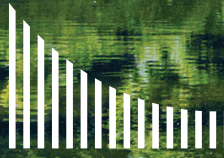


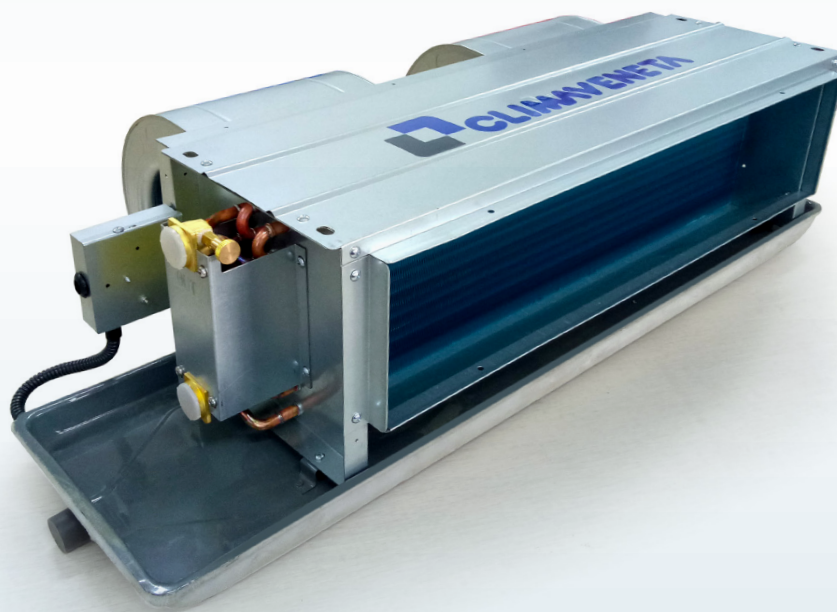
Sustainable Comfort



FC-NFCILN Series

Silent Fan Coil Unit

340~1360m³/h



 **CLIMAVENETA**

Silent Fan Coil Unit

Product Overview

FC-NFCILN Silent Fan Coil Unit is a series of high quality products developed and designed by CLIMAVENETA China factory based on the introduction of advanced technology from Italy. It is mainly used in central air-conditioning systems which can continuously or intermittently deliver air with a certain temperature difference and humidity to maintain the room's heat and moisture balance, temperature and humidity requirements. It can be widely used in hotels, apartments, villas, office buildings, hospitals, etc. With compact structure, the products can help save much valuable space. It is also high efficient, with low noise and easy to install and maintain. It is an ideal product for the customers.

Air Volume: 340~1360m³/h, Cooling Capacity: 2010~7780W

Product Features

Exquisite Structure, Durable Performance

The fan coil adopts galvanized plate casing; the condensate water tray is integrally formed by molding process, without weld seams and solder joints, which eliminates the shortcomings of easy water leakage of the welding water tray; the thermal insulation material conforming to the fireproof specification is integrally bonded to the water tray; the body structure is exquisite.

Excellent Performance, High Efficiency

The heat exchanger of the fan coil adopts high-quality Φ9.52mm copper tube and louver type sinusoidal waveform hydrophilic aluminum heat-dissipating fins, and the copper tube and aluminum sheet are tightly combined through mechanical expansion tube. Combined with a large air volume and low noise fan to enhance heat transfer, the unit can achieve the optimal heat transfer efficiency. The water collecting head is made of brass forging with evenly distributed water flow which can achieve the ideal overall heat transfer effect further.

Quiet Operation, Energy Efficient

Uniquely designed galvanized multi-wing centrifugal wind wheel; equipped with a 160mm ultra-wide impeller and optimally matched with a low-noise permanent-capacitance motor. It is tested to ensure that the unit works quietly and efficiently. The fan is with large air volume and low noise.

Flexible Adjustment, Easy Maintenance

The bearings used in the motor are rolling bearings. The motor shaft is made of quenched and tempered steel, and the surface is treated with special anti-rust treatment for durability. Can configure optional three-speed switch or thermostat which is easy to operate and can adjust the indoor air volume and cooling capacity.

Installation: High Flexibility, Low Installation Cost

The product is lightly designed. The drain pipe, the line and the return air box are easy to install, and the position of the air outlet can be changed on site to meet the actual needs.

Options Available, Flexible Configuration

- PTC electric heater
- Return air box (need the customer to assemble onsite)
- Removable air filter (nylon filter or double layer aluminum mesh filter)
- Lengthen drain pan for valve water leaking and condensing water
- Stainless lengthen drain pan(standard length and 100mm lengthen)
- For space restriction spaces, drain pan length can be reduced 100mm.
- Single-ended nanophoton purification device(installed in return air box or duct)

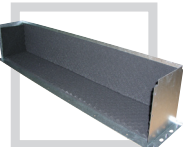
Structure Features

Fan coil: Super High Efficiency Heat Exchange

The product adopts high-quality $\Phi 9.52\text{mm}$ copper tube and louver type sinusoidal waveform hydrophilic aluminum heat-dissipating fins, and the copper tube and aluminum sheet are tightly combined through mechanical expansion tube. The water collecting head is made of brass forging with evenly distributed water flow which can achieve the ideal overall heat transfer effect.



Enclosure: Beautiful Appearance, Strong Structure



The frame is formed by using a first-grade galvanized steel sheet through a mold, and the structure is firm and not easily deformed.

The products also have PE insulated key components, beautiful and generous appearance, special overlap protection design, and friendly human-machine interface.

Water Tray: No leakage

Adopting one-time stamping forming process of high-grade steel plate mold, the surface is treated by hot dip-coating; 7mmPE heat insulation is integrally bonded to the water tray. Not only is the processing simple, the appearance is beautiful, and the phenomenon that the welding water tray is easy to drip is eliminated. The service life of the water tray is extended. The width and length of the water pan have reserved the piping space for the electric valve of the inlet and outlet pipes to ensure the water collecting effect.



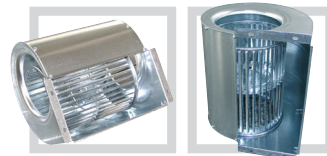
Motor: High Efficiency, Low Power Consumption



It adopts permanent low noise capacitor motor and fully enclosed rolling bearing without adding lubricating oil. The base is insulated by a rubber shock pad to reduce running noise.

Fan: Quiet Operation

The wind wheel is a high-efficiency, low-noise multi-wing centrifugal vane with a large impeller of 160mm diameter and is made of galvanized sheet with high dynamic balance. The Pittsburgh-style meshing between the wind shell main board and the side panels is sturdy and durable.



Model Nomenclature

FC-□□□□□□□□

Design code: G

Pipe connection direction: L: Left R: Right (subject to the direction when facing air outlet)

Drain pan: Default: standard; B: stainless steel J: 100mm lengthen than standard S: stainless steel 100mm lengthen

Default: none; EX: electric heating(1kW:FC-200 ~ 400; 2kW:FC-500 ~ 600; 3kW: FC-800)

Coil: default: 3-row 2-pipe

External static pressure: default: 12Pa

Structural type: NFCILN: silent horizontal concealed fan coil unit

Nominal Air Volume (CFM)

Fan Coil Unit

FCB-□□□

Structure Type A: without air filter N: nylon air filter without aluminum frame N: nylon air filter without aluminum frame

LN(Low Noise Version)

Nominal Air Volume (CFM)

Air Return Box

Model Designation Example:

FC-800NFCILNEXBLG The model indicates that it is a silent horizontal concealed unit, with 800CFM nominal air volume, 3-row 2-pipe, 12Pa external static pressure, 3kW electric heating, water pipe connected to the left.

FCB-800LNN The model indicates that it is air inlet plenum of a silent horizontal concealed unit, with 800CFM nominal air volume.

Note: Air inlet plenum is packaged separately and need to be assembled by the customer on site.

Silent Fan Coil Unit

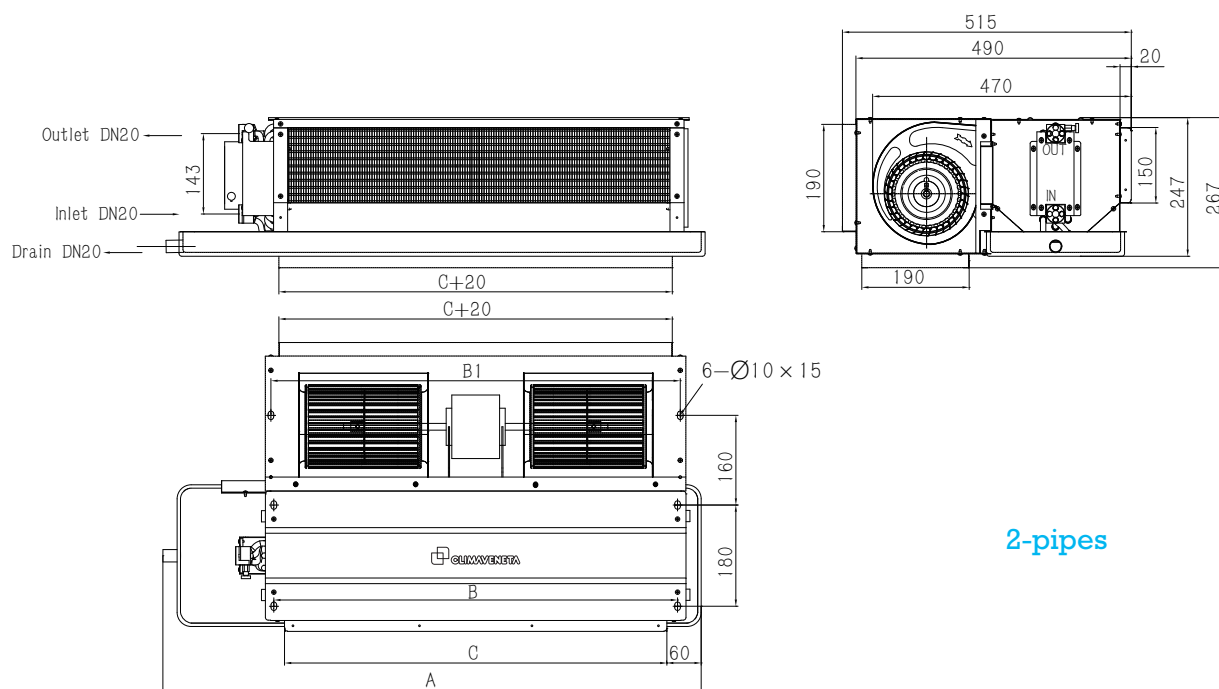
Technical Data

3 Rows(2-pipe)

ITEM		FC-200	FC-300	FC-400	FC-500	FC-600	FC-800
Nominal Air Flow (m³/h)	H	340	510	680	850	1020	1360
	M	260	390	530	660	780	1040
	L	180	270	360	440	520	690
Capacity (3 Rows)	Cooling(W)	2010	2900	3900	4900	5600	7780
	Heating(W)	3300	5100	6380	7400	8500	12500
	Water Flow(LPM)	6.4	9.4	12.1	14	17	22.8
	WPD(kPa)	15	28	15	26	36	39
Power Input(W)	12Pa	25	45	40	78	90	92
Noise dB(A) (12Pa)	H	34.5	32.5	36	42	43.5	44.5
	M	28	25.5	30	34	37	39
	L	25	23	24	27	30	32
Heat Exchanger	Structure	Φ9.52 mm copper tubes with hydrophilic aluminum fin					
	Water Pipe	DN20 female thread (RC3/4)					
	Condensing Pipe	DN20 male thread (RC3/4)					
	Working Pressure	1.6 MPa					
Fan	Type	Double inlet forward curved centrifugal fan					
	Qty.	1	2				4
Motor	Type	Capacitor activated three-speed motor					
	Bearing	High-precision maintenance-free bearing					
	Power Supply	220V/1Ph/50Hz					
	Qty.	1					2
Weight(kg)	without Return Air Plenum	13	16	18	19	20	28
	with Return Air Plenum	16	20	22	23	24	32

Rated testing condition	Temp. DB (°C)	Temp. WB (°C)	Temp. water inlet (°C)	Water temp. difference (°C)
Nominal cooling mode	27	19.5	7	5
Nominal heating mode	21		60	According to water flow
Noise level	The measurement has been taken on surfaces positioned at d=1m distance from the unit in a standard anechoic chamber (<17dB (A)).			
Note	LPM: Liter per minute, 1LPM=0.06m ³ /h			

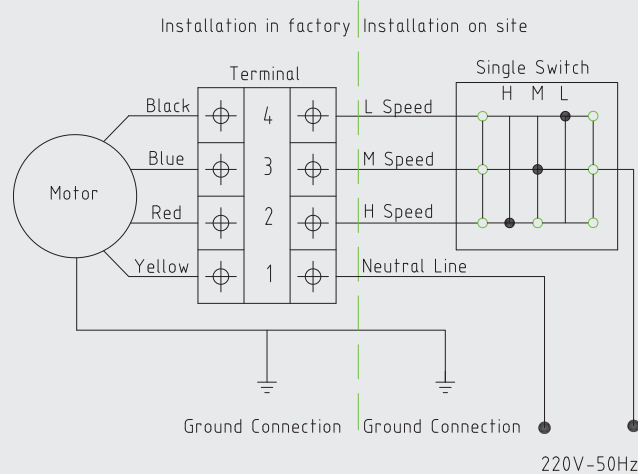
Dimension Drawing



2-pipes

Electric Wiring Diagram

Model	A	B	B ₁	C
FC-200LN	760	518	528	480
FC-300LN	960	718	728	680
FC-400LN	1060	818	828	780
FC-500LN	1160	918	928	880
FC-600LN	1260	1018	1028	980
FC-800LN	1560	1318	1328	1280



Silent Fan Coil Unit

Advantages of Low Noise FCU compared with traditional FCU

ITEM		FC-300NFCILN	FC-300NFCI	FC-400NFCILN	FC-400NFCI	FC-500NFCILN	FC-500NFCI
Rated Air Volume(m ³ /h)	H	510	510	680	680	850	850
	M	390	390	530	530	660	660
	L	270	270	360	360	440	440
Noise dB(A) (12Pa)	H	32.5	38	36	41	42	43
	M	25.5	31	30	33.5	34	37.3
	L	23	27.2	24	27	27	30

From the above table, we can find under medium and low speed conditions, noise data of LN version FCU is much lower than traditional FCU.

FCU ACCESSORIES

Digital Fan Coil Thermostat



Product Description

The fan coil thermostat has a large LCD screen and modern appearance, which features the applications' elegance. It is suitable for industrial, commercial and residential applications. Cooling, heating and ventilation function can be selected through the LCD screen.

Features

- Modern appearance, large LCD screen
- Light touching button design
- Set point and room temperature display
- High reliability microcontroller, strong anti-interference
- Wide voltage range(AC85-260V)
- Adjustable manual 3-speed or automatic fan speed control
- Non-volatile memory (EEPROM) retains user settings during power loss(optional)
- Button lockout function(optional)
- Blue backlit(optional)

Water Valve

Features

- Forging brass body
- Stainless base with aluminum shell
- Synchromoter drive
- Efficient power consumption and less noise
- BSPP/NPT connections

Specifications

- Power Supply: AC220V±10%, 50/60Hz
- Power Consumption: <6.5W
- Pressure: 1.6MPa
- Working Conditions: 5~40 °C (ambient air); 5~90 °C (medium in pipe)



Unit Installation, Use and Maintenance

Unit Installation

Attention should be paid to keeping the unit exterior in good shape and interior rotating components from mutual collision; during installation, prevent impurities from entering into fan impeller, motor and heat exchanger; and ensure the drainage end is 3-5mm lower than the other end, so as to ensure smooth drainage of condensation water.

Air Pipe Connection

Filter net shall be mounted at the air outlet to prevent dust from jamming the coil radiator-fan, thus ensuring the heat transmission effect of heat exchanger.

Water Pipe Connection

The water flows along a bottom-top path, so flexible pipes are recommended for inlet and outlet pipes. When connecting water pipe, use wrench to grip water pipe of fan coil; use another wrench to fasten water pipe connector, and be careful not to let torque exceed $2.5\text{kg}\cdot\text{m}$. Inlet and outlet water pipes shall keep warm; use PTFE thread seal tape to seal the threaded connector. The drain pipe shall be kept in enough slope, and shall not be flattered or bended, so as to ensure its smooth drainage.

Electrical Wiring

The unit shall be firmly grounded; after properly clamping the terminal, connect the unit's external wire end to the unit's upper terminal; pay attention to the terminal code and wire color when installing three-speed switch, and do not connect it in wrong way (for the electric connection, refer to the wiring diagram provided by the company).

Unit Startup

After completing the above installations, please clear away any possible foreign matters in water pond, wind crust and around coil pipe; and start up the unit only after checking the water pipe, electric wire and other mounting points to be error free. For three speed regulation units, better to regulate from the highest grade and then select the lower grades.

Unit Operation

During the unit operation period, open the manual air vent valve to release air within water pipe on a periodical basis; the temperature of cold water supply for the unit in summer shall be no lower than 5°C and that of hot water supply for the unit in winter shall be no higher than 65°C ; water quality should be cleansed and softened.

Maintenance

The heat exchanger of fan coil shall be purged periodically and kept clean; the filter net shall be cleaned periodically to ensure smooth air return. When stop using the unit, fill coil pipe with water, or adopt other ways to reduce pipe corrosion. It is necessary to take anti-freezing measures in winter, to prevent frost cracking of pipes.

The installation, operation and maintenance of units shall comply with the related standards and attached installation, operation and maintenance manual.

Executive standard: GB/T 19232-2003 Fan-coil unit





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