

Sustainable Comfort

DAZZLE™ Series

Cassette Type Fan Coil Unit

FC-NH DU4 Cassette Type Fan Coil Unit

340~2380 m³/h



Cassette Type Fan Coil Unit



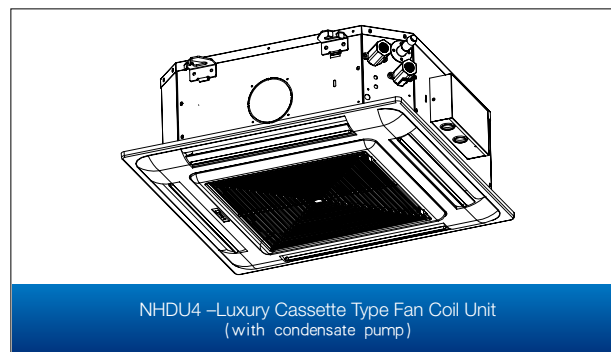
FC-NH DU4 series is the cassette type fan coil unit of Climaveneta. They are ideally designed with versatile configuration and adoption for all applications with 2-pipe system and 4-pipe system. The units shall guarantee lower pressure drop of air side and water side in accordance with different installation requirement.

The 2-pipe system units shall be constructed with one coil which can interchange the mode between heating and cooling in specific condition. And the 4-pipe system units are characterized by 2 coils, resulting in the independent operation of heating and cooling mode. The cooling and heating mode of 4-pipe system also can be exchanged upon different requests in different areas.

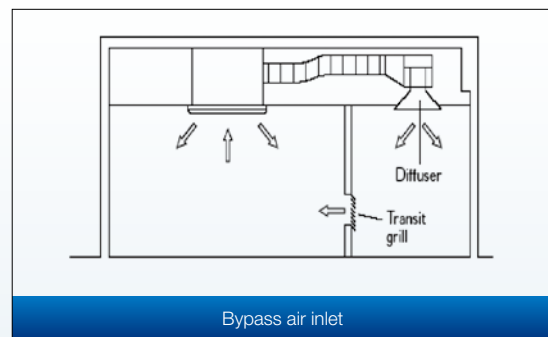
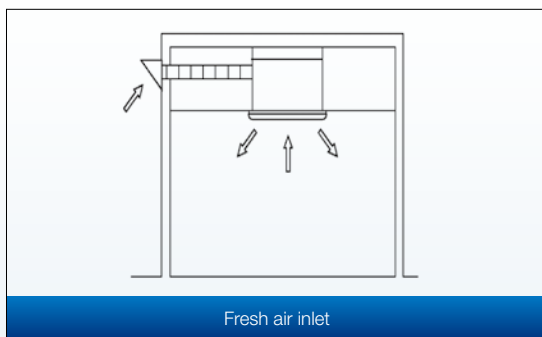
Unit Features

Casing

The casing shall be manufactured by Grand 1 galvanized steel sheet with extruded treated. The thermal resistance material shall be integrally attached to the exterior surface of the casing and installed with seamless connection method preventing the condensate occurs at the unit exterior surface.



The fresh air inlet and air inlet bypass are equipped in the standard configuration, and they shall be installed as an option depending on customer's requirement.



The minimal height of unit is 290mm ideally fitting for the installation of compact space in the ceiling.



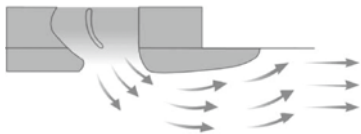
Front Panel

The front panels of Cassette Type Fan Coil Units are manufactured by ABS material, and the air return section shall be fixed with removable grills, resulting in the convenient replacement and cleaning of filters. The electric diffuser at the air outlet section shall adjust the airflow direction for specific requests.

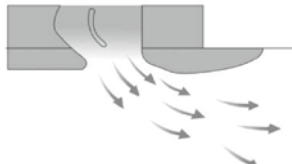


Optimized Air Diffusion Configuration

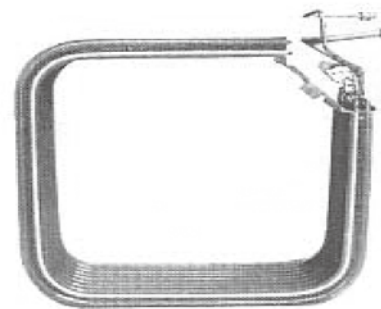
Preventing the condensation on the front panel of units and the dirt on the ceiling near the airflow outlet efficiently.



Typical air diffusion type
The airflow moving along the ceiling make the dirt occurs.



Optimized air diffusion type by
Climaveneta
The upward airflow is limited



Coil

- The reasonable water flow configuration shall be designed to ensure the balance of cooling load between the water side and air side, as well as the matching of cooling load and airflow rate.
- The coils shall be made of hydrophilic aluminum fins which can prevent the film condensation efficiently and discharge the condensate fluently, resulting in the reduction of the thermal resistant and air resistant. The noncorrosive hydrophilic coat can expand the working life of drain pans also.
- The exclusive fins shall distribute the air adequately and maximize the heat transfer efficiency. Coils are annular type designed with the possibility to minimize the blind angle of heat transfer, finally guaranteeing the 4-way heat exchange ability.
- The headers shall be made of copper with ideal performance of water flow configuration.

Fan

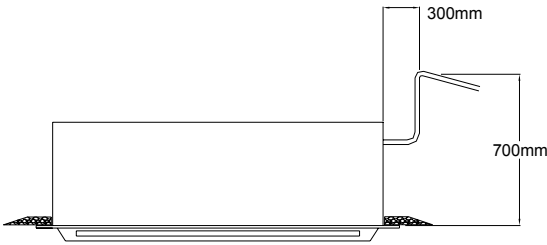


- Non-direction, one-inlet centrifugal fan shall be fixed. And oversized fan wheel made of thermoplastic ABS material shall be factory dynamical balance tested to ensure the reliable operation.
- Motors shall be equipped with low-speed, total-hermetic, 3-speed, free-lubricated scroll bearing. Unit foundation shall be installed with rubber collars to insulate the vibration, finally reducing the noise level. Wire cables shall be protected with specific covers for the reliability of units.
- The motors, fans and heat exchangers shall be performance match tested strictly to guarantee the motors working at the highest efficient performance with low noise operation.

Cassette Type Fan Coil Unit

Condensate Pump

The condensate pumps shall be expected to lift the condensate for 700mm from the ceiling. And the units without condensate pumps shall be offered upon customer's requirement also.



Drain Pan

The oversized drain pans shall be fixed with well thermal insulation protection on the exterior surface preventing the leakage and stagnant condensation.

Control system

Both wireless remote controllers and wall-mounted thermostats shall be provided for customer as an option to regulate the operation of units accurately. And the control system could exchange the operation mode in different applications.

Operation Mode

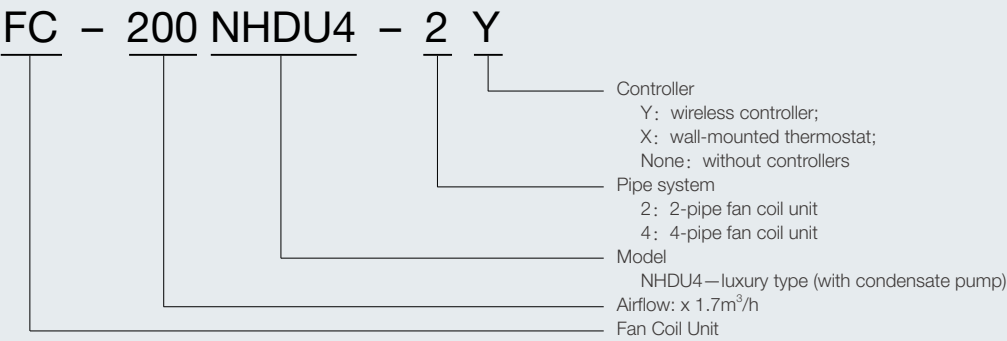
Auto. Mode	Cooling Mode	Humidification Mode	Ventilation Mode	Heating Mode

24-Hour programmable timer shall be friendly designed keeping the excellent balance between comfort request and energy saving, which presenting the exclusive humanization care of Climaveneta.

Timer operation

Circulating Timer	Turn on at setting time	Turn off at setting time

Model Nomenclature



Technical Data

FC-NHDU4-2 Cassette Type Fan Coil Unit (2-pipe, with condensate pump)

Model			200	300	400	470	500	600	800	1000	1200	1400
Air Flow	H	m³/h	340	510	680	800	850	1020	1360	1700	2040	2380
	M		255	380	510	600	635	765	1020	1275	1530	1785
	L		170	255	340	400	425	510	680	850	1020	1190
Cooling	H	kW	2.12	3.09	3.94	4.32	5	5.87	7.32	9.59	11.46	13.04
	M		1.7	2.6	3.2	3.5	4.1	4.9	6.2	8	9.6	11
	L		1.3	1.9	2.4	2.6	3.1	3.6	4.7	6.1	7.2	8.3
Coil	H	kW	3.37	4.81	6.21	7.01	7.66	9.62	12.42	15.47	17.43	20.16
	M		2.7	3.8	5	5.6	6.1	7.6	9.9	12.3	14	16.2
	L		1.9	2.7	3.6	4.1	4.4	5.5	7.1	8.9	10.1	11.7
Coil	Water Flow	m³/h	0.366	0.534	0.678	0.744	0.858	1.008	1.26	1.65	1.974	2.244
	Pressure Drop	kPa	16.2	20.8	28.2	36.3	21.5	25.4	35.9	33.6	40	47.2
Power Supply			220V/1Ph/50Hz									
Power Input		W	35	49	58	70	72	94	130	149	183	220
Motor Current		Amp	0.16	0.22	0.26	0.32	0.33	0.43	0.59	0.68	0.83	1
Noise		dB(A)	35	39	41	44	40	45	46	44	48	52
Net Weight		kg	21.5	21.5	21.5	21.5	30.5	32	32	41	41	41
Water Pipe	Inlet	inch	FPT 3/4"									
	Outlet		FPT 3/4"									
Drain Pipe Size		mm	φ 26									

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	
Noise level	The measurement has been taken on surfaces positioned at d=1m distance from the unit in a standard anechoic chamber (<17dB (A)).			
Rated airflow	stands for the airflow while the exterior static pressure is 0Pa			
FPT	Female Pipe Thread			

Cassette Type Fan Coil Unit

Technical Data

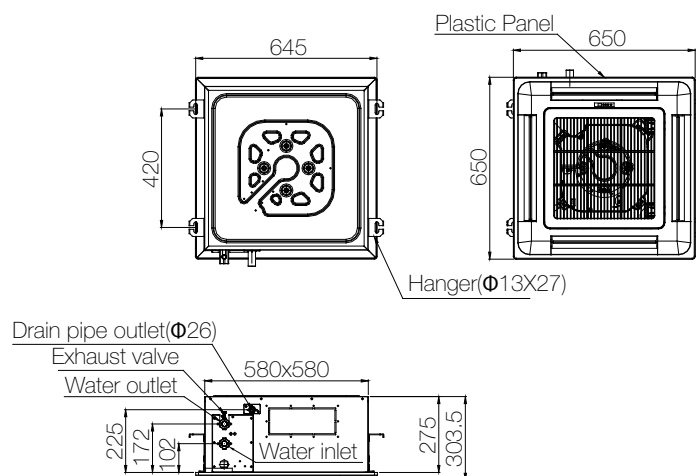
FC-NH DU4-4 Cassette Type Fan Coil Unit (4-pipe, with condensate pump)

Model			200	300	400	470	500	600	800	1000	1200	1400
Air Flow	H	m³/h	340	510	680	800	850	1020	1360	1700	2040	2380
	M		255	380	510	600	635	765	1020	1275	1530	1785
	L		170	255	340	400	425	510	680	850	1020	1190
Cooling	H	kW	1.76	2.53	3.19	3.47	4.25	5.19	6.01	8.07	9.05	9.81
	M		1.41	2.13	2.59	2.81	3.49	4.28	5.07	6.72	7.55	8.25
	L		1.08	1.56	1.94	2.11	2.64	3.19	3.82	5.12	5.7	6.21
Heating	H	kW	2.09	2.72	3.3	3.64	4.29	4.79	5.53	7.55	8.45	9.31
	M		1.97	2.25	2.72	3.04	3.52	3.99	4.79	6.36	7.08	7.78
	L		1.7	1.97	2.09	2.32	2.74	3.42	3.69	4.83	5.45	6.06
Coil	Water Flow (m³/h)	Cooling	0.3	0.438	0.552	0.6	0.732	0.894	1.032	1.386	1.56	1.686
		Heating	0.18	0.252	0.324	0.36	0.396	0.468	0.57	0.72	0.792	0.9
	Pressure Drop (kPa)	Cooling	16.2	20.8	28.2	36.3	21.5	25.4	35.9	33.6	40	47.2
		Heating	9.7	16	22	27	45	55	62	26	32	38
Power Supply			220V/1Ph/50Hz									
Power Input		W	35	49	58	70	72	94	130	149	183	220
Motor Current		Amp	0.16	0.22	0.26	0.32	0.33	0.43	0.59	0.68	0.83	1
Noise		dB(A)	35	39	41	44	40	45	46	44	48	52
Net Weight		kg	22	22	22	22	31	32.5	32.5	41.5	41.5	41.5
Water Pipe	Inlet	inch	FPT 3/4"									
	Outlet		FPT 3/4"									
Drain Pipe Size		mm	ϕ 26									

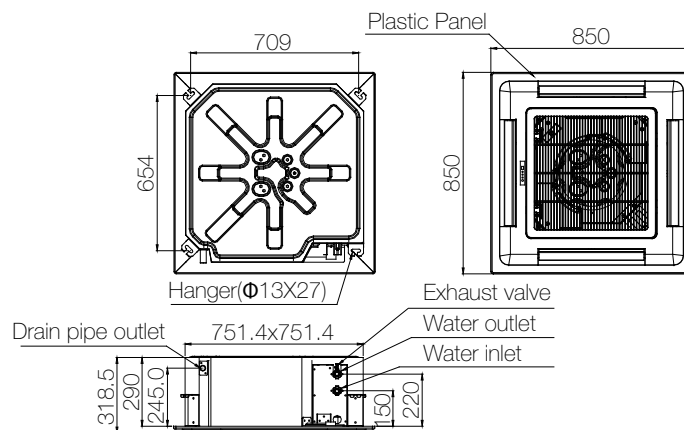
Rated testing condition	Temp. DB (°C)	Temp. WB (°C)	Temp. water inlet (°C)	Water temp. difference (°C)
Nominal cooling mode	27	19.5	7	5
Nominal heating mode	21		60	
Noise level	The measurement has been taken on surfaces positioned at d=1m distance from the unit in a standard anechoic chamber (<17dB (A)).			
Rated airflow	stands for the airflow while the exterior static pressure is 0Pa			
FPT	Female Pipe Thread			

Dimension

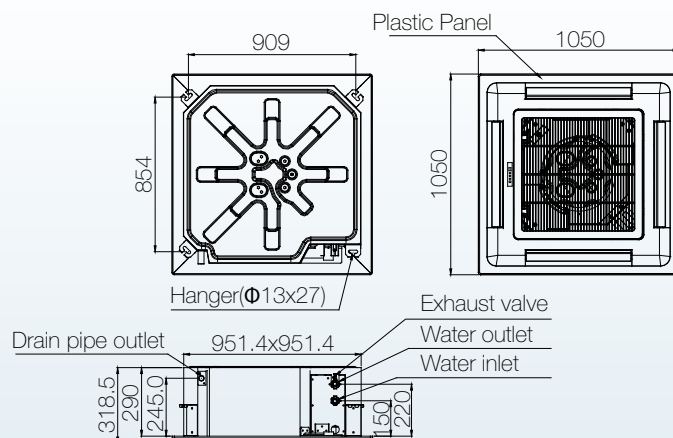
FC-200NHDU4-2~FC-470NHDU4-2



FC-500NHDU4-2~FC-800NHDU4-2



FC-1000NHDU4-2~FC-1400NHDU4-2

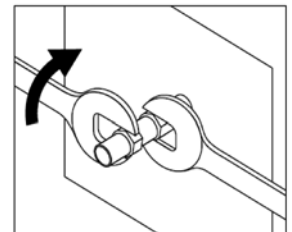


Cassette Type Fan Coil Unit

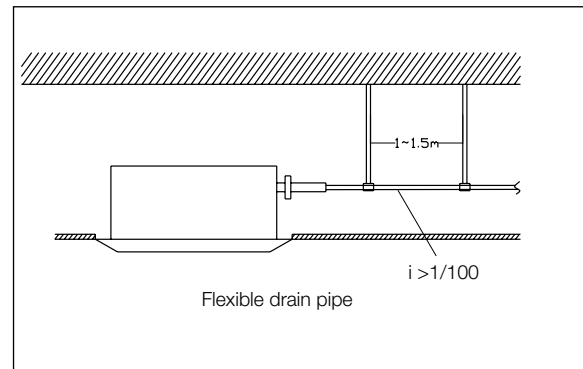
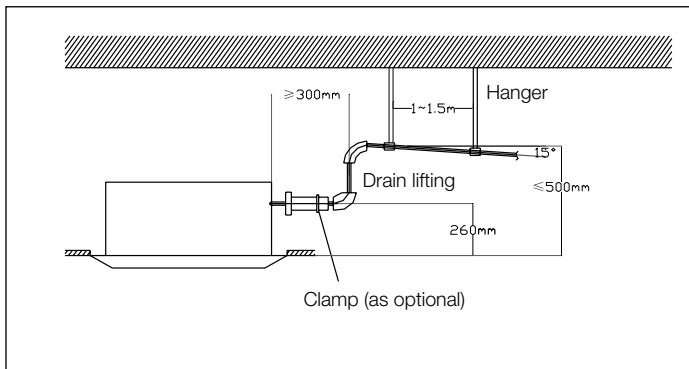
Installation, Operation and Maintenance

Installation---Make sure that the unit is not damaged during transit and the all the components inside shall not collide with each other and no dirt shall drop into the fan, motor and heat exchanger. The unit shall be installed in the middle of the ceiling ensuring the optimal air diffusion.

Water Pipe Connection---Water connections are inlet from the bottom and outlet from the top; Flexible connectors are suggested for both inlet and outlet; The torque shall be less than $2.5\text{kg}\cdot\text{m}$ during installation; All water pipes shall be well insulated. And all bolt connections shall be insulated and sealed by material of PTFE belt. The drain pipe shall be mounted with proper gradient, no squash, no bending.



Union joint with 2 spanners shown in the drawing



Electrical Connection---The unit must be earthing, All electrical wires exposing to the air should well bonded to connectors before attach to unit (Wire connection shall comply with the wire diagram offered by the company).

Start-up Procedure---After proper installation, the drain pan, fan casing and coil must be clean; Then check all field connections of pipes and wires; And now the unit can be started. The 3-speed switch is recommended to be turned on from high speed.

Operation---The lowest water temperatures for unit inlet is 2°C for cooling and highest temperature is 80°C for heating. The manual vent valve shall be regularly opened to release the air in the pipe system. The system water shall be softened and meet the water quality requirements.

Maintenance---Fan coils and filters shall be cleaned regularly by blowing with compressed air in opposite direction of airflow. Clean water should be charged in the coils to reduce the rust while the unit stops working. And in winter, anti-freeze method shall be considered.

Filter Cleaning---The customer shall be suggested to clean the front panel and filters only! Before the cleaning, always turn off the main power! The filters shall be cleaned by soap water. The strong oxidant, strong acid or alkalis liquid are forbidden to use! The front panel shall be cleaned by wet rag with soap water. And the filters shall be treated with the proper method in the manual book.

The installation, operation and maintenance of units shall comply with the "Installation manual book of Cassette Type Fan Coil Unit".



Global Headquarter

Mitsubishi Electric Hydronics & IT Cooling Systems S.p.A.
36061 BASSANO DEL GRAPPA (MCENZA) ITALIA - VIA SARSON 57/C
TEL: +39 / 0424 509 500 (r.a.) FAX: +39 / 0424 509 509
E-mail: <https://www.melcohit.com>

Asia Pacific Headquarter

Climaveneta Chat Union Refrigeration Equipment (Shanghai) CO., LTD
NO. 88 BAIYUN ROAD XINGHUO DEVELOPING ZONE, SHANGHAI, CHINA
TEL: +86-21-57505566 FAX: +86-21-57505797
E-mail: <http://www.climaveneta.com.cn>

Hongkong Branch

ROOM 2003, CCT TELECOM BUILDING, 11 WO SHING STREET, FOTAN, SHATIN, N.T., HONGKONG
TEL: +852-26871755 FAX: +85-2-26873078
E-mail: <http://www.climaveneta.com>

Vietnam Branch

6TH FLOOR, ROOM 6.6B, ETOWN2, 364 CONG HOA STREET, WARD 13, TAN BINH DISTRICT, HOCHIMINH CITY
TEL: +848 6262 9966 FAX: +848 6262 9977
E-mail: <http://www.climaveneta.com>

Malaysia Branch

A-4-3, GARDEN SHOPPE ONE CITY, JALAN USJ 25/1, 47650 SUBANG JAYA, SELANGOR DARUL EHSAN
TEL: +603 8081 8558 FAX: +603 8081 9558
E-mail: <http://www.climaveneta.com>

Myanmar Branch

ROOM 501, 5TH FLOOR, SALOMON BUSINESS CENTER, NO 244/A, U WISARA ROAD, BAHAN TOWNSHIP, YANGON
Tel: +951535098 Ext: 501
E-mail: <http://www.climaveneta.com>