

# HOLTOP FAN COIL UNIT

*Make Air Treatment More Healthy And Energy Saving*

**HOLTOP**

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Factory code:HPY202461    Marketing code:202504

Horizontal Fan Coil Unit

Cassette Fan Coil Unit





## MAKE AIR TREATMENT HEALTHIER AND MORE ENERGY-EFFICIENT

Everyone needs to breathe 25,000 times per day, fresh and clean air is essential.

The ultimate pursuit of details, strict requirements for quality.

Pragmatism, Responsibility, Collaboration, Innovation.

Holtop keeps working on providing you with fresh air, clean, intelligent control, comfortable, convenience - integrated clean air solutions. Holtop delivers fresh and clean air, just for you healthy breath!

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## ABOUT HOLTOP



Well-known domestic manufacturer of healthy, comfortable and energy-saving air handling unit.

Annual output of 200,000 units of fresh air, air conditioning and environmental protection equipment.

Won the title of “Zhongguancun and National High-tech Enterprises” and “Specialized, Special, New and Small Giant Enterprises” Accredited for participating in the compilation of many China national standards, with nearly 100 patent.

Obtained ISO9001, ISO14001, ISO45001 management system certification.

Set up sales and service agencies in major cities across the China, and won the five-star service certification.

Holtop products are available in over 100 countries and regions, delivering high-quality user experience to hundreds of millions of customers worldwide.



ISO Certifications



Dozens of National Patents Owner



National Standards Participated



World Leading Manufacturer



Zhongguancun & National High-tech Enterprise



Equipment Supplier for Beijing Olympics and The Shanghai World Expo

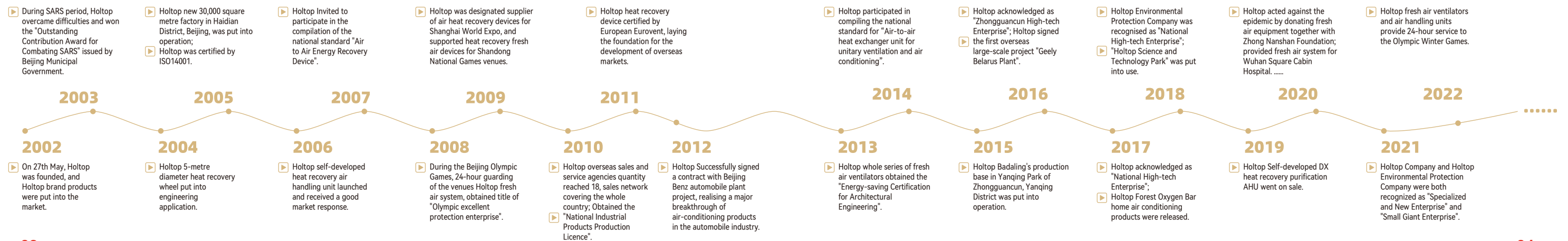


## MAKE AIR TREATMENT HEALTHIER AND MORE ENERGY-EFFICIENT

To make the air fresh and the sky blue, to ensure every breath is safer, to utilize energy more sustainably and to make air treatment healthier and more energy-efficient, this is the mission to which we have been dedicated.



## DEVELOPMENT HISTORY





## CRAFTSMANSHIP

### ANNUAL OUTPUT OF 200,000 SETS OF AIR HANDLING UNIT

Holtop Badaling manufacturing base is located in Yanqing Park, Zhongguancun.

Has international advanced production lines and modern intelligent manufacturing equipment.

Details determine quality, Holtop strive for perfection in every detail, and produce excellent products that meet the quality of Holtop.



Sheet metal workshop



Assembly line for standard ventilation unit



Assembly line of ceiling type air handling unit



Assembly area of combined air handling unit



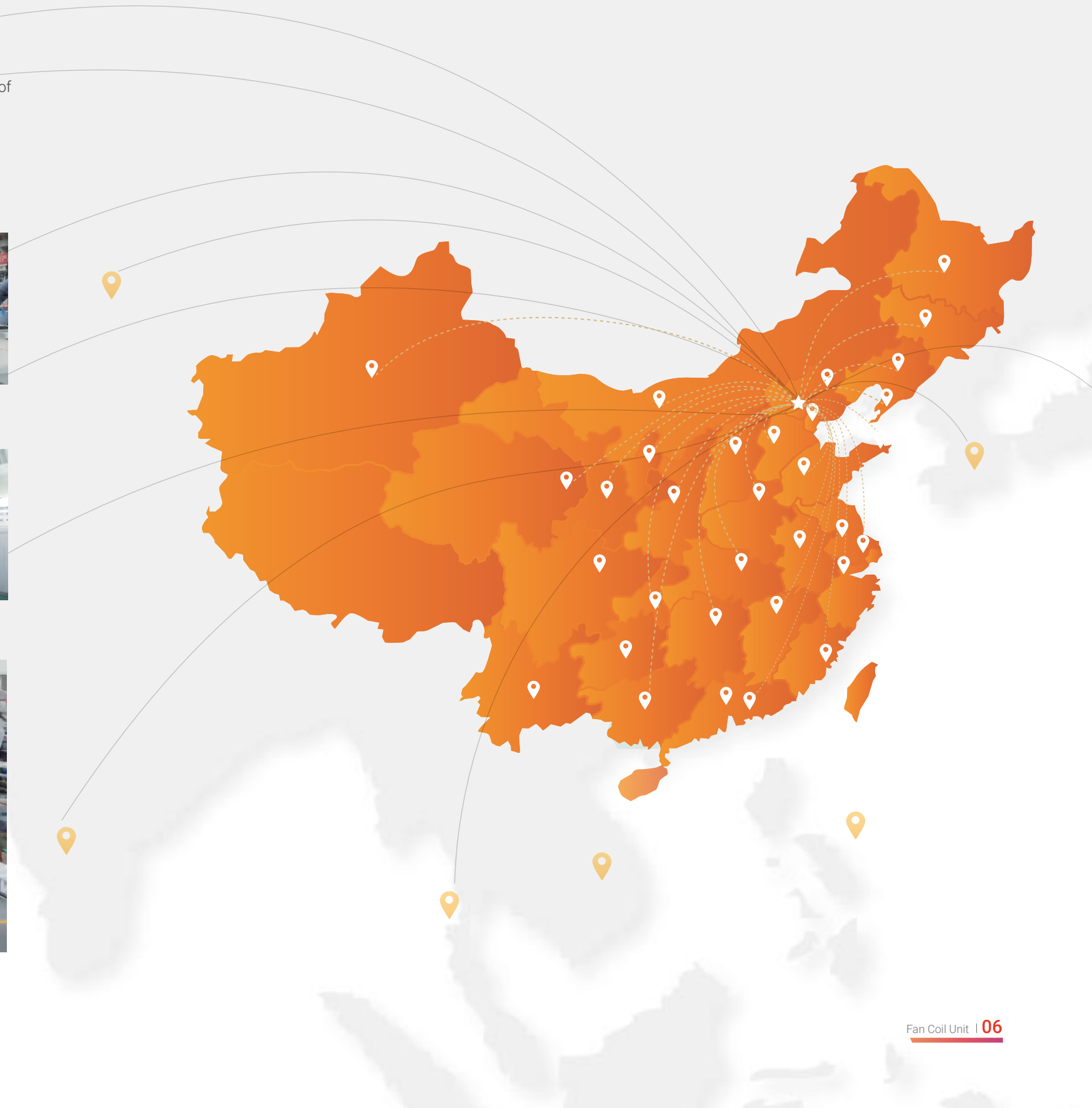
Air conditioning Outdoor unit production line



National certified enthalpy laboratory



Manufacturing base assembly workshop

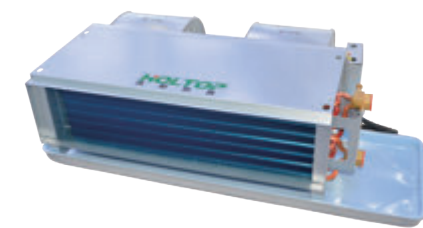






## Fan Coil Unit

The Holtop fan coil unit (FCU) is a small terminal unit consisting of a heat exchanger (coil) and a fan, designed to generate heating or cooling for a space. FCUs are commonly utilized in HVAC systems across residential, commercial, and industrial buildings . Holtop fan coil units are available in various shapes and sizes, including Cassette (a variant of ceiling unit), and Ducted horizontal(also referred to as Ceiling Concealed).



Ducted Concealed Fan Coil Unit

■ HP - \*\* 1WRSF - D

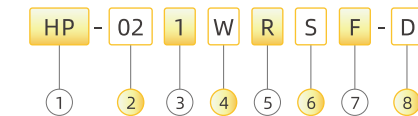


Cassette Fan Coil Unit

■ HP - \*\* 1KMP



## Concealed Fan Coil Unit Model Description



- ① Holtop HP Series Fan Coil Unit
- ② Airflow number: 02/03/04/05/06/08/10/12, Rated airflow: 02\*170=340 m³/h, 03\*170=510 m³/h...
- ③ Design number
- ④ Structural form: "W"-Horizontal, "K"-Cassette, "L"-Vertical
- ⑤ Chilled/Hot water inlet direction: "L"-left connection, "R"-right connection
- ⑥ External static pressure: "S"-12Pa, "H"-30Pa, "U"-50Pa, "G"-120Pa
- ⑦ Return air plenum: (Omitted)-no return air plenum, "F"-back return air plenum / "B"-down return air plenum / "F1"-back return air plenum with primary filter, "B1" down return air plenum with primary filter
- ⑧ "D"-DC Brushless Motor, "S"-Four Pipe System

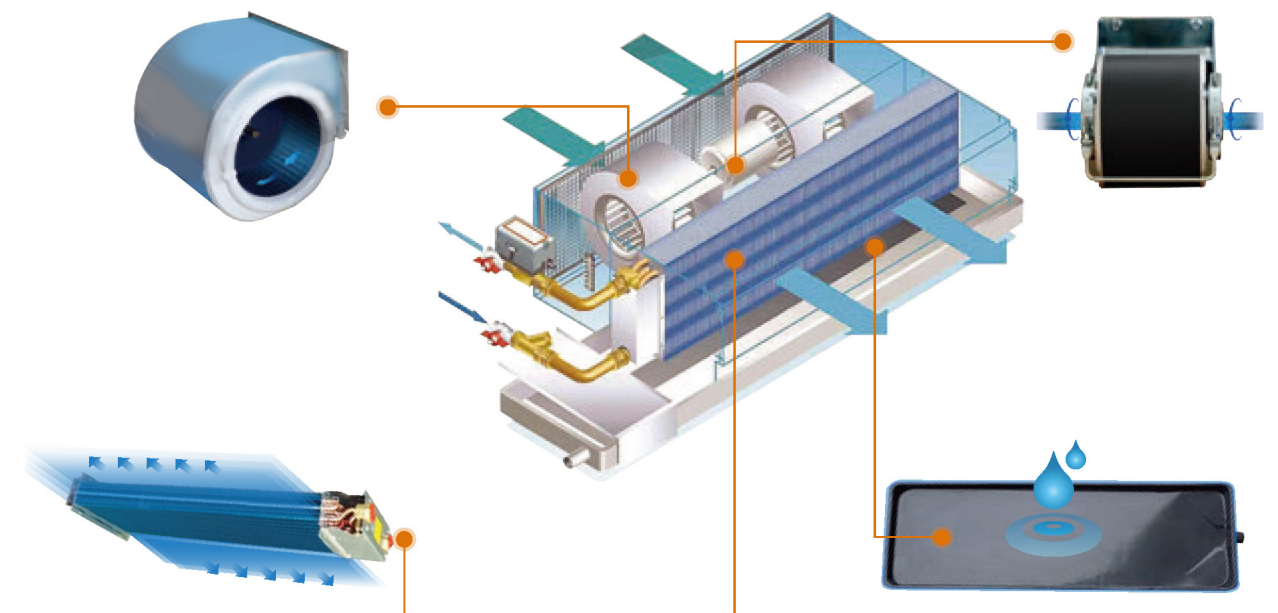
## FCU Features

### Ultra-low Noise

The fan adopts the forward multi-blade centrifugal impeller and passes the strict dynamic and static balance tests, so that the fan can exert the maximum capacity while reducing the speed and noise.

### Safe & Reliable

The motor adopts high precision and high quality ball bearing, self-lubrication, low noise, long life, high transmission efficiency. The electrode spindle has special anti-corrosion treatment and is durable.



### High Efficiency Heat Exchanger

The heat exchanger adopts high quality copper tubes with unique louver type hydrophilic aluminum fins, and adopts mechanical tube expansion process, which has high heat exchange efficiency and matches the special fan to maximize the capacity of the unit.

### Thermal Insulation

The drain pan is made of one-time process molding, and has a slight sloped bottom structure, the overall spraying treatment and flame-retardant insulation materials are applied to the external to prevent condensation.

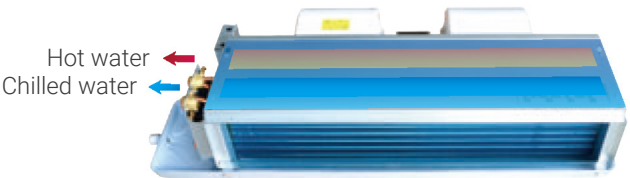


## FCU Features

### Four Pipe Horizontal Concealed Fan Coil Unit

This series of fan coil units are equipped with two groups of cooling and heating coils at the same time, and the two groups of water pipes are connected to chilled water and hot water respectively, so that the cooling and heating can be switched at any time throughout the year, and it is also possible to realize part of the area heating and other areas cooling at the same time.

Each terminal equipment can be freely selected for heating or cooling mode at any time, with no interference between them. Additionally, the areas served by the air-conditioning can independently control their temperature and other parameters, such as humidity..

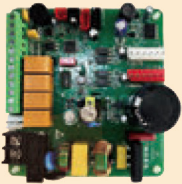


### DC Brushless Fan Coil Unit

This series of fan coil units adopt DC brushless motor, which greatly reduce energy consumption compared with the conventional units and also realize stepless speed control of fan coil units, and the performance of DC motor is greatly improved compared with the common AC motor, so the DC brushless fan coil has the characteristics of energy saving and comfort.



DC motor



Control module



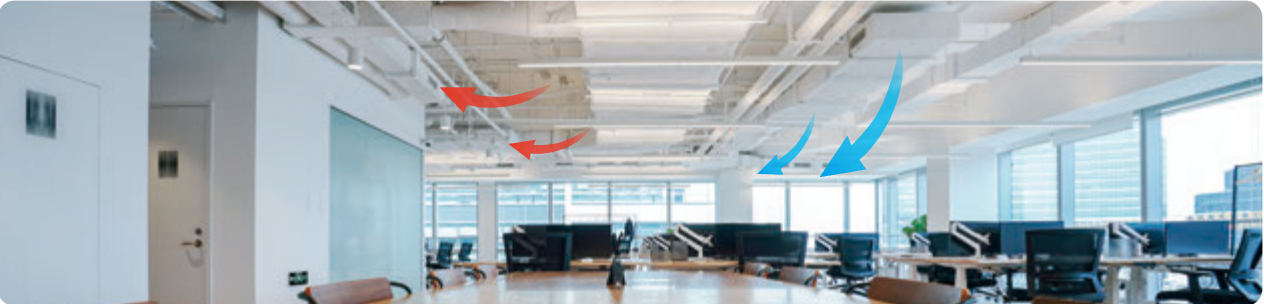
Intelligent controller

## High Efficiency and Energy Saving

1. The overall efficiency of the motor is doubled compared to that of traditional motors, and the average power consumption is only 50% to 70% of that of traditional AC motors.
2. Users can adjust the speed steplessly to further reduce the overall power consumption under the automatic operation mode
3. Users can also set the fan speed of different gears according to the actual indoor application needs, more independent operation.

## Comfortable and Safe

1. The thermostat achieves precise control of room temperature, adjusting it within a range of  $\pm 1^\circ\text{C}$ , through PID calculations.
2. The motor eliminates the traditional air conditioning issue of fluctuating cold and hot air supply, creating a comfortable and quiet indoor environment by allowing linear, step-less adjustment of airflow from 30% to 100%.
3. With multiple speed adjustment combinations, the system can achieve rapid cooling, maintain quiet operation with low noise levels, and provide customers with a more comfortable experience.

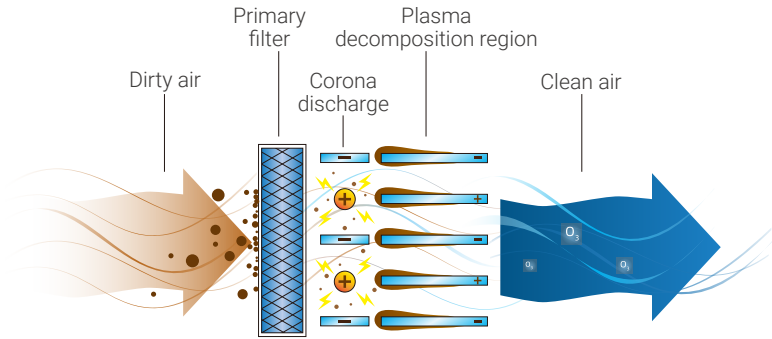


## FCU Features

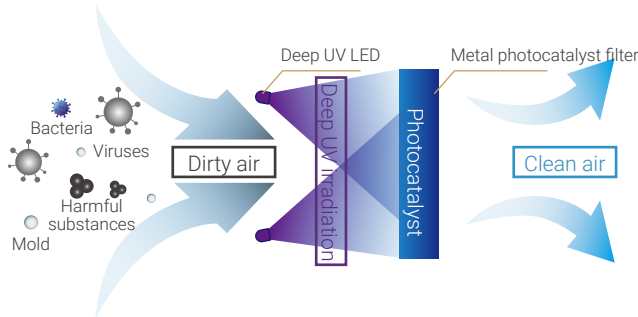
### Indoor Air Quality Component (optional for concealed)

Nowadays, indoor air pollution is a serious issue. To address this, Holtop has developed a series of fan coil units, integrating the latest advanced technology and introducing the corresponding return air purification unit. These products are characterized by their ease of installation and standardized production. They can effectively filter air dust, PM2.5, and other pollutants, and also feature air sterilization functions.

**High-efficiency electrostatic dust removal:** effective adsorption and filtration of suspended particles in the air (such as PM2.5, etc.) as well as sterilization and disinfection.



**Working principle:** Through the specific wavelength light irradiation, activate the nano photocatalyst, generate electron - hole pairs, so that the photocatalyst and the surrounding  $\text{H}_2\text{O}$  molecules,  $\text{O}_2$  molecules, combined with the generation of hydroxyl radical OH. Through the hydroxyl radical OH layer by layer to lock the air of various harmful components, decomposition of harmful components of the molecular structure, inhibition the growth of bacteria and viruses active ability, it can achieve the purpose of sterilization, air purification, deodorization, anti-virus and elimination of air pollution.



**Photocatalyst sterilization:** Effectively kill bacteria and viruses in the air, and rapidly decompose gaseous pollutants or odors in the atmosphere.

**Working principle:** For air conditioning and ventilation system, it can effectively inhibit the microbial growth of air conditioning unit/fan coil, through UV-C band (254nm) light wave irradiation, it can quickly penetrate the DNA of bacteria and viruses and kill them. At the same time, through the interaction between UV and nano-catalytic materials in the air, it can effectively decompose formaldehyde, benzene and other toxic and harmful gases in the air, so as to purify the air and achieve the effect of sterilization and disinfection.

## Available Accessories



LCD Controller



Three Speed Switch



Motorized Three-Way Valve



Motorized Two-Way Valve



# Performance Parameter

AC Concealed Fan Coil Unit (three rows)

Model		HP-02	HP-03	HP-04	HP-05	HP-06	HP-08	HP-10	HP-12	HP-14
Rated airflow (m³/h)	H	340	510	680	850	1020	1360	1700	2040	2380
	M	260	390	510	640	770	1020	1280	1530	1790
	L	170	260	340	430	510	680	850	1020	1190
Rated cooling capacity (W)	H	1800	2700	3600	4500	5400	7200	9000	10800	12600
Rated heating capacity (60°C water) (W)	H	2700	4050	5400	6750	8100	10800	13500	16200	18900
Rated heating capacity (45°C water) (W)	H	1800	2700	3600	4500	5400	7200	9000	10800	12600
Input power (W)	12Pa H	36	50	60	74	93	130	147	183	221
	30Pa H	43	57	70	84	105	151	169	206	245
	50Pa H	48	64	81	97	114	169	204	243	291
Noise (dB(A))	12Pa H	37	39	41	43	45	46	48	50	52
	30Pa H	40	42	44	46	47	48	50	52	54
	50Pa H	42	44	46	47	49	50	52	54	56
EER (W/W)	12Pa H	46	49	54	54	51	49	53	51	48
	30Pa H	39	43	47	49	45	43	47	46	44
	50Pa H	35	39	41	43	42	38	40	40	38
COP (W/W) 60°C	12Pa H	68	73	81	82	76	73	79	77	72
	30Pa H	58	65	70	73	68	64	70	69	66
	50Pa H	53	59	61	64	63	58	60	60	57
COP (W/W) 45°C	12Pa H	46	49	54	54	51	49	53	51	48
	30Pa H	39	43	47	49	45	43	47	46	44
	50Pa H	35	39	41	43	42	38	40	40	38
Fan	Type	Forward multi-blade centrifugal double-inlet fan								
	Qty	1	2	2	2	2	3	4	4	4
Motor	Type	Single asynchronous capacitor motor								
	Qty	1	1	1	1	1	2	2	2	2
	Protection class	Protection class IP20, Insulation class B								
	Power supply	220V/1P/50Hz								
Heat exchanger	Type	Copper tube with aluminum fin ( louver type)								
	Chilled waterflow (kg/h)	318	475	628	813	999	1291	1601	1866	2167
	Water pressure drop (kPa)	≤20	≤30	≤30	≤30	≤40	≤40	≤40	≤40	≤50
	Water inlet/outlet pipe connection	3/4" Internal thread								
Gross weight (kg)	Without return air plenum	11	12.5	13.5	15	16.5	21.5	28	35	39
	With return air plenum	14.2	16.3	17.5	19.5	21.5	27.2	35	43	47.6
Condensate pipe connection		3/4*External thread								

1. Cooling: Supply and return water temperature 7/12°C, Return air condition: Inlet air DB temperature 27°C, WB temperature 19.5°C.  
2. Heating: Supply water temperature 60°C, same water flow as cooling condition, Return air condition: Inlet air DB temperature 21°C.  
3. The airflow, cooling capacity, heating capacity, noise and other parameters in the table are all measured based on the unit without any accessories, if you increase the accessories (such as return air plenum, filters, etc.), the parameters will be changed.  
4. The airflow in the table is measured when the unit is running in dry state and the DB temperature is 25°C, the noise in the table is measured when the unit is in a fully anechoic room with the background noise of 16.5dB(A).  
5. Specifications and parameters are subject to change without prior notice due to product improvement, please refer to the nameplate of the unit.

# Performance Parameter

DC Brushless Concealed Fan Coil Unit (three rows)

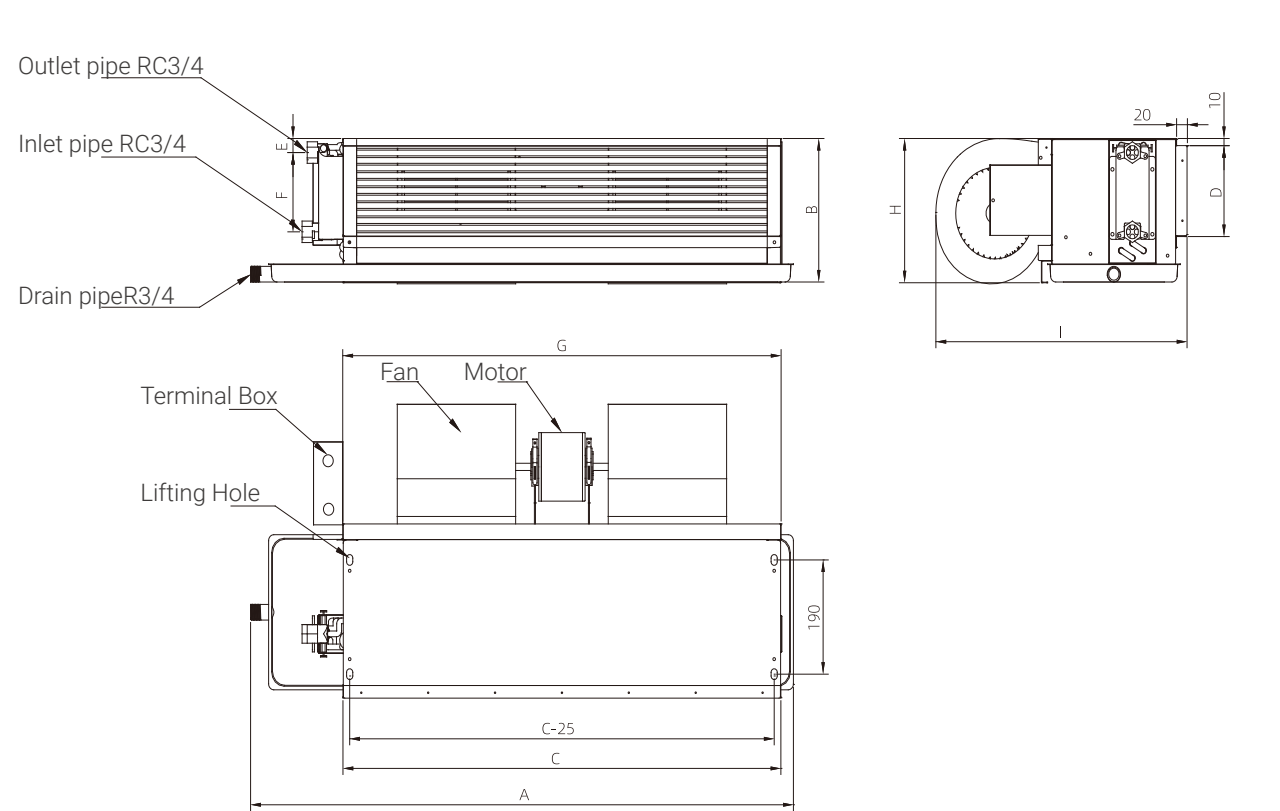
Model		HP-02	HP-03	HP-04	HP-05	HP-06	HP-08	HP-10	HP-12	HP-14
Rated airflow (m³/h)	H	340	510	680	850	1020	1360	1700	2040	2380
	M	260	390	510	640	770	1020	1280	1530	1790
	L	170	260	340	430	510	680	850	1020	1190
Rated cooling capacity (W)	H	1800	2700	3600	4500	5400	7200	9000	10800	12600
Rated heating capacity (60°C water) (W)	H	2700	4050	5400	6750	8100	10800	13500	16200	18900
Rated heating capacity (45°C water) (W)	H	1800	2700	3600	4500	5400	7200	9000	10800	12600
Input power (W)	12Pa H	22	30	36	44	56	78	88	114	139
	30Pa H	26	34	42	51	65	91	101	140	166
	50Pa H	29	40	49	61	80	101	125	173	208
Noise (dB(A))	12Pa H	37	39	41	43	45	46	48	50	52
	30Pa H	40	42	44	46	47	48	50	52	54
	50Pa H	42	44	46	47	49	50	52	54	56
EER (W/W)	12Pa H	71	77	84	86	77	75	81	76	70
	30Pa H	61	69	74	76	69	66	73	65	61
	50Pa H	56	60	64	65	58	60	61	54	51
COP (W/W) 60°C	12Pa H	106	115	126	128	116	112	122	115	106
	30Pa H	92	103	111	113	103	99	109	97	92
	50Pa H	83	90	97	97	86	91	91	81	76
COP (W/W) 45°C	12Pa H	71	77	84	86	77	75	81	76	70
	30Pa H	61	69	74	76	69	66	73	65	61
	50Pa H	56	60	64	65	58	60	61	54	51
Fan	Type	Forward multi-blade centrifugal double-inlet fan								
	Qty	1	2	2	2	2	3	4	4	4
Motor	Type	Single asynchronous capacitor motor								
	Qty	1	1	1	1	1	2	2	2	2
	Protection class	Protection class IP20, Insulation class B								
	Power supply	220V/1P/50Hz								
Heat exchanger	Type	Copper tube with aluminum fin ( louver type)								
	Chilled waterflow (kg/h)	318	475	628	780	938	1250	1561	1866	2167
	Water pressure drop (kPa)	≤20	≤30	≤30	≤30	≤40	≤40	≤40	≤40	≤50
	Water inlet/outlet pipe connection	3/4" Internal thread								
Gross weight (kg)	Without return air plenum	11	12.5	13.5	15	16.5	21.5	28	35	39
	With return air plenum	14.2	16.3	17.5	19.5	21.5	27.2	35	43	47.6
Condensate pipe connection		3/4*External thread								

1. Cooling: Supply and return water temperature 7/12°C, Return air condition: Inlet air DB temperature 27°C, WB temperature 19.5°C.  
2. Heating: Supply water temperature 60°C, same water flow as cooling condition, Return air condition: Inlet air DB temperature 21°C.  
3. The airflow, cooling capacity, heating capacity, noise and other parameters in the table are all measured based on the unit without any accessories, if you increase the accessories (such as return air plenum, filters, etc.), the parameters will be changed.  
4. The airflow in the table is measured when the unit is running in dry state and the DB temperature is 25°C, the noise in the table is measured when the unit is in a fully anechoic room with the background noise of 16.5dB(A).  
5. Specifications and parameters are subject to change without prior notice due to product improvement, please refer to the nameplate of the unit.



Fan Coil Unit Dimension

AC/DC Brushless Concealed Fan Coil Unit (three rows)

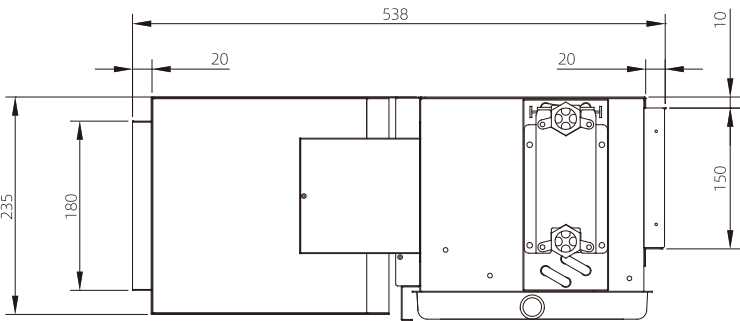


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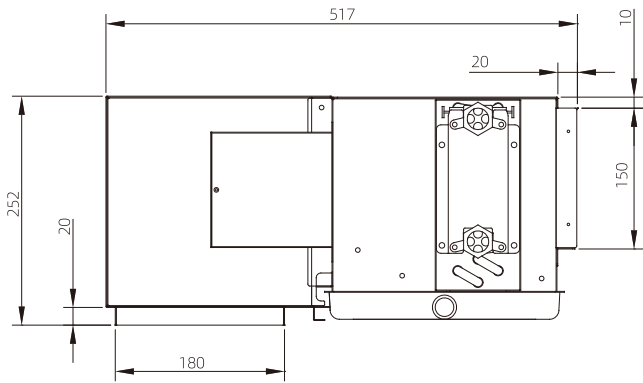
Model	A	B	C	D	E	F	G	H	I	Motor Qty	Fan Qty
HP-02	760	235	480	150	23	132	480	228	470	1	1
HP-03	860	235	610	150	23	132	610	228	470	1	2
HP-04	960	235	680	150	23	132	680	228	470	1	2
HP-05	1060	235	800	150	23	132	800	228	470	1	2
HP-06	1160	235	920	150	23	132	920	228	470	1	2
HP-08	1360	235	1100	150	23	132	1100	228	470	2	3
HP-10	1660	235	1410	150	23	132	1410	228	470	2	4
HP-12	1860	235	1610	150	23	132	1610	228	470	2	4
HP-14	2060	235	1810	150	23	132	1810	228	470	2	4

Performance Parameter

Side view of back return air plenum



Side view of down return air plenum



UOM: mm

Model	HP-02	HP-03	HP-04	HP-05	HP-06	HP-08	HP-10	HP-12	HP-14
Return air plenum length	485	615	685	805	925	1105	1415	1615	1815
Return air vent length	445	575	645	765	885	1065	1375	1575	1775



Performance Parameter

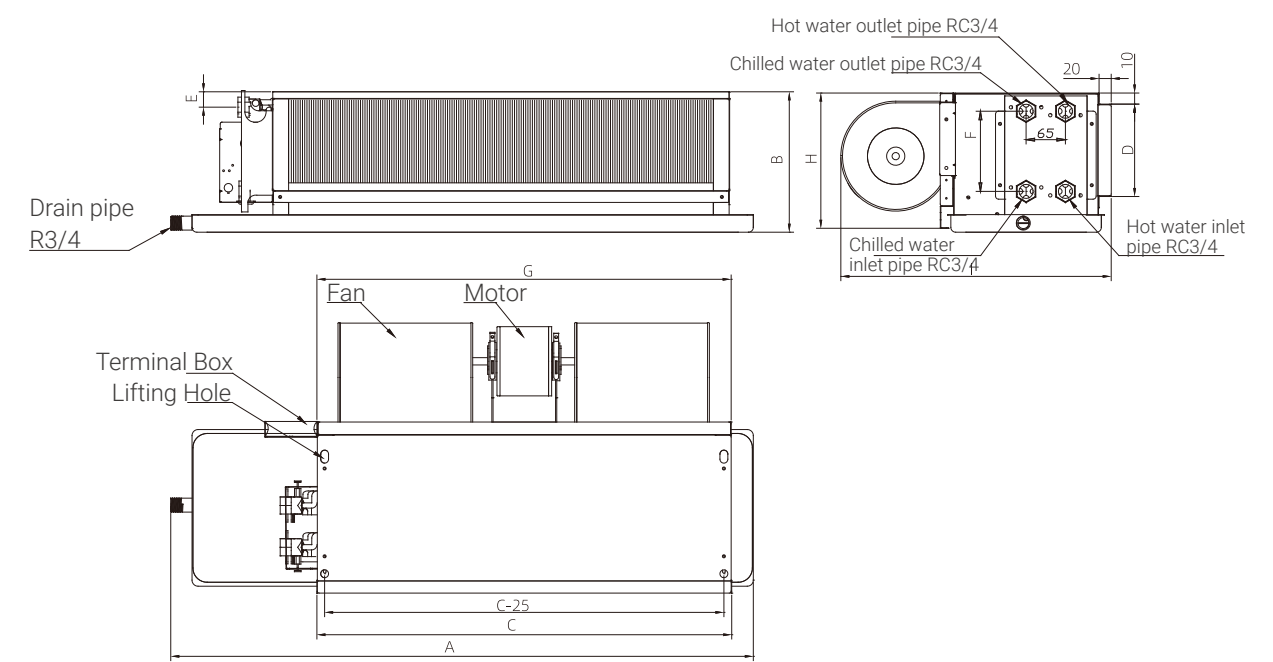
AC Brushless Concealed Fan Coil Unit (Four pipes 3+1)

Model		HP-02	HP-03	HP-04	HP-05	HP-06	HP-08	HP-10	HP-12	HP-14
Rated airflow (m³/h)	H	340	510	680	850	1020	1360	1700	2040	2380
	M	260	390	510	640	770	1020	1280	1530	1790
	L	170	260	340	430	510	680	850	1020	1190
Rated cooling capacity (W)	H	1800	2700	3600	4500	5400	7200	9000	10800	12600
Rated heating capacity (60°C water) (W)	H	1210	1820	2430	3030	3650	4860	6070	7290	8500
Rated heating capacity (45°C water) (W)	H	810	1210	1620	2020	2430	3240	4050	4860	5670
Input power (W)	12Pa H	36	50	60	74	93	130	147	183	221
	30Pa H	43	57	70	84	105	151	169	206	245
	50Pa H	48	64	81	97	114	169	204	243	291
Noise (dB(A))	12Pa H	37	39	41	43	45	46	48	50	52
	30Pa H	40	42	44	46	47	48	50	52	54
	50Pa H	42	44	46	47	49	50	52	54	56
EER (W/W)	12Pa H	46	49	54	54	51	49	53	51	48
	30Pa H	39	43	47	49	45	43	47	46	44
	50Pa H	35	39	41	43	42	38	40	40	38
COP (W/W) 60°C	12Pa H	33	35	39	39	37	36	39	38	36
	30Pa H	27	31	34	35	33	31	34	34	33
	50Pa H	25	28	29	30	31	28	29	29	28
COP (W/W) 45°C	12Pa H	22	23	26	26	25	23	26	25	24
	30Pa H	18	20	22	23	22	20	23	22	22
	50Pa H	16	18	19	20	20	18	19	19	18
Fan	Type	Forward multi-blade centrifugal double-inlet fan								
	Qty	1	2	2	2	2	3	4	4	4
Motor	Type	Single asynchronous capacitor motor								
	Qty	1	1	1	1	1	2	2	2	2
	Protection class	Protection class IP20, Insulation class B								
	Power supply	220V1P/50Hz								
Heat exchanger	Type	Copper tube with aluminum fin ( louver type)								
	Water inlet/outlet pipe connection	3/4" Internal thread								
Condensate pipe connection		3/4"External thread								

1. Cooling: Supply and return water temperature 7/12°C, Return air condition: Inlet air DB temperature 27°C, WB temperature 19.5°C.  
2. Heating: Supply water temperature 60°C, same water flow as cooling condition, Return air condition: Inlet air DB temperature 21°C.  
3. The airflow, cooling capacity, heating capacity, noise and other parameters in the table are all measured based on the unit without any accessories, if you increase the accessories (such as return air plenum, filters, etc.), the parameters will be changed.  
4. The airflow in the table is measured when the unit is running in dry state and the DB temperature is 25°C, the noise in the table is measured when the unit is in a fully anechoic room with the background noise of 16.5dB(A).  
5. Specifications and parameters are subject to change without prior notice due to product improvement, please refer to the nameplate of the unit.

Fan Coil Unit Dimension

AC Concealed Fan Coil Unit (Four pipes)



UOM: mm

Model	A	B	C	D	E	F	G	H	I	Motor Qty	Fan Qty
HP-02	760	235	480	150	23	132	480	228	470	1	1
HP-03	860	235	610	150	23	132	610	228	470	1	2
HP-04	960	235	680	150	23	132	680	228	470	1	2
HP-05	1060	235	800	150	23	132	800	228	470	1	2
HP-06	1160	235	920	150	23	132	920	228	470	1	2
HP-08	1360	235	1100	150	23	132	1100	228	470	2	3
HP-10	1660	235	1410	150	23	132	1410	228	470	2	4
HP-12	1860	235	1610	150	23	132	1610	228	470	2	4
HP-14	2060	235	1810	150	23	132	1810	228	470	2	4

**Note:** The dimensions of the four pipe unit may not be consistent with the above dimensions table, please refer to the real equipment.





## Cassette Fan Coil Unit Model Description

HP - 02 1 K M P  
① ② ③ ④ ⑤ ⑥

- ① Holtop HP Series Fan Coil Unit
- ② Airflow number: 02/03/04/05/06/08/10/12, Rated airflow: 02\*170=340m<sup>3</sup>/h; 03\*170=510 m<sup>3</sup>/h...
- ③ Design number
- ④ Structural form: "W"-Horizontal, "K"- Cassette
- ⑤ Installation type: "A"-Concealed type, "M"- Decorative type
- ⑥ Drainage form: "P"-Self-drainage type, "T"-Self-With condensate lifting pump type

### ■ Cassette Fan Coil Unit

This series of fan coil unit using high-quality ABS panel, with arc rounded corners, 3D lattice decorative overall appearance of elegant and generous, optional condensate drainage pump to greatly reduce the installation space.

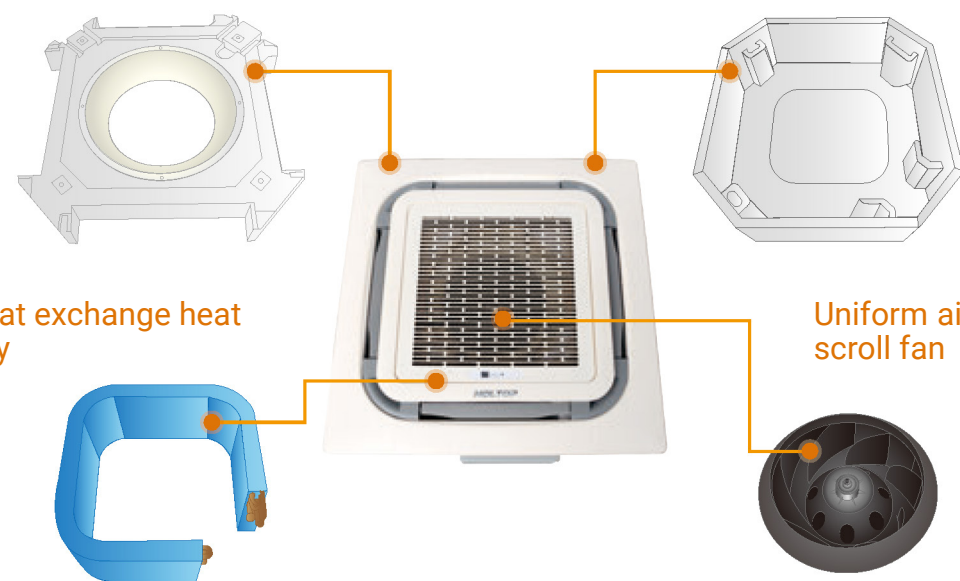
1. Convenient installation and maintenance, no need to install separate air inlet and outlet, saving cumbersome duct connection and insulation work, panel and unit bayonet connection for maintenance.
2. Uniform air supply, four-side air outlet design, reduce indoor supply air resistance, easier to quickly reach the air to every corner, to ensure uniform temperature in the room.
3. Super heat exchanger, using C-type high-efficiency heat exchanger effectively to improve the uniformity of the air ducts and piping system, making the air effect more balanced.
4. Ultra-low noise, using large-diameter scroll centrifugal fan with high-density acoustic insulation foam to greatly reduce indoor noise.

Injection molding drain pan  
Safe and reliable

Foam insulation structure  
Flame retardant and noise reduction

C-type heat exchange heat  
uniformity

Uniform airflow from  
scroll fan





## Performance Parameter

Gravity drainage type

Model			HP-02	HP-03	HP-04	HP-05	HP-06	HP-08	HP-10	HP-12
Rated airflow (m³/h)	H		340	510	680	850	1020	1360	1700	2040
	M		260	390	510	640	770	1020	1280	1530
	L		170	260	340	430	510	680	850	1020
Rated cooling capacity (W)	H		1800	2700	3600	4500	5400	7200	9000	10800
Rated heating capacity (60°C water) (W)	H		2700	4050	5400	6750	8100	10800	13500	16200
Rated heating capacity (45°C water) (W)	H		1800	2700	3600	4500	5400	7200	9000	10800
Input power (W)	Low static pressure	H	36	50	60	74	93	130	147	183
Noise (dB(A))	Low static pressure	H	37	39	41	43	45	46	48	50
EER (W/W)	Low static pressure	H	46	49	54	54	51	49	53	51
COP (W/W) 60°C	Low static pressure	H	68	73	81	82	76	73	79	77
COP (W/W) 45°C	Low static pressure	H	46	49	54	54	51	49	53	51
Fan	Type		Centrifugal wheel							
	Qty		1	1	1	1	1	1	1	1
Motor	Type		Asynchronous capacitor motor							
	Qty		1	1	1	1	1	1	1	1
Heat exchanger	Protection class		Protection class IP20, Insulation class B							
	Power supply		220V/1P/50Hz							
	Type		Copper tube with aluminum fin ( louver type)							
	Chilled waterflow (kg/h)		344	464	636	774	963	1204	1565	1857
	Water pressure drop (kPa)		≤30	≤30	≤30	≤30	≤40	≤40	≤40	≤40
	Water inlet/outlet pipe connection		3/4" Internal thread							
Gross weight (kg)			20	20	20	27.5	28	28	35.5	36.5
Condensate pipe connection			φ30							

1. Cooling: Supply and return water temperature 7/12°C Return air condition: Inlet air DB temperature 27°C, WB temperature 19.5°C.  
2. Heating: Water supply temperature 60°C, the same water flow and cooling condition. Return air condition: Inlet air DB temperature 21°C.  
3. The airflow in the table is the airflow when the outlet static pressure is 0Pa as well as the unit is running in dry state and the DB temperature is 25°C.  
4. Specifications and parameters are subject to change without prior notice due to product improvement, please refer to the nameplate of the unit.

## Performance Parameter

Self-contained condensate drainage pump type

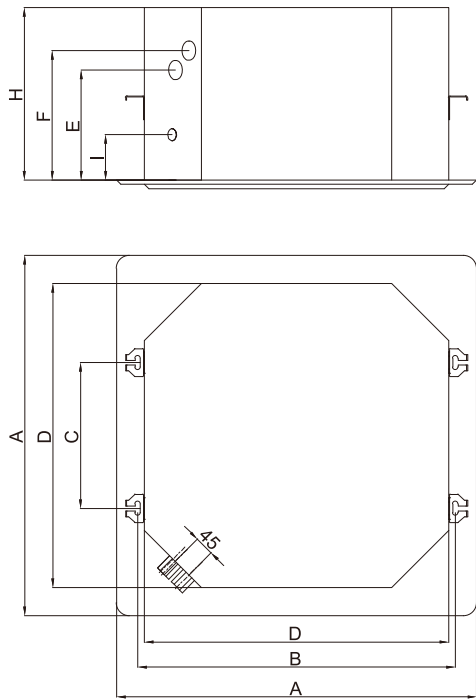
Model			HP-02	HP-03	HP-04	HP-05	HP-06	HP-08	HP-10	HP-12
Rated airflow (m³/h)	H		340	510	680	850	1020	1360	1700	2040
	M		260	390	510	640	770	1020	1280	1530
	L		170	260	340	430	510	680	850	1020
Rated cooling capacity (W)	H		1800	2700	3600	4500	5400	7200	9000	10800
Rated heating capacity (60°C water) (W)	H		2700	4050	5400	6750	8100	10800	13500	16200
Rated heating capacity (45°C water) (W)	H		1800	2700	3600	4500	5400	7200	9000	10800
Input power (W)	Low static pressure	H	36	50	60	74	93	130	147	183
Noise (dB(A))	Low static pressure	H	37	39	41	43	45	46	48	50
EER (W/W)	Low static pressure	H	46	49	54	54	51	49	53	51
COP (W/W) 60°C	Low static pressure	H	68	73	81	82	76	73	79	77
COP (W/W) 45°C	Low static pressure	H	46	49	54	54	51	49	53	51
Fan	Type		Centrifugal wheel							
	Qty		1	1	1	1	1	1	1	1
Motor	Type		Asynchronous capacitor motor							
	Qty		1	1	1	1	1	1	1	1
Heat exchanger	Protection class		Protection class IP20, Insulation class B							
	Power supply		220V/1P/50Hz							
	Type		Copper tube with aluminum fin ( louver type)							
	Chilled waterflow (kg/h)		344	464	636	774	963	1204	1565	1857
	Water pressure drop (kPa)		≤30	≤30	≤30	≤30	≤40	≤40	≤40	≤40
	Water inlet/outlet pipe connection		3/4" Internal thread							
Gross weight (kg)		20	20	20	27.5	28	28	35.5	36.5	
Condensate pipe connection			φ30							
Lifting pump	Pump head (m)		1.2							

1. Cooling: Supply and return water temperature 7/12°C Return air condition: Inlet air DB temperature 27°C, WB temperature 19.5°C.  
2. Heating: Water supply temperature 60°C, the same water flow and cooling condition. Return air condition: Inlet air DB temperature 21°C.  
3. The airflow in the table is the airflow when the outlet static pressure is 0Pa as well as the unit is running in dry state and the DB temperature is 25°C.  
4. Condensate lifting pump type with remote control.  
5. Specifications and parameters are subject to change without prior notice due to product improvement, please refer to the nameplate of the unit.



## Fan Coil Unit Dimension

Gravity drainage type

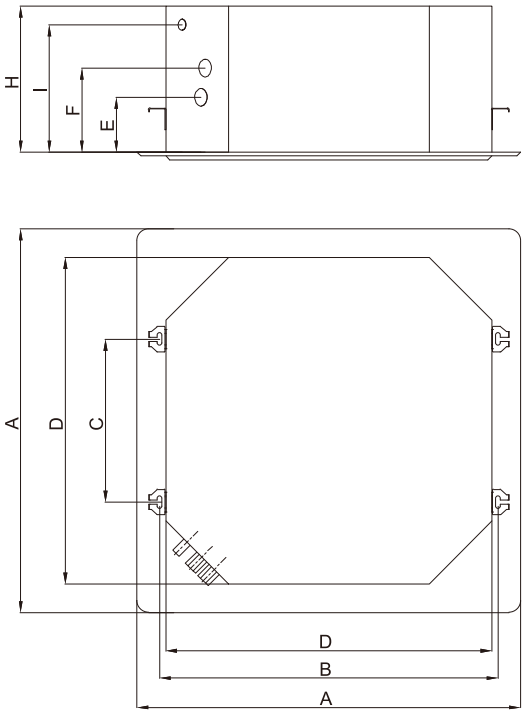


UOM: mm

Model	HP-021KMP	HP-031KMP	HP-041KMP	HP-051KMP	HP-061KMP	HP-081KMP	HP-101KMP	HP-121KMP
Drawing board size A	680			835			960	
Boom center distance BxC	615×425			740×340			865×415	
Dimension D	585			710			835	
Dimension H	400			400			400	
Inlet pipe height E	240			255			250	
Outlet pipe height F	290			300			195	
Condensate pipe height I	115			105			105	

## Fan Coil Unit Dimension

Self-contained condensate drainage pump type cassette fan coil unit



UOM: mm

Model	HP-021KMT	HP-031KMT	HP-041KMT	HP-051KMT	HP-061KMT	HP-081KMT	HP-101KMT	HP-121KMT
Drawing board size A	680			835			960	
Boom center distance BxC	615×425			740×340			865×415	
Dimension D	585			710			835	
Dimension H	250			290			290	
Inlet pipe height E	90			145			140	
Outlet pipe height F	138			190			185	
Condensate pipe height I	212			242			242	



## Variable Working Condition Correction Table

Medium and low speed - cooling performance correction coefficient

Model		HP-02	HP-03	HP-04	HP-05	HP-06	HP-08	HP-10	HP-12	HP-14
Medium speed	Total heat	0.87	0.91	0.82	0.81	0.83	0.83	0.78	0.80	0.78
	Sensible heat	0.85	0.88	0.80	0.79	0.81	0.81	0.76	0.78	0.85
Low speed	Total heat	0.69	0.69	0.60	0.58	0.57	0.58	0.57	0.59	0.52
	Sensible heat	0.65	0.65	0.56	0.55	0.53	0.55	0.54	0.56	0.50

Medium and low speed - heating performance correction coefficient

Model	HP-02	HP-03	HP-04	HP-05	HP-06	HP-08	HP-10	HP-12	HP-14
Medium speed	0.83	0.86	0.77	0.77	0.79	0.78	0.74	0.76	0.74
Low speed	0.65	0.65	0.56	0.55	0.53	0.55	0.54	0.56	0.50

Cooling performance correction coefficient

Inlet air temperature	Inlet water temperature	40	45	50	55	60	65	70
16		0.62	0.75	0.87	1	1.13	1.26	1.39
17		0.59	0.72	0.85	0.98	1.1	1.23	1.36
18		0.57	0.69	0.82	0.95	1.08	1.21	1.33
19		0.54	0.67	0.8	0.92	1.05	1.18	1.31
20		0.51	0.64	0.77	0.9	1.03	1.16	1.28
21		0.49	0.62	0.75	0.87	1	1.13	1.26
22		0.46	0.59	0.72	0.85	0.98	1.1	1.23
23		0.44	0.57	0.69	0.82	0.95	1.08	1.21
24		0.41	0.54	0.67	0.8	0.92	1.05	1.18

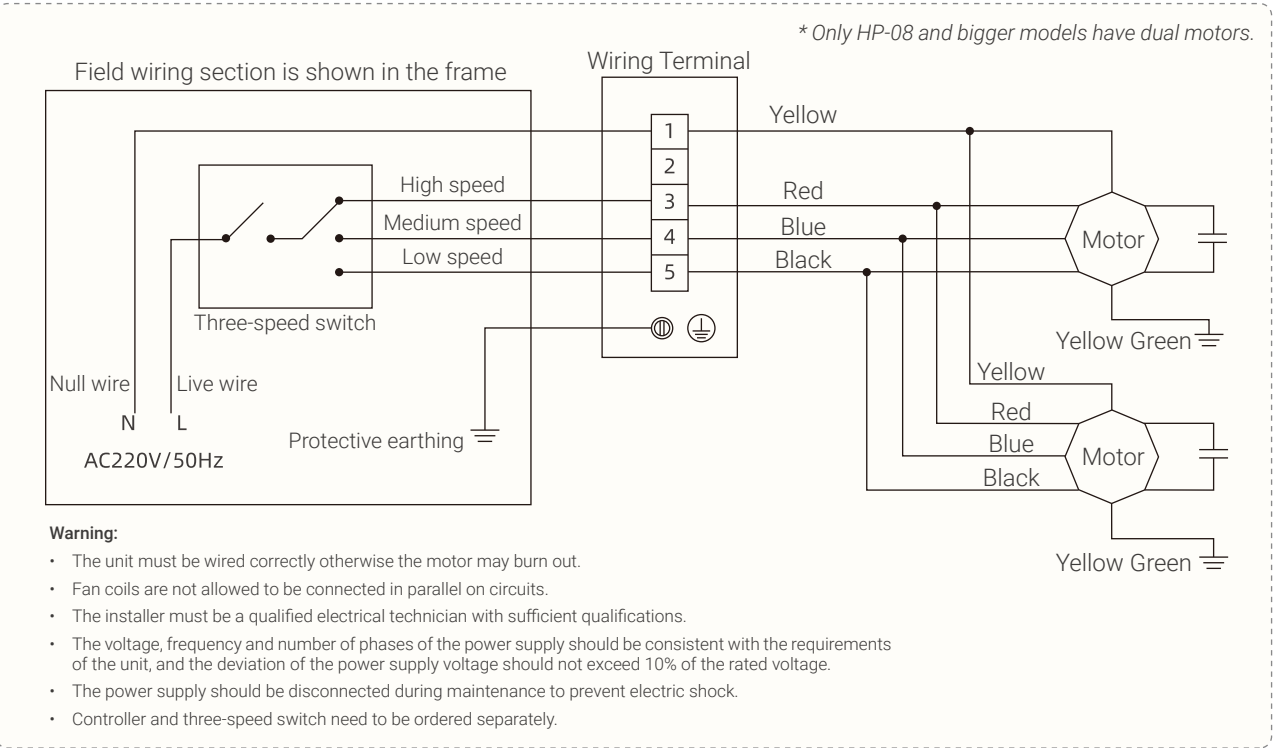
Heating performance correction coefficient

Inlet air temperature	Inlet water temperature	5	6	7	8	9	10
22		0.85	0.76	0.66	0.57	0.49	0.4
23		0.92	0.83	0.74	0.65	0.56	0.47
24		0.98	0.89	0.8	0.71	0.62	0.53
25		1.06	0.97	0.88	0.79	0.7	0.61
26		1.14	1.05	0.96	0.87	0.78	0.69
27		1.21	1.12	1	0.94	0.85	0.76
28		1.27	1.18	1.09	0.99	0.91	0.82

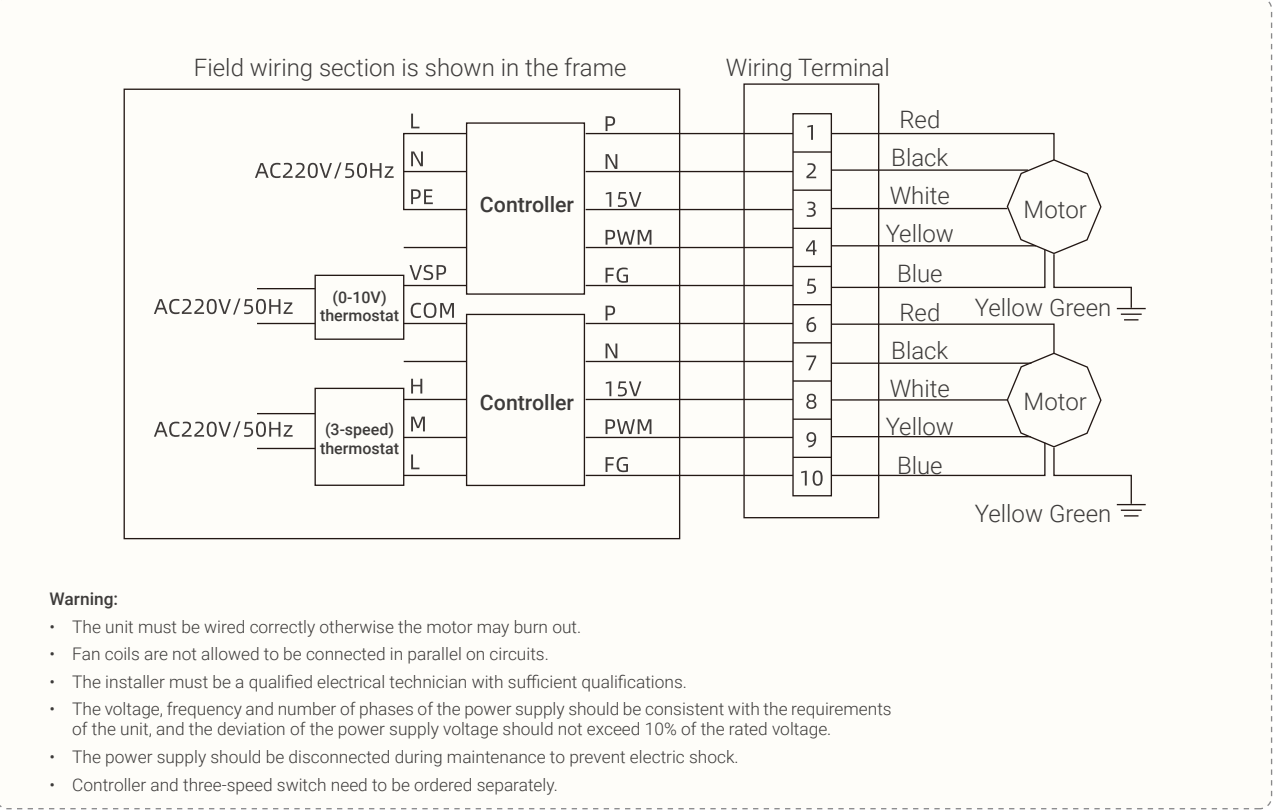
**Note:** The cooling capacity corresponding to the above correction coefficient is tested under the conditions of inlet air DB temperature of 27°C, WB temperature of 19.5°C, inlet water temperature of 7°C and outlet water temperature of 12°C. The heating capacity corresponding to the above correction coefficient is tested under the conditions of inlet air DB temperature 21°C, inlet water temperature 60°C and outlet water temperature 50°C.

## Electrical Schematic

General Fan Coil Unit



DC Brushless Motor Fan Coil Unit



# Installation and Maintenance Instructions

## Unit installation

- During the process of handling and lifting, relevant safety regulations should be followed. The unit should not be moved by hand with the impeller or volute to avoid personal injury or equipment damage.
- Pay attention to keep all parts of the unit intact and prevent foreign matter from entering into the volute or cooling/heating coil.
- The main body of the unit must be set horizontally, and the drain pipe must maintain sufficient slope, otherwise it will affect the condensate drainage and lead to water leakage.
- The unit can only bear its own weight, and cannot bear other external forces such as water pipes, and the installation position should leave enough space for maintenance.
- The return air outlet should be equipped with a filter to prevent dust from blocking the heat exchanger fins and affecting the heat exchange effect.

## Piping configuration

- The water pipes should be connected from the bottom to the top, and the inlet and outlet pipes should be flexibly connected, and do not exert too much force during operation.
- Inlet and outlet pipes, condensate pipes and valves should be strictly anti-dew construction. At the same time, the insulation material should be carefully end processing, so as to avoid condensate penetration into the interior of the insulation material.

## Electrical wiring

- Power supply: 220V±10%, 50HZ.
- When wiring the unit, please follow the electrical schematic diagram strictly, running the unit in the wrong wiring state will damage the motor.
- It is strictly prohibited for multiple units to share a switch or connect any two of the three high, medium and low gears to the same power line, otherwise the following situations will occur:
  - A. Generate internal circuit current, the motor temperature rises and the load increases, thus burning the motor.
  - B. When a motor burns, then burn other parallel motors.
  - C. Motor speed is not normal.

## Water supply requirements

- The chilled water inlet temperature of the unit in summer should not be lower than 5°C, and the hot water inlet temperature in winter should not be higher than 80°C, and the water quality is required to be clean and softened.
- It is forbidden to use of steam and hot water above 85°C, otherwise the supply air temperature is too high, which will lead to deformation of the supply air grid or other failure or hazards.
- If the fan coil unit is stopped during system operation in summer, the water circulation should stop automatically, otherwise condensation may form on the surface of the unit.
- During the design, electric valves and temperature control switches can be interlocked, or chilled water bypass can be used. Otherwise, the water inlet valve can only be manually closed to avoid it. The maximum water flow rate of each model shall not exceed the sample data range, and the water quality is required to be clean and softened.

## Precautions

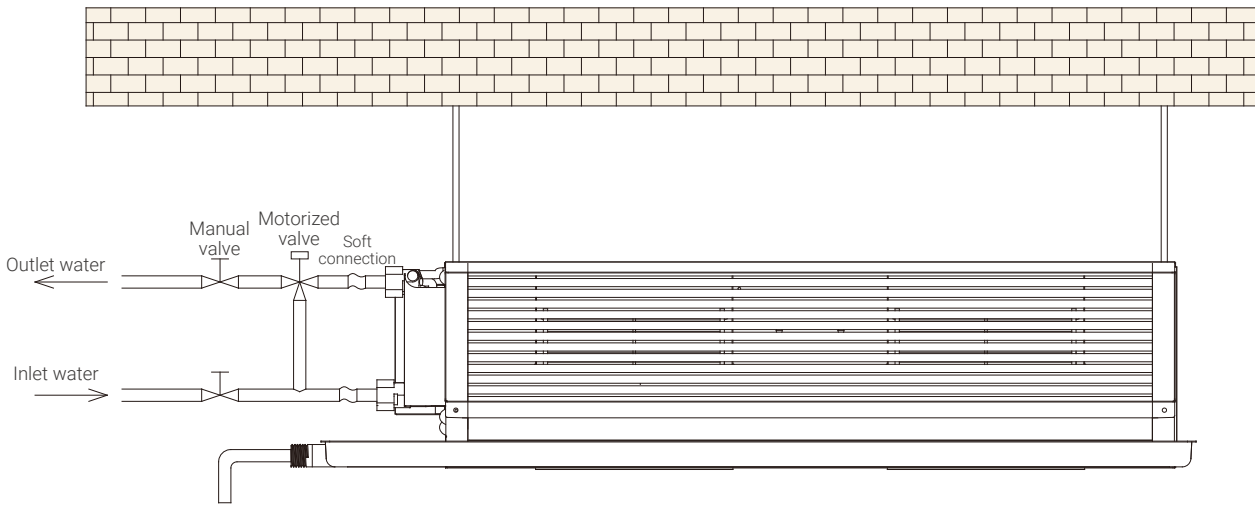
- The applicable working condition of the unit is -30°C~65°C, and the altitude does not exceed 4000 meters.
- Before the first operation of the unit and the conversion between heating and cooling, it is necessary to open the vent valve to exhaust the air in the pipeline, otherwise it will affect the heat transfer effect.
- The shell of the cassette FCU is spray plastic parts, do not use thinner or gasoline for cleaning.
- When the unit starts, it is best to start from the high speed and then switch to medium or low speed.
- When the unit is not used for a long time, please cut off the power supply for safety reasons, and it is recommended to test the insulation resistance before operation when it is used again.
- It is prohibited to modify the unit by yourself, otherwise the failure, electric shock, fire and other consequences will be responsible for yourself.
- When the above working conditions are exceeded, the unit may condense, at this time the water temperature should be increased or the water volume should be reduced.

## Use and maintenance

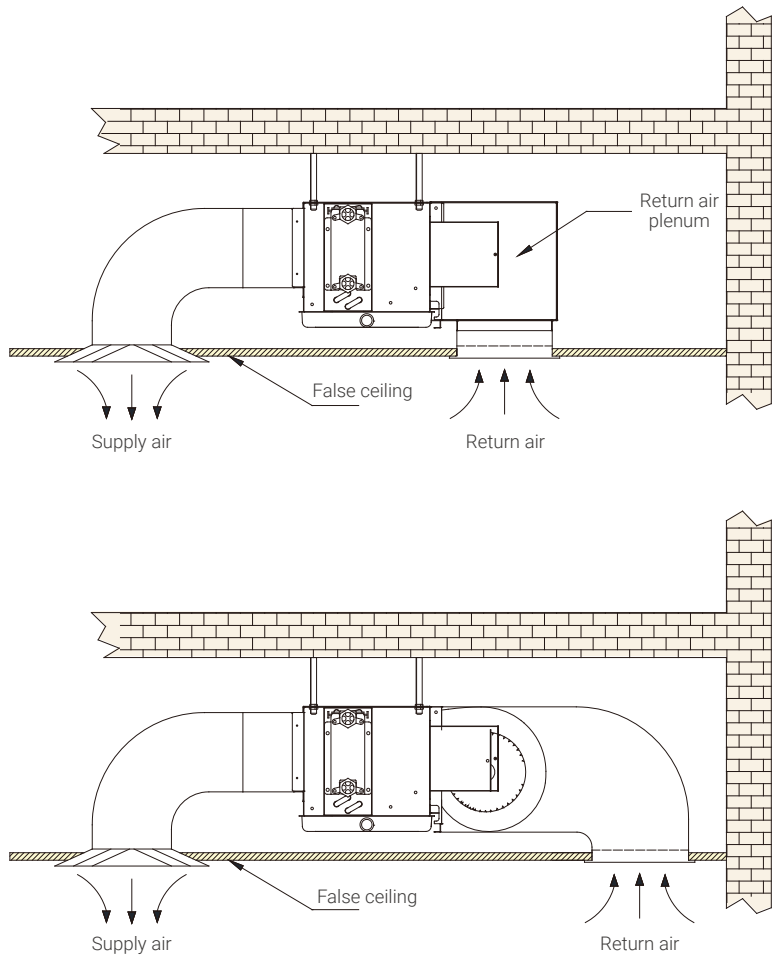
- The cooling/heating coil and filter should be cleaned regularly to facilitate the smoothness of the air path and ensure the efficiency of heat exchange.
- The motor bearing adopts fully enclosed ball bearing, no need to add lubricating oil.
- When the unit is out of service for a long time, the coil should be filled with water to reduce the corrosion of the pipeline.
- During shutdown or installation and commissioning in winter, the water inside the coil should be drained or other anti-freezing measures should be taken to prevent the pipeline from freezing and cracking.
- Before cooling operation in summer, please clean the inside of the drain tray to confirm whether it needs to be repaired, and the drain outlet needs to be cleaned before cooling operation and in the cooling season.
- Please check and clean the motor and fan impeller regularly, and check the mounting bolts and nuts of the motor regularly to check whether they are loose.
- When the unit fails, it should be repaired by professionals.

# Installation Schematic

## General Fan Coil Unit



## Air duct installation





Project Reference

Public Buildings

Commercial Buildings

Office Buildings

Big Venues

Complexes

Factories

• Baixiang County Central Hospital Phase II

• Zhengding New Magnetic Office Building

• State Grid Ningxia Power Supply Operation and Maintenance Centre

• Lund CDC Centre

• Taoxiang Lake Hilton Hotel

• Gannan Health Care College Canteen

• Yunnan Second Infectious Disease Hospital

• Dingbian County Xinhua Bookstore

• Luoyang Fuxing School

• Yongan General Hospital

• Fever Clinic of First Affiliated Hospital of Heda

• Henan Senyuan Electric Vehicle Welding Workshop

• Zhongyuan College of Science and Technology

• Xuchang Campus

• South China Optoelectronics Phase I

• Zhuzhou Air Development 3302 Factory

• ZTE Communication Base

• Suzhou Tongqiao District Culture and Art Centre

• Jiangsu Jianqiu Hi-Tech Group

• Hefei Financial Plaza

• China Postal Savings Bank Co.

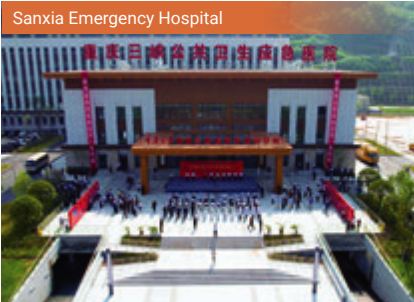
• Shanghai Normal University Integrated Development and Modern Service Centre

• Zhao County People's Hospital

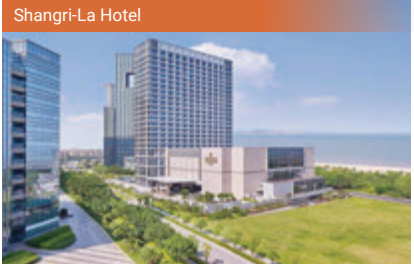
• Respiratory Ward Building of Langfang

• Third People's Hospital

• Nanqiao Trade Centre



Project Reference



- Huairou Space Science Payload Assembly and Test Laboratory Building
- Changdu County People's Hospital
- Tibet Airlines Chengdu Base
- Shandong Guohua Building
- Haitian Quantum Office Building
- Yinchuan New Reading Sea Xinlian
- China Construction Mansion
- 3D Communication Technology Park
- Xixi International
- Shandong Shui Fa Building
- Huaxin Mansion
- Xicheng Mansion
- Yanji Grade IV Hot Spring Hotel
- Landmark International Plaza
- Guiyang South Park - Zhigu
- Nanchang Huazhang Tiandi

- Urumqi Rail Transit Headquarters Base Control Center Project
- Zhuzhou Information Port
- Beijing Institute of Life Sciences Expansion Project
- Wangfujing Group Office Building
- Longfei Building
- Changsha Hui Jing Development Global Center
- State-owned Assets Building
- Minjiang College Innovation and Entrepreneurship Building
- Guangdong-Macao Cooperation Traditional Chinese Medicine Science and Technology Industrial Park
- Hilton Garden Inn Guangzhou
- Daqing Oilfield Informatization Production Command Center
- Zhong'an Chuanggu
- Shenzhen CCB Building

- Shenzhen COFCO Cloudview
- Qingdao Center for International Exchange and Cooperation (QCIEC)
- Oriental International New Town Hotel
- Sanya Haitang Bay
- Vienna Hotel
- Beijing Baoneng Mansion
- National Network Security Talent and Innovation Base
- Wuhan Science and Technology Industrial Park Project Equipment R&D Building
- Guanggu Science and Technology Building
- Zhongguancun Dongsheng International Venture Park
- Guiyang Shengshan International Hotel
- Excellence Qianhai Financial Center II
- Hangzhou Ideal City
- Hanyu Financial Business Center

