V017-EN-01

Mini Chillers
Modular Chillers
Fan Coil Units

sinclair
AIR CONDITIONING

Mini Chillers

Sinclair DC Inverter Mini Chillers adopt unitary structure design and a hydraulic module is built in the outdoor unit. It is an air-cooled water heat pump chiller so there is no need of cooling water tower at the condensing side.

Cooling capacity of DC inverter Mini Chillers range is from 5kW to 18kW and it can be freely combined with fan coil units & floor heating. These units are designed for residential applications or light commercial applications that require cold or hot water.

Modular Chillers

Sinclair Modular Chillers adopt V shape heat exchanger and by units you can use capacity from 30kW to 250kW. Combining models maximum capacity can be 2000kW. For 30kW and 65kW digital compressor is used. The advantage of modular connection is, if one module fails, other modules can be back-up instead of the failed one to provide a continuing operation.

Chillers are freely combinable with fan coil units and air handling units. Project owners may choose the best types according to their design taste (for interior) or needs for functions.

AIR-COOLED FULL DC INVERTER

MINI CHILLERS

SCV-50EA
SCV-70EA
SCV-100EA
SCV-120EA
SCV-140EA
SCV-160EA

FEATURES

- Energy saving – energy class A+
- High efficient DC inverter compressor and DC fan motor
- Low noise emission
- Easy installation and high reliability
- Integrated and compact design - include hydraulic module
- High performance heat exchanger
- Reliable operation – built-in controller & water pressure gauge
- Water pump starts/stops compulsory function
- Built-in electronic controller
- Wide operation temperature range and outlet water temperature range

Mode	Ambient temperature range	Water outlet temperature range
Cooling	-5 ºC ~ 46 ºC	4 ºC ~ 20 ºC
Heating	-15 ºC ~ 27 ºC	30 ºC ~ 55 ºC

Model			SCV-50EA	SCV-70EA	SCV-100EA	SCV-120EA	SCV-140EA	SCV-160EA
Power supply		V/Ph/Hz	220-240/1/50			380-415/ 3/50		
Cooling[1]	Capacity	kW	5,0 (1,9~5,8)	7,0 (2,1~7,8)	10,0 (2,9~10,5)	11,2 (3,1~12,0)	12,5 (3,3~14,0)	14,5 (3,5~15,5)
	Rated input	W	1550	2250	2950	3380	3900	4700
	Rated current	A	6,8	9,9	13,0	5,5	6,4	7,7
	EER	W / W	3,23	3,11	3,39	3,31	3,20	3,10
Cooling[2]	Capacity	kW	5,6	8,0	10,6	12,2	14,2	15,6
	Rated input	W	1150	1850	2300	2600	3100	3600
	EER	W/W	4,87	4,32	4,24	4,70	4,58	4,33
	SEER		5,83	6,07	5,71	6,18	6,69	6,78
Heating[3]	Capacity	kW	6,2 (2,1~7,0)	8,0 (2,3~9,0)	11,0 (3,2~12,0)	12,3 (3,3~13,2)	13,8 (3,5~15,4)	16,0 (3,7~17,0)
	Rated input	W	1900	2500	3140	3720	4250	4850
	Rated current	A	8,3	11,0	13,8	6,1	7,0	8,0
	COP	W/W	3,26	3,20	3,50	3,31	3,25	3,30
Heating[4]	Capacity	kW	6,2	8,6	11,5	13,0	15,1	16,5
	Rated input	W	1350	2100	2650	2850	3350	3920
	COP	W/W	4,60	4,10	4,34	4,56	4,51	4,21
	SCOP		3,55	3,46	3,34	3,66	3,78	3,39
Seasonal space heating energy efficiency (ηs)			138,9%	135,3%	130,7%	143,5%	148,3%	132,6%
Seasonal space heating energy efficiency class			A+	A+	A+	A+	A+	A+
Max. input current		A	11,4	13,7	25	8,9	9,6	10,1
Compressor	Type		ROTARY	ROTARY	ROTARY	ROTARY	ROTARY	ROTARY
Outdoor fan	Motor type		DC Motor	DC Motor	DC Motor	DC Motor	DC Motor	DC Motor
	Air flow	m^3/h	5100	5100	7000	7000	7000	7000
Air heat exchanger	Type		Fin-coil					
Water heat exchanger	Type		Plate heat exchanger					
	Water volume	L	0,53	0,53	0,70	0,78	0,78	1,06
	Water flow	m^3/h	0,86	1,20	1,72	1,92	2,15	2,49
	Water pressure drop	kPa	15	15	18	18	18	19
Water pump	Pump head	m	5,5	5,5	8,5	8,5	8,5	8,5
	Water volume	L/min	4	4	4	4	4	4
Expansion tank volume		L	2	2	3	3	3	3
Refrigerant	Type		R410A	R410A	R410A	R410A	R410A	R410A
	Charged volume	kg / t eq. CO_2	2,5 / 5,22	2,5 / 5,22	2,8 / 5,8	2,8 / 5,8	2,9 / 6,0	3,2 / 6,7
Throttle type			Electronic expansion valve					
Sound power level[5]		dB(A)	63	66	68	68	70	72
Sound pressure level		dB(A)	58	58	59	62	62	62
Unit net dimension (WxHxD)		mm	990x966x354	990x966x354	970x1327x400	970x1327x400	970x1327x400	970x1327x400
Packing dimension (WxHxD)		mm	1120x1100x435	1120x1100x435	1082x1456x435	1082x1456x435	1082x1456x435	1082x1456x435
Net / Gross weight		kg	81/91	81/91	110/121	110/121	111/122	111/122
The Max. and Min. water inlet pressure[6]		kPa	500/150	500/150	500/150	500/150	500/150	500/150
Pipe connections	Water inlet/outlet	inch	1	1	1-1/4	1-1/4	1-1/4	1-1/4
Controller			Electronic controller (standard)					
Ambient temperature range	Cooling	°C	-5~46	-5~46	-5~46	-5~46	-5~46	-5~46
	Heating	°C	-15~27	-15~27	-15~27	-15~27	-15~27	-15~27
Water outlet temperature range	Cooling	°C	4~20	4~20	4~20	4~20	4~20	4~20
	Heating	°C	30~55	30~55	30~55	30~55	30~55	30~55

Nominal capacity is based on the following conditions:

1. Condenser air in 35 °C. Evaporator water in/out 12/7 °C
2. Condenser air in 35 °C. Evaporator water in/out 23/18 °C
3. Evaporator air in 7 °C 85% R.H. Condenser water in/out 40/45 °C
4. Evaporator air in 7 °C 85% R.H. Condenser water in/out 30/35 °C
5. 1 m far from fan side of unit in open field
6. The maximum and minimum operating pressure values refer to the activation of the pressure switches
7. The above data test reference standard EN14511:2013; EN14825:2013; EN50564:2011; EN12102:2011; (EU)No:811:2013; (EU)No:813:2013; OJ 2014/C 207/02:2014

The specification of products is subject to change based on further development of the units by the producer and can be changed without prior notice. Refer to rating label. Contains fluorinated greenhouse gases covered by the Kyoto Protocol. R410A (50% HFC-32, 50% HFC-125), GWP of refrigerant used: 2088. Noise is tested in the semi-anechoic room, so it should be slightly higher in the actual Operation due to environmental change. Power input is tested under standard condition.

AIR-COOLED SCROLL
MODULAR CHILLERS

SCV-300EAD
SCV-650EAD

SCV-1300EAX
SCV-2000EAX
SCV-2500EAX

FEATURES

- Modular design concept
- Combination of up to 16 modules
- Each module can be set a master unit and each module can also be set as a slave unit (if the system has a digital unit, the digital unit must be set as the master unit)
- Easy connection of the main unit and slave units
- All units can be connected together with a three-core wired controller in series type
- On PCB you can remotely control: ON/OFF, heating/cooling, alarm (Note: when using the remote control function, the wired controller is out of operation.)
- Easy transportation and installation
- Back-up functions (in combined system) - if one module fails, other modules are back-up for the failed one to provide a continuing operation
- Digital or fixed scroll compressor
- Small capacity units (30kW) have double pipe heat exchanger
- Large capacity units (65kW, 130kW, 200kW and 250kW) have shell and tube heat exchanger
- Economical operation
- Flexible pipe connection and installation

Mode	Ambient temperature range	Water outlet temperature range
Cooling	10 ºC ~ 46 ºC	5 ºC ~ 17 ºC (7 ºC default)
Heating	-10 ºC ~ 21 ºC	22 ºC ~ 50 ºC (45 ºC default)

Model			SCV-300EAD	SCV-650EAD	SCV-1300EAX	SCV-2000EAX	SCV-2500EAX
Power supply	V/Ph/Hz		380-415/3/50				
Cooling[1]	Capacity	kW	30	65	130	185	250
	Input	kW	10,0	20,4	40,8	63,0	78,3
	EER		3,00	3,18	3,18	2,93	3,19
Heating[2]	Capacity	kW	32	69	138	200	270
	Input	kW	9,8	21,5	43,0	61,0	80,0
	COP		3,27	3,21	3,21	3,27	3,38
Max. running current	A		21,1	54,5	109	150	200
Compressor	Type		Digital Scroll+Fixed Scroll	Digital Scroll+Fixed Scroll	Fixed Scroll	Fixed Scroll	Fixed Scroll
	Quantity	Pieces	2	3	4	6	8
Air side heat exchanger	Type		Fin-coil	Fin-coil	Fin-coil	Fin-coil	Fin-coil
	Fan motor type		AC Motor	AC Motor	AC Motor	AC Motor	AC Motor
	Quantity of fan motor	Pieces	1	2	4	6	8
	Air flow	m3/h	12 000	24 000	48 000	72 000	96 000
Water side heat exchanger	Type		Double-pipe	Shell-tube	Shell-tube	Shell-tube	Shell-tube
	Water pressure drop	kPa	60	15	25	30	40
	Volume	L	10	42	64	90	131
	Water flow volume	m^3/h	5,2	11,2	22,4	31,8	43
Refrigerant	Type		R410A	R410A	R410A	R410A	R410A
	Charged volume	kg	7,0 / 14,6	14,0 / 29,2	28,0 / 58,5	42,0 / 87,7	60,0 / 125,3
	Throttle type		EXV	EXV	EXV	EXV	Fixed Scroll
Sound pressure level[3]		dB(A)	65	67	70	74	74
Unit net dimension(DxHxW)		mm	1514x1865x841	2000x1880x900	2000x2090x1685	2850x2110x2000	3800x2130x2000
Packing dimension(DxHxW)		mm	1590x2065x995	2106x2090x998	2090x2240x1755	2980x2260x2135	3900x2200x2100
Net/ Gross weight		kg	375/400	610/680	1150/1270	1700/2000	2450/2600
Pipe connections	Water inlet/outlet	mm	DN40	DN100	DN65	DN80	DN100
Controller			Wired controller	Wired controller	Wired controller	Wired controller	Wired controller
Ambient temperature range	Cooling	ºC	10~46	10~46	10~46	10~46	10~46
	Heating	ºC	-10~21	-10~21	-10~21	-10~21	-10~21
Water outlet temperature range	Cooling	ºC	5~17	5~17	5~17	5~17	5~17
	Heating	ºC	45~50	45~50	45~50	45~50	45~50

1. Cooling: Chilled water inlet/outlet temperature: 12/7 ºC, outdoor ambient temperature 35 ºC DB.
2. Heating: Warm water inlet/outlet temperature: 40/45 ºC, outdoor ambient temperature 7 ºC DB/6 ºC WB.
3. 1 m far from unit in open field.

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COMBINATIONS OF MODULAR CHILLERS

Model		SCV-300EAD	SCV-650EAD	SCV-1300EAX	SCV-2000EAX	SCV-2500EAX
Heat exchanger	type	Double-pipe	Shell and tube	Shell and tube	Shell and tube	Shell and tube
Compressor	type	digital and fixed	digital and fixed	fixed	fixed	fixed
Maximum combinations		16	16	8	5	8
Maximum capacity	kW	480	1040	1040	1000	2000

CONTROL SYSTEM
MODULAR CHILLERS

KJRM-120D
KJR-120A
LONWORKS (BMS) GATEWAY
MODBUS GATEWAY
BACNET GATEWAY

WIRED CONTROLLERS

KJRM-120D - STANDARD

- Parameter setting and display
- Real time clock control
- Manual reset
- Remote control icon display
- Hysteresis temperature setting
- Touch key operation
- Compatible gateway: Modbus & Lon Works

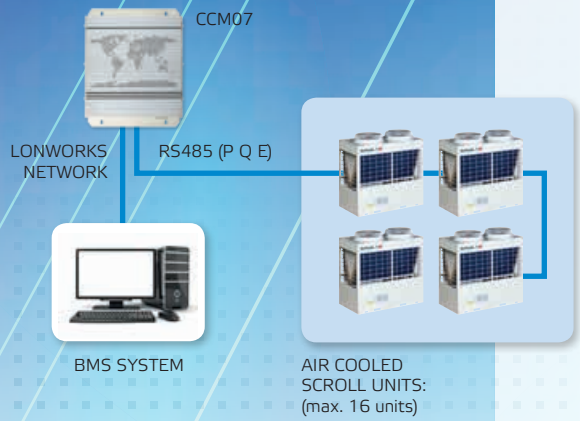
KJR-120A - OPTIONAL

- Parameter setting and display
- Real time clock control
- Manual reset
- Remote control icon display
- Hysteresis temperature setting
- Weekly timing function
- Compatible gateway: Lon Works

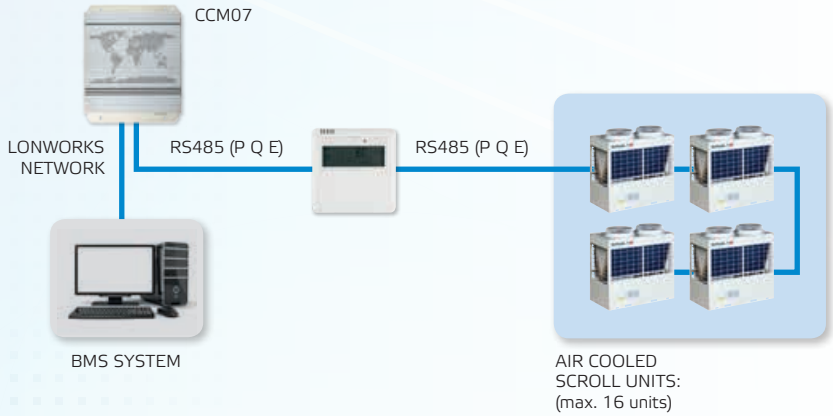
LONWORKS BMS GATEWAY
LONGW64 CCM07

- Controls central building management system (BMS)
- Main settings of LonWorks: operation mode, outlet water temperature, hysteresis temperature and clear alarm
- Two connection methods for LonWorks:

CONNECTION 1

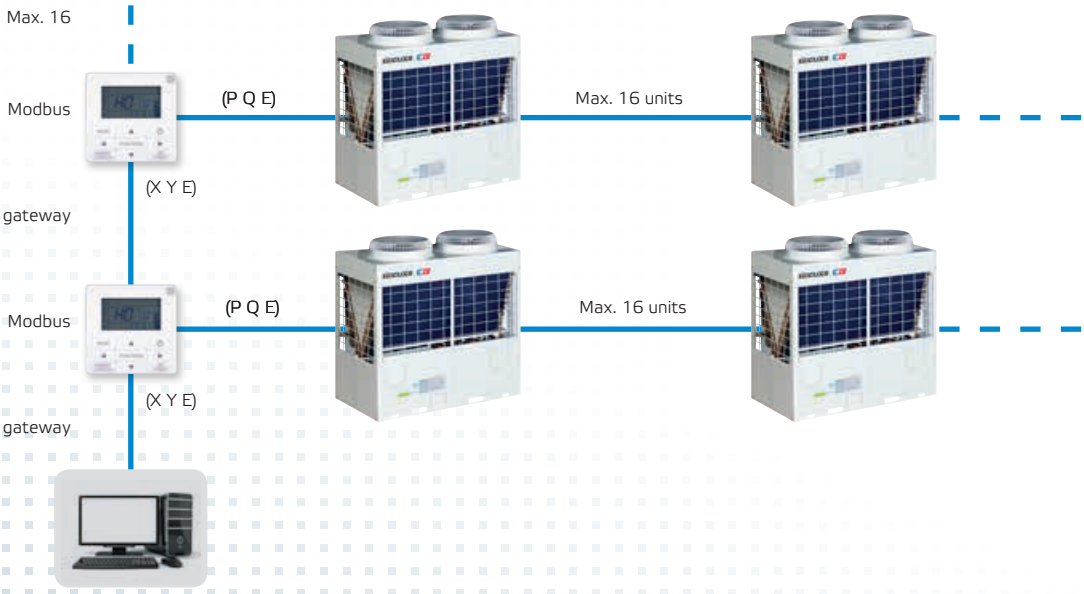


CONNECTION 2



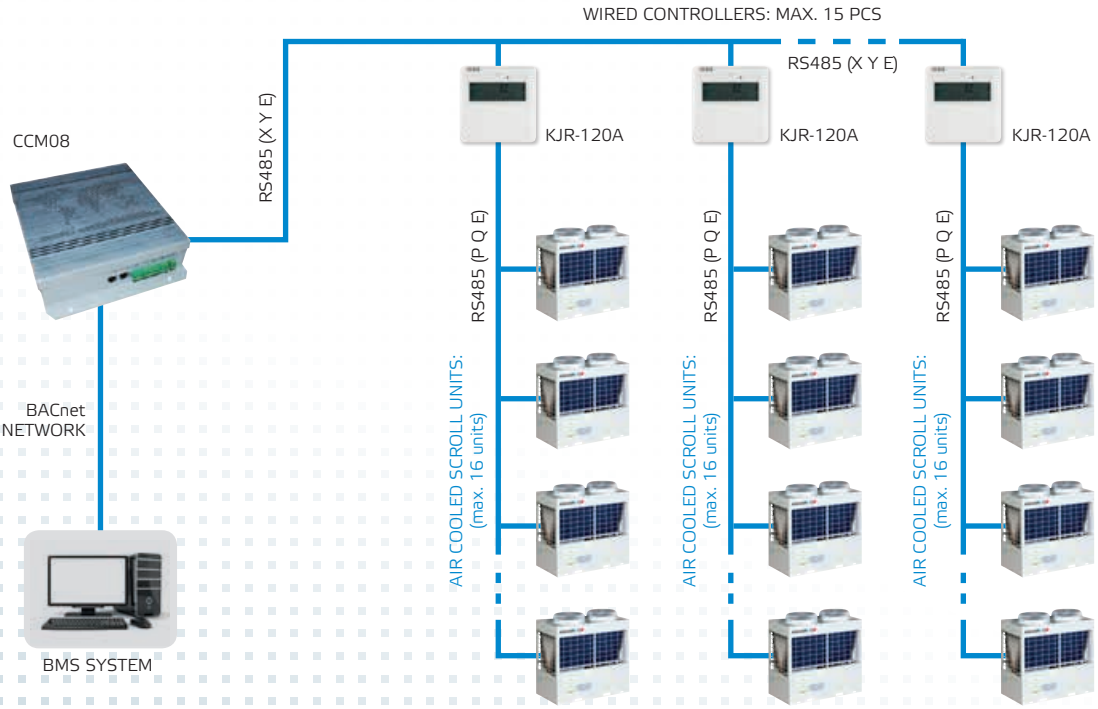
MODBUS GATEWAY

- Can be customized by adding X, Y, E ports on wired controller KJRM-120D
- Can connect max. 16 wired controllers and each controller can control max. 16 units



BACNET BMS GATEWAY
CCM08

- Enables to connect air-conditioning units and modular chillers to Building Management System (BMS) via BACnet interface (256 indoor units or 128 outdoor units).



Fan Coil Units

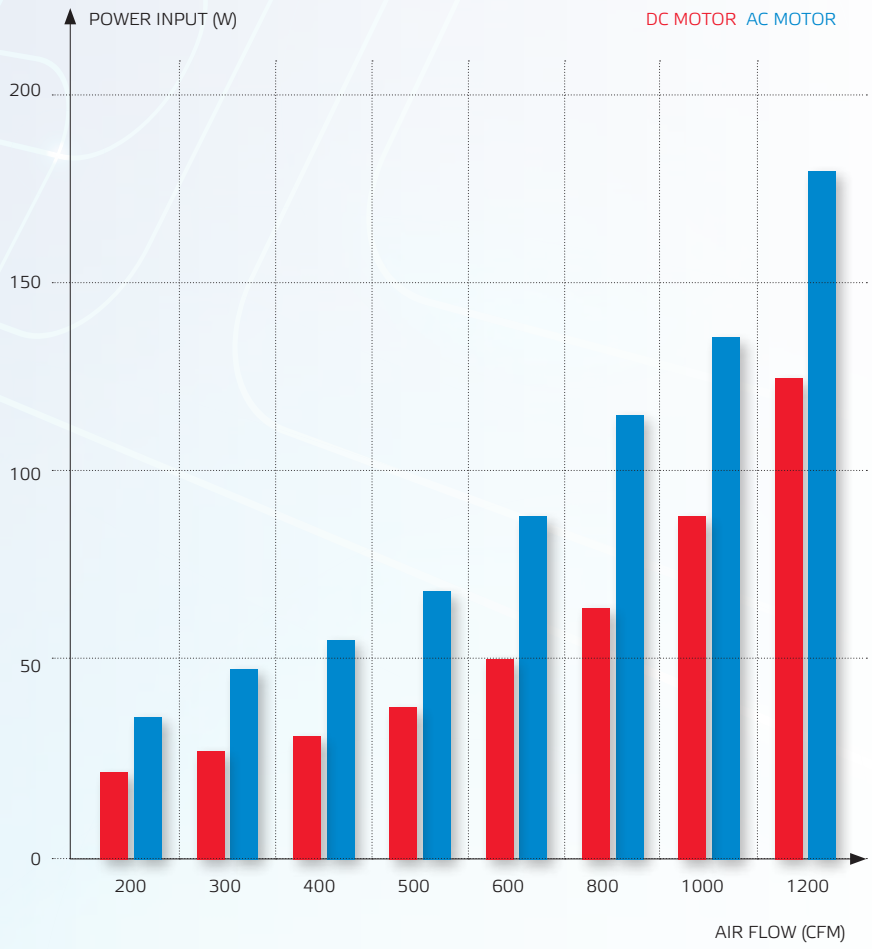
C2
C4
H
D3
F
SF

TYPE OF UNIT

- FOUR-WAY CASSETTE UNIT, 2 PIPES
- FOUR-WAY CASSETTE UNIT, 4 PIPES
- WALL MOUNTED UNIT, 2 PIPES
- DUCT, 3 ROWS, 2 PIPES
- FLOOR CEILING, 2 PIPES
- DESIGNATION FOR SINCLAIR FAN COIL

ADVANTAGE OF FAN COIL UNITS WITH DC BRUSHLESS FAN MOTOR

The DC fan coil units are the new energy saving products improved with advanced DC driven technology. The DC fan coil units have advanced technology of high energy efficiency, low noise operation and precise temperature control, so they are ideal for hospitals, office buildings, hotels, airports and various other applications.



HIGH EFFICIENCY AND ENERGY SAVING

Sinclair DC FCU adopts the brushless DC motor whose efficiency is up to 90%. In contrast with the original FCU, DC FCU power consumption can be reduced by more than 30%.

FOUR-WAY CASSETTE, 2 PIPES

FAN COIL UNITS

FEATURES

- Fresh air connection
- Possibility of air outlet into small room
- Possibility of Modbus connection port
- DC brushless fan motor
- Drainage water pump
- High efficient heat exchanger
- Advanced 3D spiral fan
- Long term filter

FOUR-WAY CASSETTE, 2 PIPES HAVE REMOTE CONTROLLER RM05 AS STANDARD

TECHNICAL SPECIFICATIONS

Model			SF-300C2	SF-400C2	SF-500C2	SF-600C2	SF-750C2	SF-850C2	SF-950C2	SF-1500C2
Power supply		V/Ph/Hz	220-240/1/50			220-240/1/50				
Air flow (H/M/L)		m^3/h	560/392/280	717/502/359	785/550/393	1133/793/567	1255/879/628	1441/1009/721	1494/1046/747	1850/1295/925
		CFM	330/231/165	422/296/211	462/324/231	667/467/334	739/517/370	848/594/424	879/616/440	1089/762/544
Cooling	Capacity (H/M/L)	kW	3,02/2,3/1,75	3,3/3,07/2,48	4,24/3,31/2,67	5,58/4,35/3,52	5,77/4,5/3,63	6,84/5,33/4,3	6,99/5,27/4,16	10,64/8,09/6,6
	Water flow rate	L/h	519	676	729	960	992	1176	1202	1830
	Water pressure drop	kPa	7,4	12	16	21	28	27	25	36
Heating	Capacity (H/M/L)	kW	4,1/3/2,22	5,34/4/3,15	5,77/4,33/3,4	7,72/5,92/4,5	8,15/6,12/4,65	9,37/7,25/5,5	9,52/7,35/5,32	14,38/11,29/8,44
	Water pressure drop	kPa	8	10,6	15	22	26	23	20	34
Power input		W	22,7	27	32	42	50	64	71	124
Sound pressure level (H/M/L)		dB(A)	34/29/21	40/36/28	43/37/30	42/33/26	45/37/28	46/36/28	47/37/31	50/40/33
Fan motor	Type		DC motor	DC motor	DC motor	DC motor	DC motor	DC motor	DC motor	DC motor
	Quantity		1	1	1	1	1	1	1	1
Fan	Type		Centrifugal, forward-curved Blades			Centrifugal, forward-curved Blades				
	Quantity		1	1	1	1	1	1	1	1
Coil	Row		2	2	2	2	2	2	2	3
	Max. working pressure	MPa	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6
	Diameter	mm	Φ7	Φ7	Φ7	Φ7	Φ7	Φ7	Φ7	Φ7
Panel	Net dimensions (WxHxD)	mm	647x50x647	647x50x647	647x50x647	950x45x950	950x45x950	950x45x950	950x45x950	950x45x950
	Packing size (WxHxD)	mm	715x123x715	715x123x715	715x123x715	1035x90x1035	1035x90x1035	1035x90x1035	1035x90x1035	1035x90x1035
	Net weight	kg	2,5	2,5	2,5	6	6	6	6	6
	Gross weight	kg	4,5	4,5	4,5	9	9	9	9	9
Body	Net dimensions (WxHxD)	mm	575x261x575	575x261x575	575x261x575	840x230x840	840x230x840	840x300x840	840x300x840	840x300x840
	Packing size (WxHxD)	mm	675x320x675	675x320x675	675x320x675	900x260x900	900x260x900	900x330x900	900x330x900	900x330x900
	Net weight	kg	16,5	16,5	16,5	23	23	27	27	29,5
	Gross weight	kg	22,5	22,5	22,5	28	28	33	33	34,5
Pipe connections	Water inlet/outlet pipe	inch	G3/4	G3/4	G3/4	RC3/4	RC3/4	RC3/4	RC3/4	RC3/4
	Drain pipe	mm	Φ25	Φ25	Φ25	Φ32	Φ32	Φ32	Φ32	Φ32

1. H: High fan speed; M: Medium fan speed; L: Low fan speed.
2. Cooling conditions: entering water 7 °C, temperature rise 5 °C, entering air temperature 27 °C DB/19 °C WB.
   Heating conditions: entering water 50 °C, entering air temperature 20 °C DB, the same water flow as the cooling conditions.
3. Noise is tested in a semi-anechoic test room.

FOUR-WAY CASSETTE, 4 PIPES

FAN COIL UNITS

FEATURES

- Independent connection to the heating and cooling circuits
- Fresh air connection
- Possibility of air outlet into small room
- Possibility of Modbus connection port
- DC brushless fan motor
- Drainage water pump
- High efficient heat exchanger
- Advanced 3D spiral fan
- Long term filter

FOUR-WAY CASSETTE, 4 PIPES HAVE
REMOTE CONTROLLER RM05 AS STANDARD

TECHNICAL SPECIFICATIONS

Model			SF-300C4	SF-400C4	SF-500C4	SF-600C4	SF-750C4	SF-950C4	SF-1200C4
Power supply		V/Ph/Hz	220-240/1/50			220-240/1/50			
Air flow (H/M/L)		m^3/h	560/397/284	717/502/359	785/550/393	1187/831/594	1233/863/617	1526/1068/763	1768/1238/884
		CFM	334/234/167	422/286/211	462/324/231	700/489/350	726/508/363	898/629/449	1041/729/520
Cooling	Capacity (H/M/L)	kW	2,39/1,82/1,46	2,88/2,19/1,8	3,24/2,46/2,04	4,94/3,77/3,13	5,18/3,94/3,26	5,61/4,26/3,53	9,02/6,85/5,68
	Water flow rate	L/h	411	495	558	850	891	965	1551
	Water pressure drop	kPa	19,1	14,5	20,9	15	12	15	70
Heating	Capacity (H/M/L)	kW	3,92/2,98/2,47	4,73/3,6/2,98	4,93/3,75/3,11	7,14/5,42/4,5	7,41/5,64/4,67	8,24/6,26/5,19	11,31/8,59/7,12
	Water flow rate	L/h	337	407	424	614	637	709	973
	Water pressure drop	kPa	20,5	29,1	34,5	40	42	49	63
Power input		W	15	27	39	47	50	71	106
Sound pressure level		dB(A)	34/26/20	36/28/22	40/31/25	40/31/25	42/34/26	45/35/29	46/37/32
Fan motor	Type		DC motor	DC motor	DC motor	DC motor	DC motor	DC motor	DC motor
	Quantity		1	1	1	1	1	1	1
Fan	Type		Centrifugal, forward-curved Blades			Centrifugal, forward-curved Blades			
	Quantity		1	1	1	1	1	1	1
Coil	Row		2	2	2	2	2	2	3
	Max. working pressure	MPa	1,6	1,6	1,6	1,6	1,6	1,6	1,6
	Diameter	mm	Φ7	Φ7	Φ7	Φ7	Φ7	Φ7	Φ7
Panel	Net dimensions (WxHxD)	mm	647x50x647	647x50x647	647x50x647	950x45x950	950x45x950	950x45x950	950x45x950
	Packing size (WxHxD)	mm	715x123x715	715x123x715	715x123x715	1035x90x1035	1035x90x1035	1035x90x1035	1035x90x1035
	Net weight	kg	2,5	2,5	2,5	6	6	6	6
	Gross weight	kg	4,5	4,5	4,5	9	9	9	9
Body	Net dimensions (WxHxD)	mm	575x261x575	575x261x575	575x261x575	840x300x840	840x300x840	840x300x840	840x300x840
	Packing size (WxHxD)	mm	675x320x675	675x320x675	675x320x675	900x307x900	900x307x900	900x330x900	900x330x900
	Net weight	kg	16,7	16,7	16,7	27,5	27,5	27,5	30
	Gross weight	kg	22,7	22,7	22,7	33,5	33,5	32,4	35
Pipe connections	Water inlet/outlet pipe	inch	Cold water: G3/4; Hot water: G1/2			Cold water: RC3/4; Hot water: RC1/2			
	Drain pipe	mm	Φ25	Φ25	Φ25	Φ32	Φ32	Φ32	Φ32

1. H: High fan speed; M: Medium fan speed; L: Low fan speed.
2. Cooling conditions: entering water 7 ºC, temperature rise 5 ºC, entering air temperature 27 ºC DB/19 ºC WB.
   Heating conditions: entering water 70 ºC, temperature drop 10 ºC DB, entering air temperature 20 ºC DB.
3. Noise is tested in a semi-anechoic test room.

WALL MOUNTED UNITS, 2 PIPES

FAN COIL UNITS

FEATURES

- Digital LED display
- Easy installation
- Built-in 3-way electromagnetic valve
- Possibility of Modbus connection port
- DC fan motor
- Auto swing louver

WALL MOUNTED UNITS HAVE
REMOTE CONTROLLER RM05 AS STANDARD

TECHNICAL SPECIFICATIONS

Model			SF-250H	SF-400H	SF-600H
Power supply		V/Ph/Hz	220-240/1/50		
Air flow (H/M/L)		m^3/h	425/410/320	680/550/504	1020/820/670
		CFM	250/241/188	400/324/297	600/483/394
Cooling	Capacity (H/M/L)	kW	2,63/2,2/1,97	3,28/2,90/2,66	5,0/3,95/3,21
	Water flow rate	L/h	452	564	860
	Water pressure drop	kPa	23,1	42	36,3
Heating	Capacity (H/M/L)	kW	3,36/2,85/2,35	4,37/3,77/3,35	6,7/5,17/4,18
	Water pressure drop	kPa	22	40	32,8
Power input		W	10,7	33	37,5
Sound pressure level (H/M/L)		dB(A)	30/26/23	36/32/29	40/36/31
Fan motor	Type		DC Motor	DC Motor	DC Motor
	Quantity		1	1	1
Fan	Type		Tangential fan		
	Quantity		1	1	1
Coil	Row		2	2	2
	Max. working pressure	MPa	1,6	1,6	1,6
	Diameter	mm	Φ7	Φ7	Φ7
Net dimensions (WxHxD)		mm	915x290x230	915x290x230	1072x315x230
Packing size (WxHxD)		mm	1020x390x315	1020x390x315	1180x415x315
Net weight		kg	12,7	12,7	14,9
Gross weight		kg	17,3	17,3	18,6
Water inlet/outlet pipe		inch	G3/4	G3/4	G3/4
Drain pipe		mm	Φ20	Φ20	Φ20

1. H: High fan speed; M: Medium fan speed; L: Low fan speed.
2. Cooling conditions: entering water 7 ºC, temperature rise 5 ºC, entering air temperature 27 ºC DB/19 ºC WB.
   Heating conditions: entering water 50 ºC, entering air temperature 20 ºC DB, the same water flow as the cooling conditions.
3. Noise is tested in a semi-anechoic test room.

DUCT, 3 ROWS, 2 PIPES
FAN COIL UNITS

FEATURES

- Intelligent electronic control
- High efficient heat exchanger
- Longer V shape drainage pan
- Possibility of Modbus connection port
- DC brushless fan motor
- Flexible installation (left or right piping connections)
- Fresh air intake

OPTIONAL WIRED CONTROLLER
KJR-18B FOR DUCT FAN COIL UNITS

TECHNICAL SPECIFICATIONS

Model			SF-200D3	SF-400D3	SF-600D3	SF-1000D3
Power supply		V/Ph/Hz	220-240/1/50			
Air flow (H/M/L)		m^3/h	340/255/170	680/510/340	1020/765/510	1700/1275/850
		CFM	200/150/100	400/300/200	600/450/300	1000/750/500
Standard external static pressure		Pa	12Pa (default); 30/50Pa can be set through dial switch on PCB			
Cooling	Capacity (H/M/L)	kW	2,2/1,9/1,68	4/3,4/2,95	5,8/4,88/4,45	9/7,8/6,57
	Water flow rate	L/h	378	688	998	1548
	Water pressure drop	kPa	9,4	9,7	30,1	21,8
Heating	Capacity (H/M/L)	kW	3,5/3,08/2,59	6,8/5,85/5,1	9,8/8,6/7,4	15,5/14,24/12
	Water pressure drop	kPa	8,2	11,4	25	18,4
Power input		W	16	28	45	90
Sound pressure level	12Pa (H/M/L)	dB(A)	36/32/26	37/34/27	39/36/29	42/39/32
	30Pa (H/M/L)	dB(A)	40/36/29	42/38/31	44/40/33	46/42/34
	50Pa (H/M/L)	dB(A)	42/39/31	45/41/33	47/43/35	50/45/37
Fan motor	Type		DC Motor	DC Motor	DC Motor	DC Motor
	Quantity		1	1	1	2
Fan	Type		Centrifugal, forward-curved Blades			
	Quantity		1	2	2	4
Coil	Row		3	3	3	3
	Max. working pressure	MPa	1,6	1,6	1,6	1,6
	Diameter	mm	Φ9,52	Φ9,52	Φ9,52	Φ9,52
Net dimensions (WxHxD)		mm	741x241x522	941x241x522	1161x241x522	1566x241x522
Packing size (WxHxD)		mm	790x260x550	990x260x550	1210x260x550	1615x260x550
Net weight		kg	16,7	21	23,7	34,7
Gross weight		kg	19,7	24	27,2	39,2
Water inlet/outlet pipe		inch	RC3/4	RC3/4	RC3/4	RC3/4
Drain pipe		inch	R3/4	R3/4	R3/4	R3/4

1. H: High fan speed; M: Medium fan speed; L: Low fan speed.
2. Air flow rate at 0Pa ESP.
3. Cooling conditions: entering water 7 °C, temperature rise 5 °C, entering air temperature 27 °C DB/19 °C WB.
   Heating conditions: entering water 50 °C, entering air temperature 20 °C DB, the same water flow as the cooling conditions.
4. Noise is tested in a semi-anechoic test room.

FLOOR CEILING, 2 PIPES
FAN COIL UNITS

FEATURES

- High efficiency and low noise operation
- Horizontal or vertical installation
- Air return can be from side to bottom
- Adjustable louver for wide angle of air flow
- DC brushless fan motor

OPTIONAL WIRED CONTROLLER KJR-15B
FOR FLOOR CEILING FAN COIL UNITS

TECHNICAL SPECIFICATIONS

Model			SF-250F	SF-400F	SF-500F	SF-800F
Power supply		V/Ph/Hz	220-240/1/50			
Air flow (H/M/L)		m^3/h	425/360/320	680/580/510	850/720/640	1360/1160/1020
		CFM	250/210/190	400/340/300	500/420/375	800/680/600
Cooling	Capacity (H/M/L)	kW	1,87/1,50/1,20	3,27/2,60/1,86	4,85/3,61/2,61	6,52/5,29/4,00
	Water flow rate	L/h	321	562	834	1121
	Water pressure drop	kPa	9,6	19,3	27,7	26,5
Heating	Capacity (H/M/L)	kW	2,53/1,91/1,47	4,58/3,49/2,47	6,98/5,12/3,67	9,58/7,58/5,68
	Water pressure drop	kPa	7,7	16,6	23,1	19,8
Power input		W	16	33	35	70
Sound pressure level	(H/M/L)	dB(A)	31/27/21	35/31/25	39/34/28	42/36/30
Fan motor	Type		DC Motor	DC Motor	DC Motor	DC Motor
	Quantity		1	1	1	1
Fan	Type					
	Quantity		1	2 Centrifugal, forward-curved Blades 2		3
Coil	Row		3	2	3	2
	Max. working pressure	MPa	1,6	1,6	1,6	1,6
	Diameter	mm	Φ9,52	Φ9,52	Φ9,52	Φ9,52
Body	Net dimensions (WxHxD)	mm	800x592x220	1000x592x220	1200x592x220	1500x592x220
	Packing size (WxHxD)	mm	889x683x312	1089x683x312	1289x683x312	1589x683x312
	Net weight	kg	24,4	28,2	34,2	40
	Gross weight	kg	28,4	33,2	39,7	45,5
Water inlet/outlet pipe		inch	G3/4	G3/4	G3/4	G3/4
Drain pipe		mm	Φ16	Φ16	Φ16	Φ16

1. H: High fan speed; M: Medium fan speed; L: Low fan speed.
2. Cooling conditions: Entering water 7 ºC, leaving water 12 ºC, Entering air temperature 27 ºC DB/19 ºC WB.
   Heating conditions: Entering water 50 ºC, the same water flow as the cooling conditions, Entering air temperature 20 ºC DB.
3. Noise is tested in a semi-anechoic test room.

sinclair
AIR CONDITIONING

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