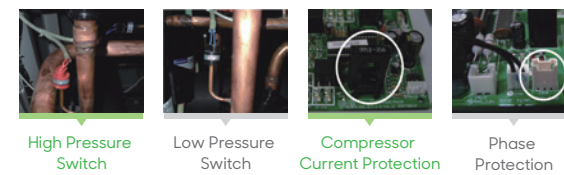


Multi Protections

- Comprehensive protections to guarantee system's safety.



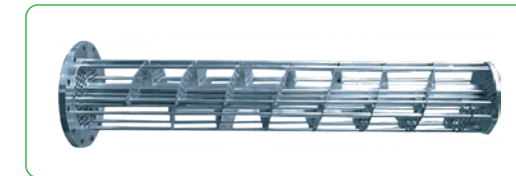
- Using various protection devices to guarantee the system safer and more reliable.



Spiral Shell&Tube Heat Exchanger

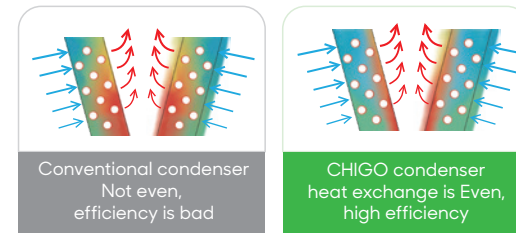
The refrigerant flow in traditional bow shaped turn-back flow heat exchanger moves in "Z" path. The new spiral flow design in spiral turn-back plate heat exchanger changes the status and form of refrigerant, thus increasing heat exchange efficiency. The main characteristics of spiral turn-back plate heat exchanger are as below:

- high heat transfer coefficient(20%~40% increase);
- Full coverage of heat exchange, without dead heat;
- Obvious decrease of pressure drop in the shell(around 45% drop pressure under the same flow velocity);
- Few impurities are no retention area in the shell;
- Better anti-vibration.



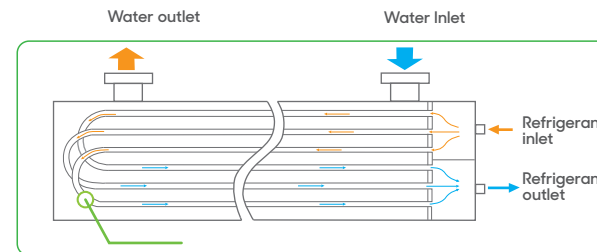
High Efficiency Condenser

Refrigerant flow paths are optimized design, especially for the lower part of condenser coil, it evens the heat exchange between upper part and lower part of condenser, to improve the efficiency of whole unit, also improve the defrosting efficiency in cold winter.



High Efficiency Evaporator

High efficiency shell & tube evaporator, fouling factor is 0.086m²°C/kW, high heat transfer efficiency copper pipes are used in the heat exchanger.



Protective Coaming

Protective coaming and net are available, offering protection for key components of the unit, meeting different requirements of customers.



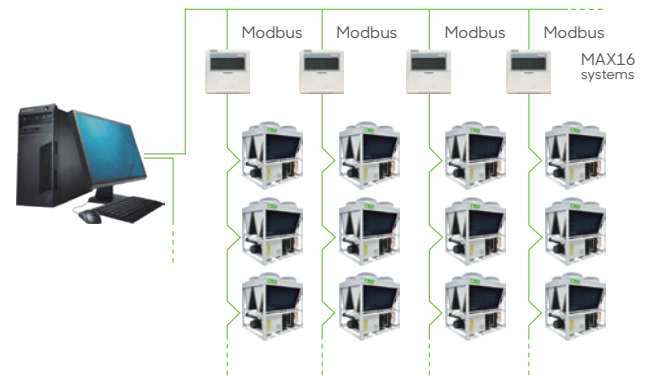
With protective coaming and net



Without coaming and net

Modbus Gateway

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



Specification

Type			R410A/50Hz			R407C/50Hz		
Model			CLS-F30HW/ZR1A	CLS-F65HW/ZR1A	CLS-F130HW/ZR1A	CLS-F30HW/ZR2	CLS-F65HW/ZR2	CLS-F130HW/ZR2
Power supply		V/N/Hz	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50
Capacity			▽	▽	▽	▽	▽	▽
Cooling		kW	30	65	130	30	65	130
Heating		kW	35	70	140	35	70	140
Electrical data			▽	▽	▽	▽	▽	▽
Power input	Cooling	kW	11	22	44	11	22	44
	Heating	kW	10.5	21	42	10.3	21.5	43
	Max. Power Input	kW	15	26	52	20	40	80
Rated current	Cooling	A	19	38	78	19	38	78
	Heating	A	18	37	76	18	37	76
	Max. Current	A	29	51	102	38	76	155
Physical data			▽	▽	▽	▽	▽	▽
Refrigerant	Weight	kg	6.5	6.5x2	6.5x4	6.2	6.2x2	6.2x4
	Refrigerant control		EXV+Capillary	EXV+Capillary	EXV+Capillary	EXV+Capillary	EXV+Capillary	EXV+Capillary
	Type		R410A	R410A	R410A	R407C	R407C	R407C
Compressor	Brand		Copeland	Copeland	Copeland	Copeland	Copeland	Copeland
	Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
	Quantity	pcs	1	2	4	1	2	4
Fan motor	Quantity	pcs	1	2	4	1	2	4
	Air flow volume	m³/h	12000	24000	48000	12000	24000	48000
Evaporator (Water side)	Heat-exchanger type		Shell and tube	Shell and tube	Shell and tube	Shell and tube	Shell and tube	Shell and tube
	Water pressure drop	kpa	30	30	40	30	30	40
	Water inlet/outlet diameter	mm	DN40	DN100	DN65	DN40	DN65	DN80
	Water flow volume	m³/h	5.16	11.18	22.36	5.16	11.18	22.36
	Max. Pressure	MPa	1.1	1.1	1.1	1	1	1
	Connection type		Flange connection	Flange connection	Flange connection	Flange connection	Flange connection	Flange connection
Dimension (WxHxD)	Net	mm	1160x2090x900	2000x2090x900	2000x2090x1700	1160x2090x900	2000x2090x900	2000x2090x1700
	Packing	mm	1240x2250x950	2080x2250x950	2080x2250x1740	1240x2245x950	2080x2245x950	2080x2245x1740
Weight	Net	kg	320	570	1100	320	570	1100
	Gross	kg	330	600	1120	330	600	1120
Control type			Wired controller	Wired controller	Wired controller	Wired controller	Wired controller	Wired controller
Sound level(semi-anechoic)		dB(A)	62	65	68	62	65	68
Quantity per 20GP/40GP/ 40HQ		Set	10/21/21	6/12/12	3/6/6	10/21/21	6/12/12	3/6/6
Operation range			▽	▽	▽	▽	▽	▽
Water inlet temperature	Cooling	℃	9-25	9-25	9-25	9-25	9-25	9-25
	Heating	℃	30-48	30-48	30-48	25-53	25-53	25-53
Water outlet temperature	Cooling	℃	5-20	5-20	5-20	5-20	5-20	5-20
	Heating	℃	35-53	35-53	35-53	30-58	30-58	30-58
Ambient temperature	Cooling	℃	10-46	10-46	10-46	20-46	20-46	20-46
	Heating	℃	-10-21	-10-21	-10-21	-15-35	-15-35	-15-35

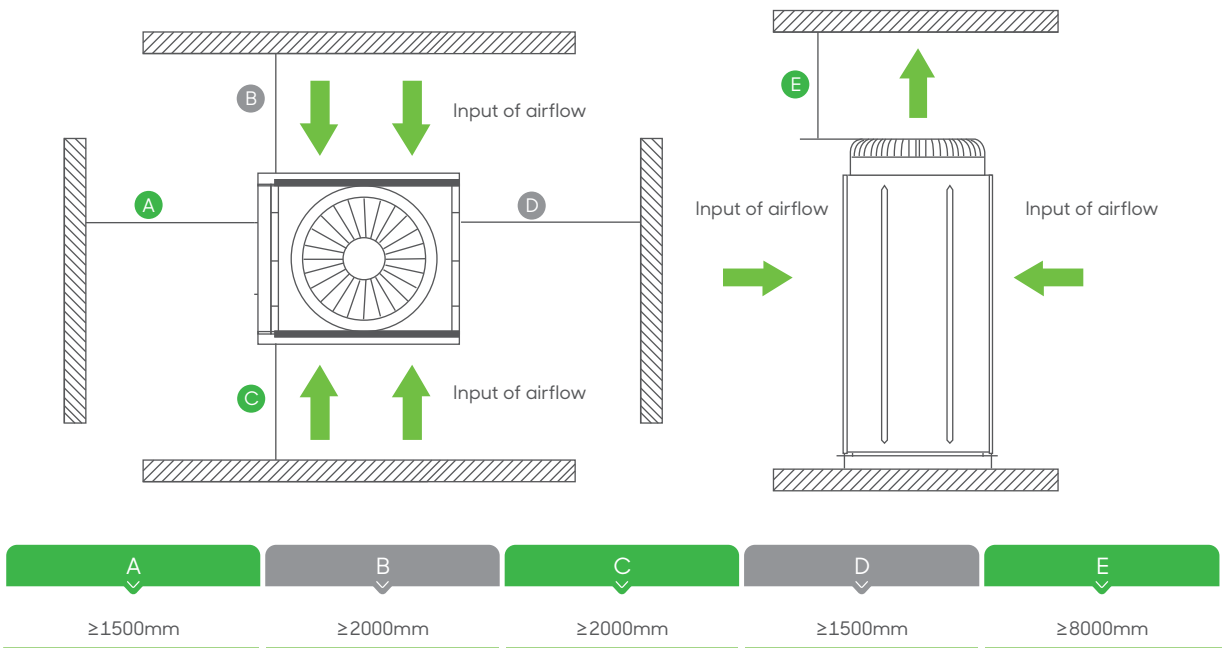
Remarks

1. Cooling: water inlet/outlet: 12℃/7℃, outdoor ambient temp. of 35℃ DB.
2. Heating: water inlet/outlet: 40℃/45℃, outdoor ambient temp. 7℃ DB/6℃ WB.
3. Water side fouling factor: 0.086m²℃/kW.
4. The above data may be changed without notice for future improvement on quality and performance.

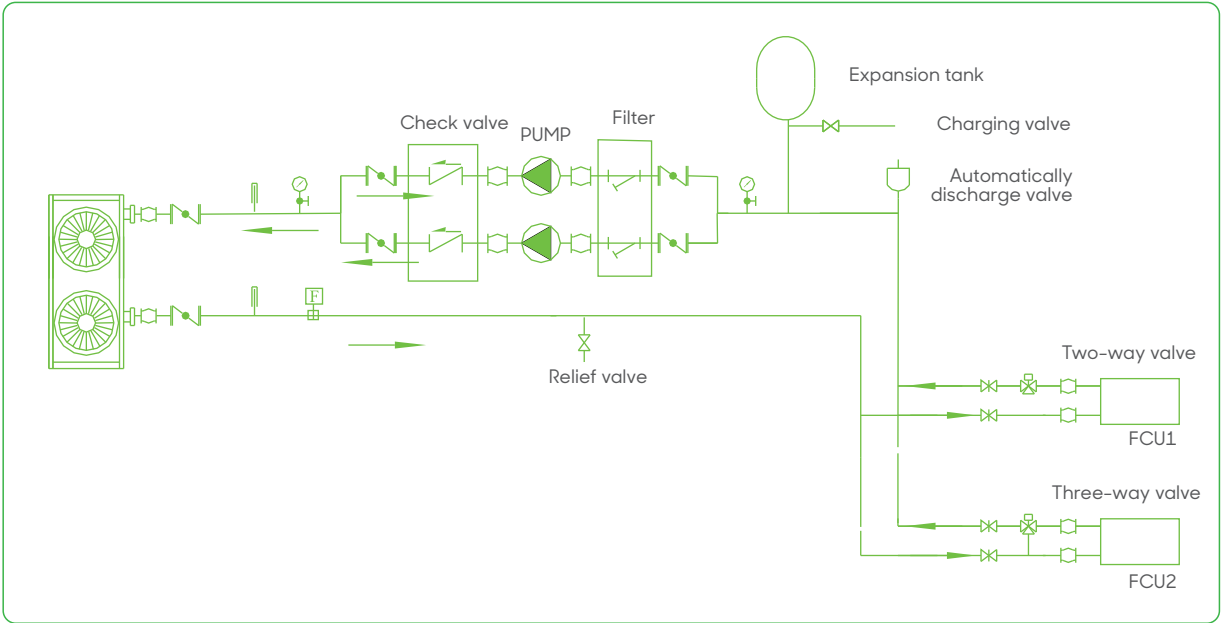
Installation



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



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.

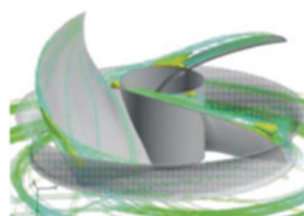
Unmatched reliability

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.



Full Heat Recovery

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

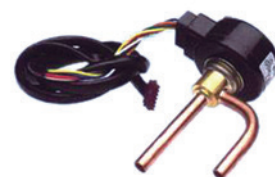


Full heat recovery
Zero discharge



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.



High Efficiency Pot

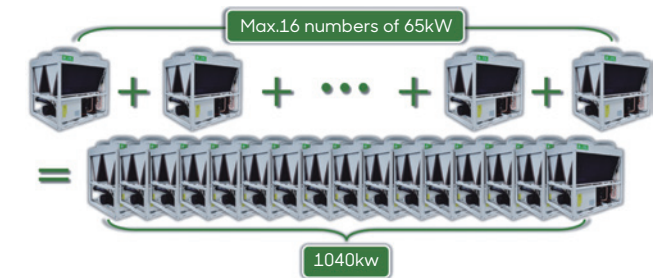
Specially designed high efficiency pot, compact structure and great heat exchange efficiency.

High efficiency pot



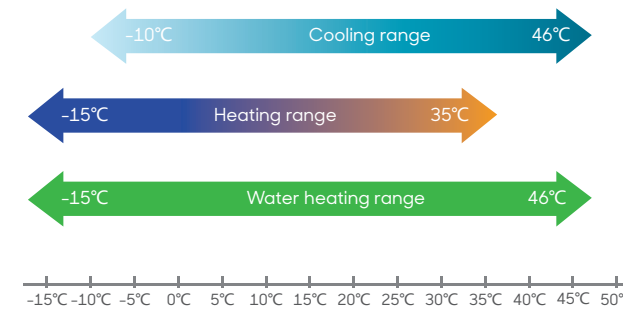
Modular Design Concept

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.

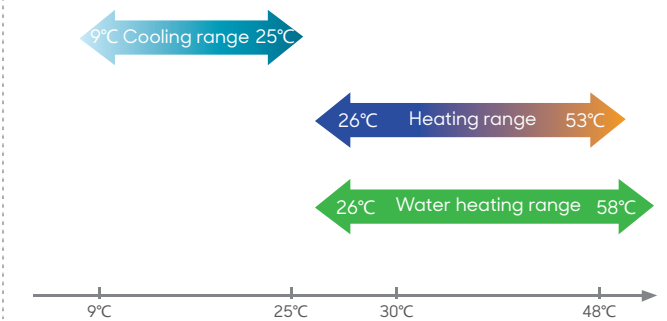


Wide Operation Range

- Ambient temperature range

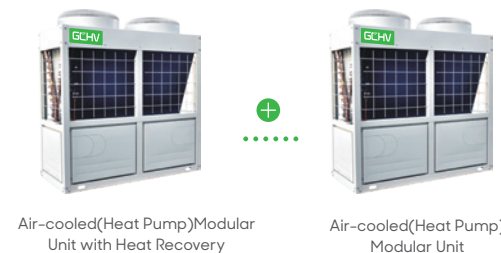


- Water inlet temperature range



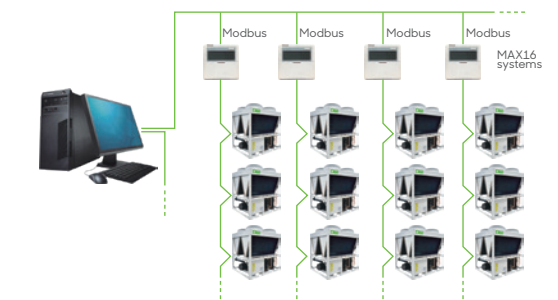
Mixed Combination Design

Mixed combination design, can be combined with standard air-cooled (heat pump) modular chillers in one system, offering flexible and convenient installation.



Modbus Gateway

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

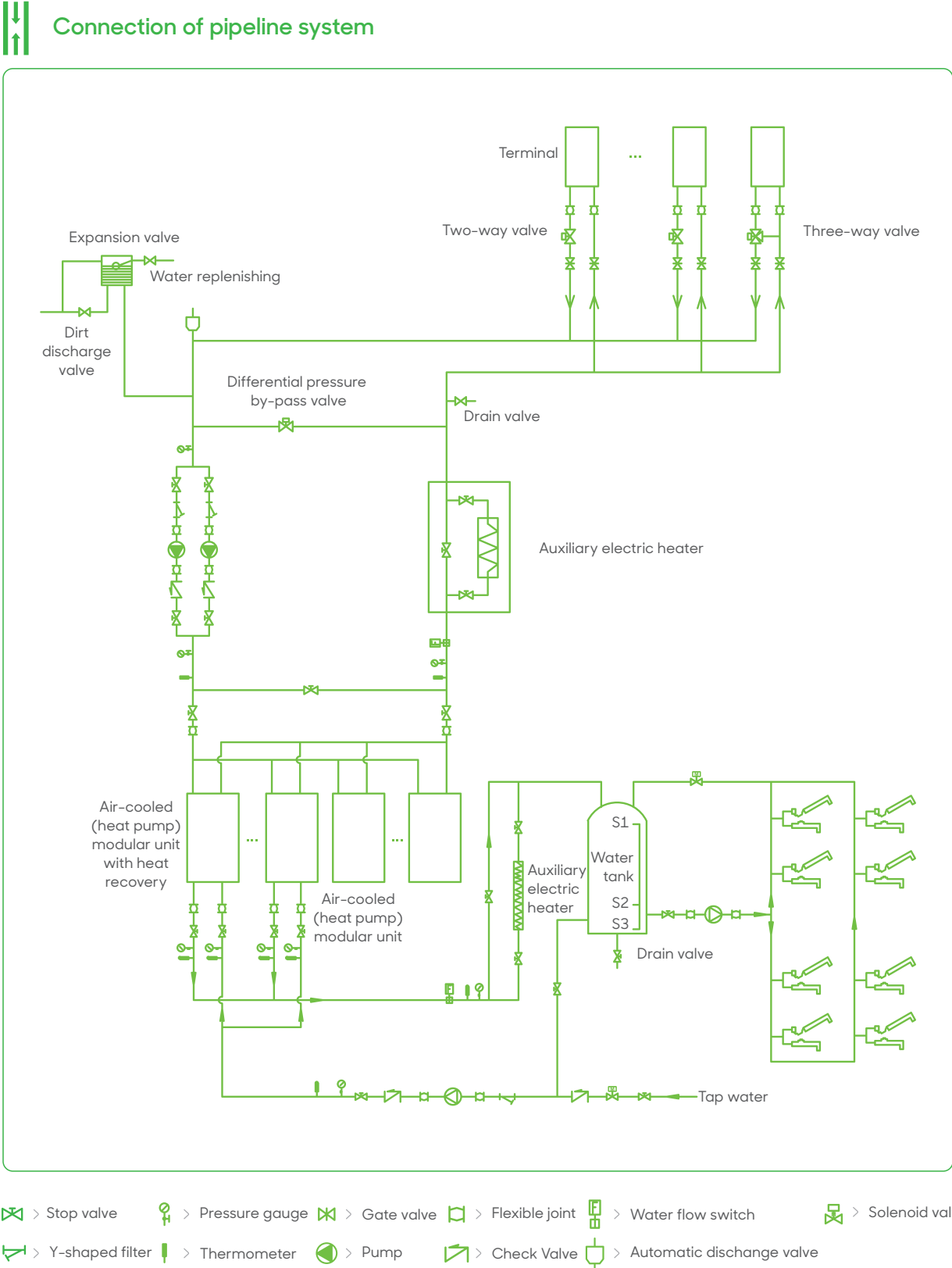


Specification

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
Fan motor	Type		Scroll	Scroll
	Quantity	pcs	1	2
Evaporator (Water side)	Quantity	pcs	1	2
	Air flow volume	m³/h	12000/6000	24000/18000/12000/6000
High efficiency pot (hot water side)	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
Dimension (WxHxD)	Connection type		Thread + rubber gasket	Flange + rubber gasket
	Heat-exchanger type	kPa	Shell and tube evaporator	Shell and tube evaporator
	Water pressure drop	inch	50	65
	Water inlet/outlet diameter	m³/h	1.5	2
	Water flow volume	MPa	6.5	13.07
Weight	Max. Pressure		1	1
	Water pipe connection type		Thread connection	Thread connection
Control type	Net	mm	1160x2090x900	2000x2090x900
	Packing	kg	1240x2245x950	2080x2245x950
Operation range	Net	kg	360	650
	Gross	kg	380	680
Sound level(semi-anechoic)	Wired controller		Wired controller	Wired controller
	58-62		60-65	
Water inlet temperature	Water inlet/outlet	°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):
1. Cooling: water inlet/outlet: 12°C/7°C, outdoor ambient temperature is 35°C DB.
2. Heating: water inlet/outlet: 40°C/45°C, outdoor ambient temperature is 7°C DB/6°C WB.
3. Water heating: water inlet/outlet: 40°C/45°C,outdoor ambient temperature is 20°C DB/15°C WB.

Installation



Envi Group

• 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 cool or warm air can reach each corner of the room, providing a stable and comfortable environment. For compact cassette, 4-way panel is standard.

heating water outlet

cooling water outlet

heating water inlet

cooling water inlet

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.

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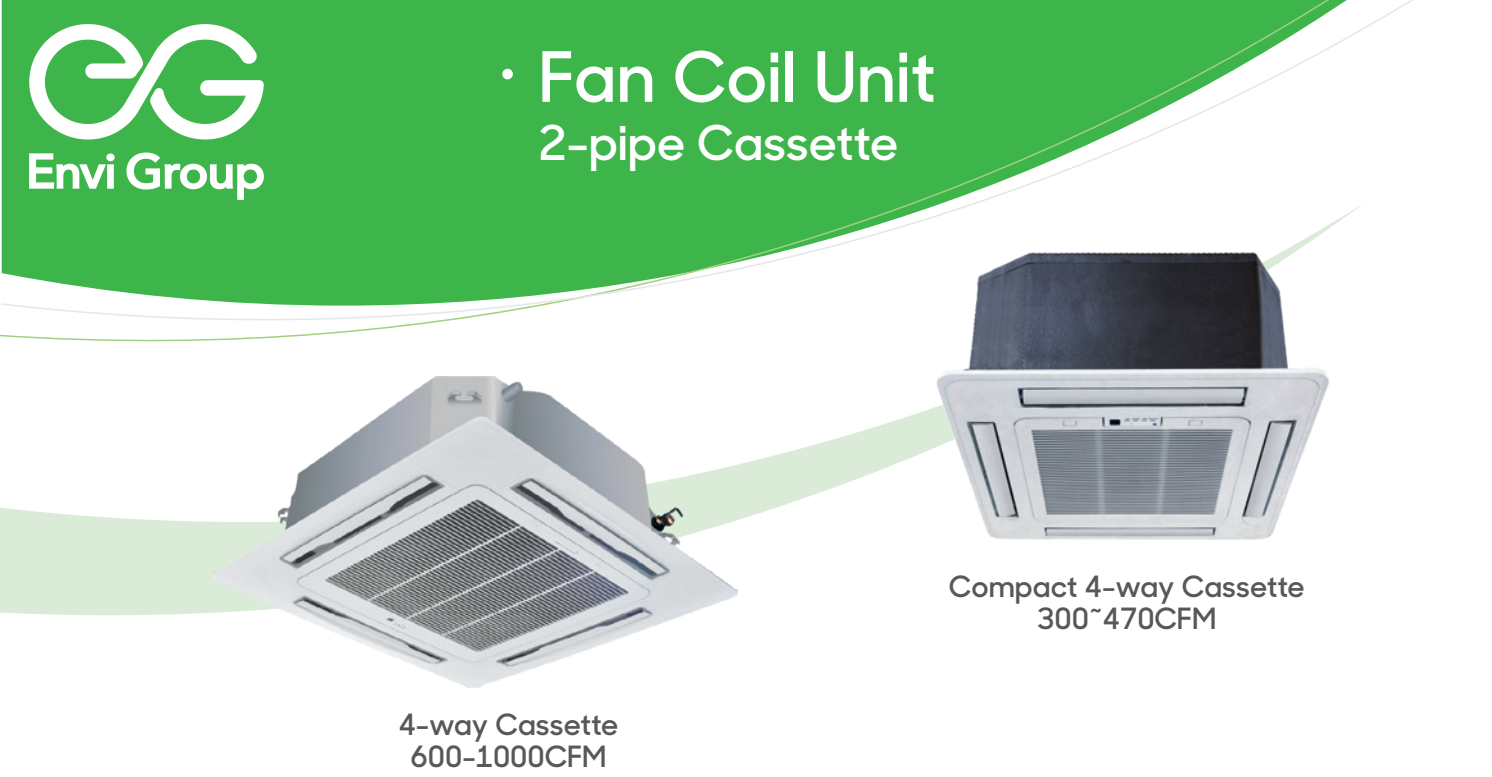
Specification

FCU type			Round Flow Cassette			
Model			CSQ-600R-F	CSQ-760R-F	CSQ-880R-F	CSQ-1000R-F
Power supply			220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50
Capacity			600/500/410	760/700/530	880/790/645	1000/880/700
Air flow volume			1000/850/700	1300/1200/900	1500/1350/1100	1700/1500/1200
Cooling capacity			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			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			127	127	130	134
Rated power input			40-49	40-49	40-49	40-49
Noise level(high speed)			0.72	0.79	0.86	0.95
Water flow volume			0.73	0.90	1.07	1.12
Cooling			32	35	24	26
Heating			43	46	40	42
Water pressure drop			IP24	IP24	IP24	IP24
Waterproof grade			840x230x840	840x230x840	840x285x840	840x285x840
Indoor unit			920x265x920	920x265x920	920x310x920	920x310x920
Dimension(WxHxD)			23.6/27.7	23.6/27.7	28.2/32.6	28.2/32.6
Packing(WxHxD)			950x50x950	950x50x950	950x50x950	950x50x950
Net/Gross weight			1030x100x1030	1030x100x1030	1030x100x1030	1030x100x1030
Cooling water-inlet pipe			6.5/9.5	6.5/9.5	6.5/9.5	6.5/9.5
Cooling water-outlet pipe			DN20	DN20	DN20	DN20
Heating water-inlet pipe			DN20	DN20	DN20	DN20
Heating water-outlet pipe			DN15	DN15	DN15	DN15
Drainage pipe			DN15	DN15	DN15	DN15
Controller			DN25	DN25	DN25	DN25
Remote controller(standard), wired controller(optional)						

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

Remarks 1. Cooling capacity test condition: air side temperature:27DB°C/19WB°C, water inlet temperature 7°C, water temperature difference 5°C.
2. Heating capacity test condition: air side temperature:21DB°C, water inlet temperature 60DB°C, water temperature difference 5°C.

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• 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 Screw Fan

- Adopting the most advanced 3D screw 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.



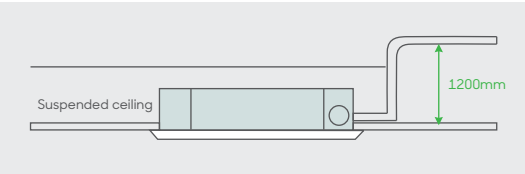
Full Series Of Controllers

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



Built-in Drainage Pump

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



Optional Controllers

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



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
		m³/h	500/340/260	600/420/330	750/560/420
Cooling capacity		kW	2.5/2.2/1.8	3.5/3.0/2.3	4.5/3.9/2.9
Heating capacity		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		m³/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
Fan motor	Fin type		copper tube, aluminum fin		
	Quantity	pcs	1	1	1
	Model		YDK-15Q -6P3	YDK-16Q-6P3	YDK-27Q-4P3
	Speed	r/min	710/ 590/460/360	740/640/540/440	890/790/650/550
	Capacitor	uF	2	1.5	2
	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
		m³/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		m³/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 60DB°C, water temperature difference 5°C.



200~1400CFM

Features



Nested in the ceiling, space-saving and noble.



High capacity of cooling/heating performance, high efficiency and energy-saving.



Adjust the indoor temperature rapidly and averagely.



Low noise fan direct driven by single phase, 3 speed permanent split capacitor motor.



Unit constructed by electrostatic galvanized sheet.



Providing maximum protection against corrosion. Heavy gauge zinc coated steel drainage pan with good insulation processing, avoiding sweating and corrosion.



Unit tested performance comply with GB4706.32-2004、JB9063-1999 and JB/T4283-1991.



Air return box and filter is optional. Air return method from rear and from bottom is changeable according to the actual installation.

Specification

[illegible]

Remarks

1.All performance data above are based upon 12Pa ESP(200-500); 30Pa ESP(600-1000).
2.Cooling capacity test condition: air side temperature: 27DB°C/19WB°C,water inlet temperature 7°C,water temperature difference 5°C.
3.Heating capacity test condition: air side temperature:21DB°C, water inlet temperature 60 DB°C,water temperature difference 5°C.

• Accessories

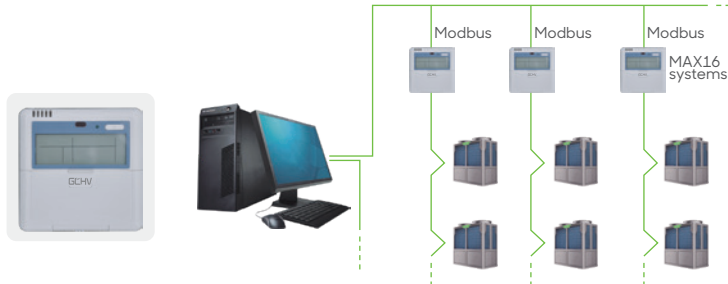


Wireless Controller (In Package Of Cassette Fcus)

- 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
- Sleep mode function

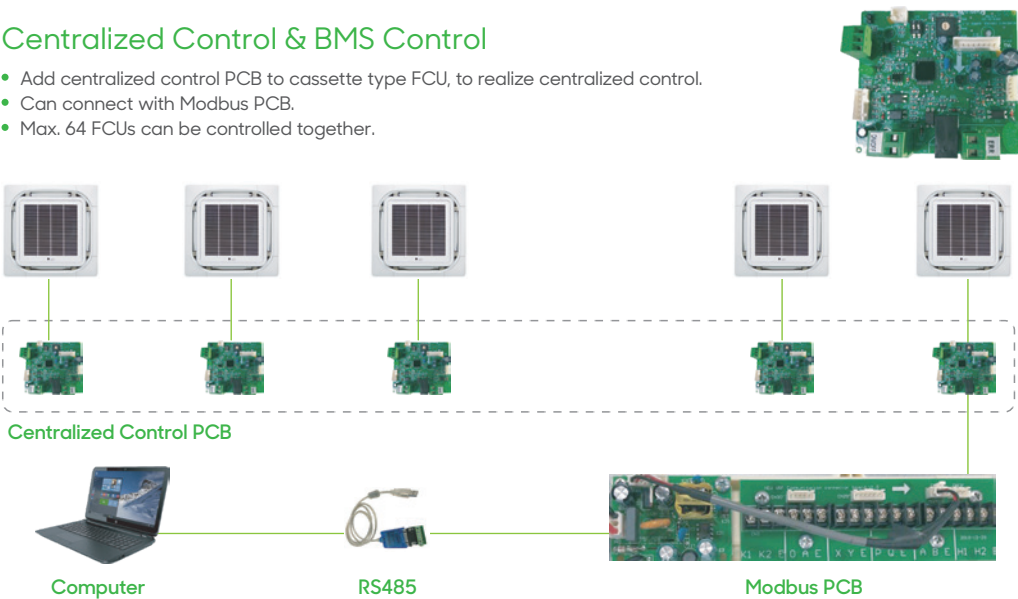
Wired Controller

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

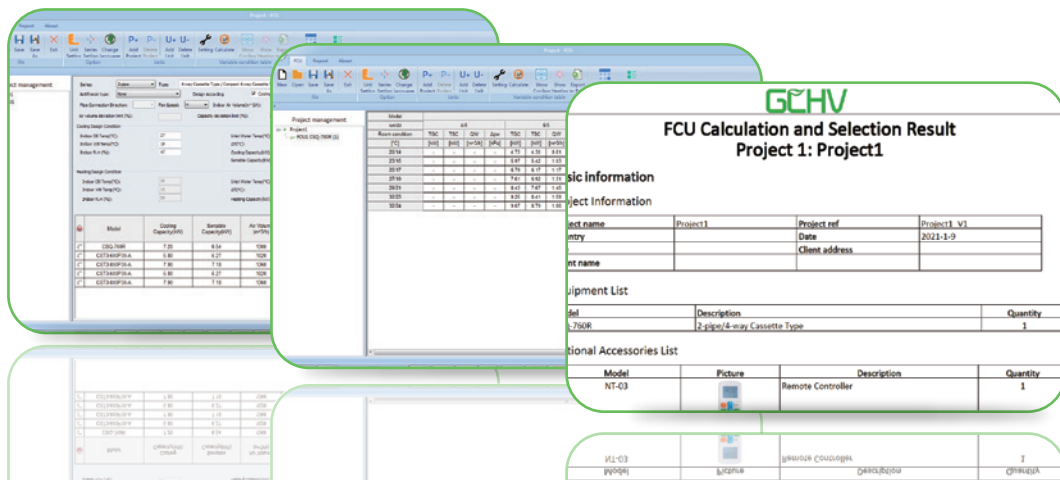


Centralized Control & BMS Control

- 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.



Museum of South Bohemia in Ceske Budejovice, Czech Republic.