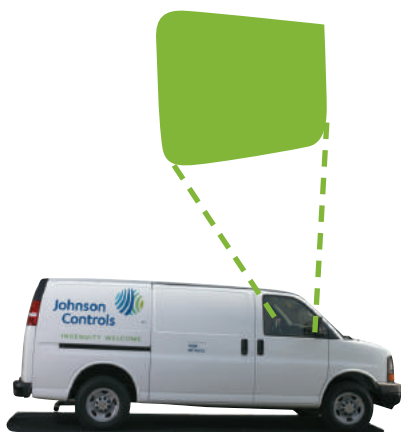


FAN COIL UNITS

YGFC



Climaproyectos



On the cover

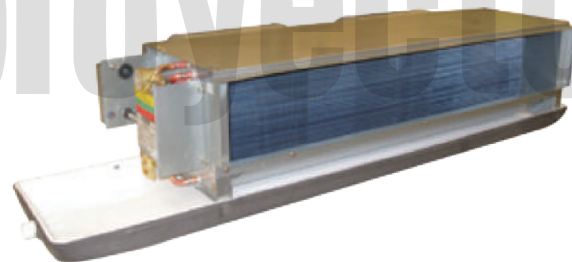
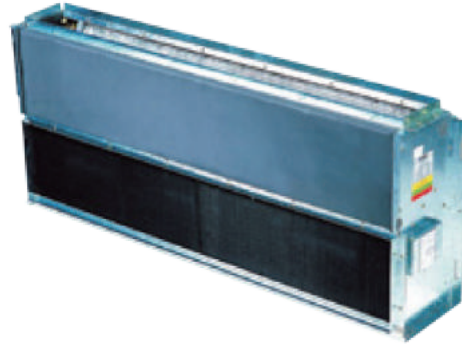
Integrated professional services designed for your unique business need.

We care about your business and understand that each business has its unique requirements. Our all-encompassing maintenance package is tailor-made to fit your every financial and technical need. It covers from planned routine equipment inspections and predictive maintenance routines to system performance checks and annual shutdowns.

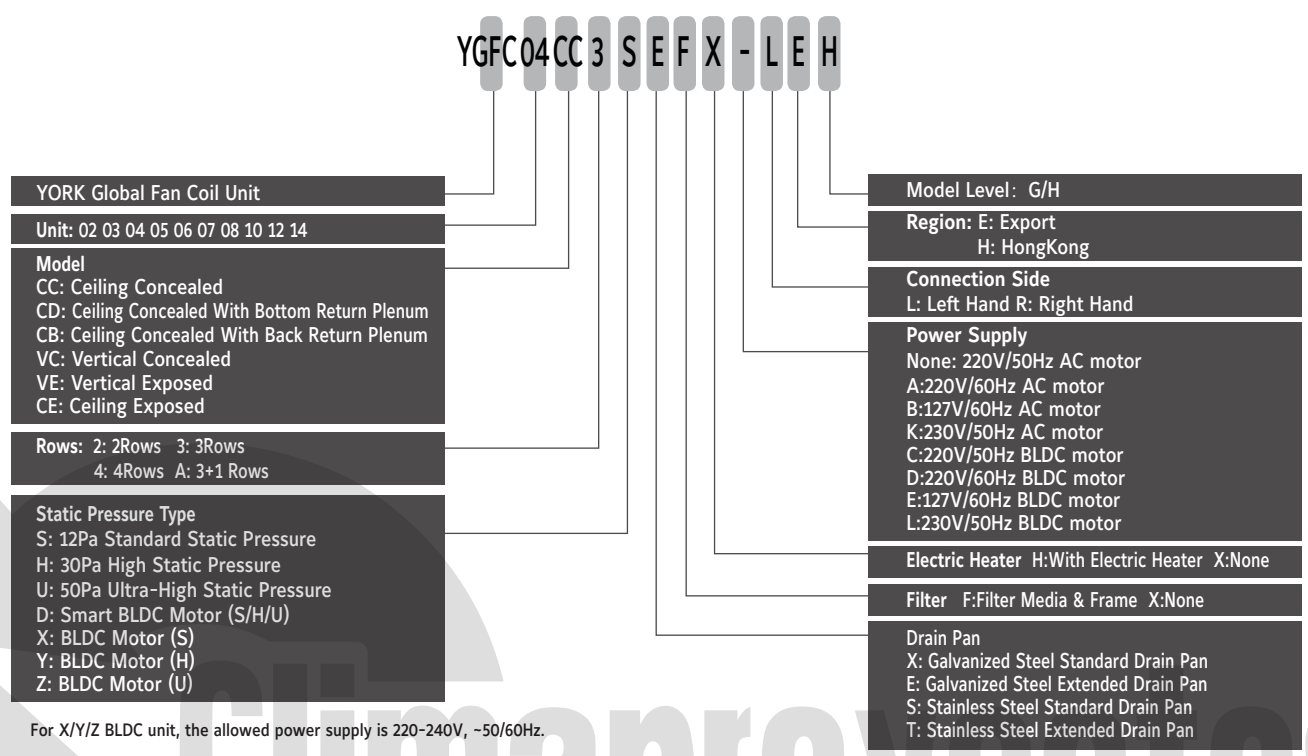


YGFC Fan Coil Units

YORK YGFC fan coil units provide 800 models in four major series of ceiling concealed mounting, vertical concealed mounting, ceiling exposed mounting and vertical exposed mounting for customers to choose. The air flow is from 340m³/h to 2380m³/h (at high speed). The customer can select a unit of high static pressure model if necessary. The design and manufacture are flexible and it can be customized according to requirements. This product is designed strictly and manufactured finely, having an up-to-date style and advanced structure. It is high-efficient, low noise, energy, safe, reliable, and easy to maintain and install.



Nomenclature



Design Features

High Efficiency

The high efficiency copper-tube and aluminum-fin heat exchanger is of the cross radiation variety, and is available in four different types: 2 rows, 3 rows, 4 rows and 4 pipes. The heat exchanger is equipped with large air flow and low noise fan to enhance the heat transfer, and achieve high heat exchange efficiency. The maximum working pressure of the heat exchanger is 1.6MPa.

Quiet Operation and Energy Saving

All units are optimized for maximum performance. Each fan has been thoroughly checked to ensure high efficient and quiet operation. The fan uses galvanized steel centrifugal forward curve blades. Water knockout is made of brass for uniform water flow and less water pressure drop.

Low Maintenance Cost

Motor utilizes 3-speed permanent split capacitors and imported high precision and quality ball bearings. The self-lube ball bearings reduce noise and prolong lifespan. They are also surface-treated with anti-corrosive material to ensure that the motor shaft has longer lifespan.

Flexibility and Low Installation Cost

- Ceiling concealed (horizontal concealed) fan coil's mounting plate can be interchanged with flange of the opening. Customers can easily change the direction of duct connection for quick and easy installation.
- Vertical concealed fan coil unit can be elegantly mounted under the window, allowing customers to renovate their house freely and comfortably.
- CE, VE Type exposed unit can be ceiling mounted as well as floor mounted too.
- Vertical exposed fan coil unit can be placed at any location in a room and its beautiful decorative shape matches any furniture, it does not only save the decoration cost but also provide a comfortable and beautiful environment.
- Ceiling exposed fan coil unit can be mounted directly on the ceiling.

Technical Data

Model	ESP	Air Flow(m³/h)			Nominal Cooling Capacity (kW)		Nominal Heating Capacity (kW)	Water Flow (L/s)		Water Pressure Drop (kPa)	
		High	Medium	Low	Total Heat	Sensible Heat		Cooling Condition	Heating Condition	Cooling Condition	Heating Condition
2 Rows	02 S/H/U	360	270/270/270	190/180/190	2.05	1.35	3.06	0.102	0.102	30.0	30.0
	03 S/H/U	520	410/440/390	270/310/270	2.80	1.99	4.93	0.135	0.135	28.0	28.0
	04 S/H/U	690	520/535/530	350/370/360	3.50	2.65	5.83	0.188	0.188	30.0	30.0
	05 S/H/U	870	660/660/700	440/440/530	4.01	3.19	7.03	0.196	0.196	27.0	27.0
	06 S/H/U	1030	750/790/800	500/540/580	4.80	3.81	8.56	0.233	0.233	30.0	30.0
	07 S/H/U	1170	860/910/850	700/620/590	5.85	4.40	10.03	0.287	0.287	40.0	40.0
	08 S/H/U	1360	1030/1135/1200	640/810/860	7.25	5.16	12.22	0.353	0.353	40.0	40.0
	10 S/H/U	1740	1310/1310/1380	870/870/920	8.25/8.00/8.00	6.18/6.15/6.15	14.56/14.15/14.15	0.397/0.385/0.385	0.397/0.385/0.385	40.0	40.0
	12 S/H/U	2040	1560/1560/1700	1040/1040/1180	9.65/9.45/9.15	7.61/7.45/7.21	15.99/15.66/15.16	0.465/0.457/0.440	0.465/0.457/0.440	40.0	40.0
3 Rows	02 S/H/U	2380	1830/1830/1850	1220/1220/1360	11.50/11.20/10.50	8.60/8.45/7.85	19.05/18.55/17.39	0.554/0.538/0.508	0.554/0.538/0.508	50.0	50.0
	02 S/H/U	340	270/270/270	190/170/190	2.13	1.44	3.48	0.104	0.104	25.0	25.0
	03 S/H/U	520	390/430/380	260/300/270	3.26	2.26	5.32	0.158	0.158	26.0	26.0
	04 S/H/U	680	520/520/530	340/360/360	4.17	3.01	6.68	0.201	0.201	30.0	30.0
	05 S/H/U	850	640/640/680	430/430/500	4.84	3.57	7.84	0.233	0.233	28.0	28.0
	06 S/H/U	1020	730/770/780	485/530/540	5.81	4.32	9.38	0.283	0.283	30.0	30.0
	07 S/H/U	1170	850/910/840	590/600/580	6.28	4.77	10.61	0.303	0.303	30.0	30.0
	08 S/H/U	1360	1000/1120/1150	640/780/840	7.92	5.85	12.79	0.386	0.386	38.0	38.0
	10 S/H/U	1710	1290/1290/1320	860/860/900	9.07	7.13	15.91	0.440	0.440	38.0	38.0
3+1 Rows	12 S/H/U	2040	1530/1530/1620	1020/1020/1130	11.12	8.23	18.38	0.540	0.540	40.0	40.0
	14 S/H/U	2380	1790/1790/1800	1190/1190/1320	12.94	9.86	21.74	0.627	0.627	50.0	50.0
	02 S/H/U	340	270/270/270	170/170/180	2.03	1.38	1.63	0.100	0.033	24.0	24.0
	03 S/H/U	500	350/420/380	240/300/260	3.08	2.15	2.49	0.149	0.050	25.0	25.0
	04 S/H/U	670	480/520/520	310/352/350	3.98	2.90	3.04	0.192	0.064	30.0	30.0
	05 S/H/U	820	620/620/640	420/420/480	4.56	3.38	3.52	0.219	0.073	27.0	27.0
	06 S/H/U	1010	720/760/760	480/520/520	5.56	4.17	4.40	0.271	0.090	30.0	30.0
	07 S/H/U	1160	840/900/830	560/590/580	6.01	4.60	4.93	0.290	0.097	30.0	30.0
	08 S/H/U	1350	990/1080/1100	640/780/820	7.62	5.67	6.11	0.371	0.124	37.0	37.0
4 Rows	10 S/H/U	1680	1270/1270/1300	850/850/880	8.60	6.82	6.66	0.418	0.139	36.0	36.0
	12 S/H/U	2000	1500/1500/1550	1000/1000/1100	10.56	7.86	8.06	0.513	0.171	38.0	38.0
	14 S/H/U	2330	1750/1750/1750	1160/1160/1280	12.34	9.44	9.66	0.598	0.199	48.0	48.0
	02 S/H/U	340	270/270/270	170/170/180	2.52	1.52	4.08	0.128	0.128	40.0	40.0
	03 S/H/U	500	350/420/380	240/300/260	3.77	2.30	5.84	0.186	0.186	40.0	40.0
	04 S/H/U	670	480/520/520	310/352/350	4.47	2.81	6.91	0.224	0.224	60.0	60.0
	05 S/H/U	820	620/620/640	420/420/480	5.37	3.45	8.63	0.266	0.266	45.0	45.0
	06 S/H/U	1010	720/760/760	480/520/520	6.21	4.06	10.25	0.305	0.305	45.0	45.0
	07 S/H/U	1160	840/900/830	560/590/580	7.33	4.79	11.81	0.363	0.363	45.0	45.0
4 Rows	08 S/H/U	1350	990/1080/1100	640/780/820	8.50	5.58	14.26	0.420	0.420	45.0	45.0
	10 S/H/U	1680	1270/1270/1300	850/850/880	10.09	6.70	17.12	0.500	0.500	45.0	45.0
	12 S/H/U	2000	1500/1500/1550	1000/1000/1100	12.35	8.00	21.23	0.616	0.616	55.0	55.0
	14 S/H/U	2330	1750/1750/1750	1160/1160/1280	14.14	9.17	23.67	0.708	0.708	80.0	80.0

Fan	Type	Centrifugal fan(Forward curved)
Motor	Type	Single phase permanent split-capacitor (PSC) motor Or Brushless DC(BLDC) motor
Coil	Water inlet/outlet connection	R _c 3/4
	Max working pressure	1.6MPa
	Fin type	Corrugated-louver aluminum fin with hydrophilic coating
Drain Pan	Drain connection	R ₂ 3/4
	Type	Press, electrostatic spray coating

Correction Factor of Total Heat / Sensible Heat (Cooling) and Heating Capacity:

Model	02	03	04	05	06	07	08	10	12	14
VC	2 Rows	0.84	0.88	0.98	0.95	0.97	0.94	0.84	0.92	0.93
	3 Rows	0.94	0.91	0.92	0.93	0.95	0.96	0.87	0.88	0.88
CE/VE	2 Rows	0.97	1.02	1.04	1.07	0.98	0.93	1.00	1.01	1.03
	3 Rows	1.01	1.12	1.00	0.99	0.96	0.96	0.98	1.02	0.95

Motor									Sound Level dB(A)			Weight (kg)			
Power Input(W)								Qty							
220V/50Hz			220V/60Hz			127V/60Hz									
AC	Smart BLDC	BLDC	AC	Smart BLDC	BLDC	AC	Smart BLDC		AC	Smart BLDC	BLDC	CC	CB/CD	CE/VE	VC
36/42/45	21/28/32	17/21/29	32/42/60	21/28/32	17/21/29	35/39/66	21/28/32	1	35/38/41	35/38/40.5	35/38/41	11.3	14.4	25.4	21.7
44/59/66	27/35/43	24/31/42	38/48/69	27/35/43	24/31/42	41/50/79	27/35/43	1	36/40.5/43.5	37/39.5/43	36/40.5/43.5	13.5	17.2	30.8	23.3
62/74/84	47/56/62	30/40/55	58/65/105	47/56/62	30/40/55	54/67/106	47/56/62	1	39/42/45.5	39/42/45	39/42/45.5	15.5	19.5	33.6	26.6
76/88/93	52/65/76	40/51/64	73/115/117	53/65/76	40/51/64	76/113/129	53/65/76	1	42/44.5/47	42/44/47	42/44.5/47	16.4	20.6	33.6	28.2
97/111/122	62/84/99	54/63/79	92/133/147	62/84/99	54/63/79	101/143/160	62/84/99	1	45/46/48	44.5/46/47.5	45/46/48	18.4	22.9	36.2	30.8
123/129/154	76/97/117	64/79/94	136/150/162	76/97/117	64/79/94	150/158/175	76/97/117	1	46/47.5/49	46/47.5/49	46/47.5/49	20.5	25.6	38.8	40.7
140/154/172	101/118/138	66/83/105	136/175/197	105/118/138	66/83/105	123/188/216	105/118/138	2	46/47/50	45.5/47/48.5	46/47/50	25.5	31.4	46.8	42.8
154/178/205	117/147/177	95/118/143	202/214/226	117/147/177	95/118/143	220/235/254	117/147/177	2	47.5/49.5/51	46.5/49.5/50.5	47.5/49.5/51	28.2	34.2	49.6	44.8
194/215/250	158/182/224	113/138/172	227/267/283	158/182/224	113/138/172	264/280/307	158/182/224	2	49.5/50.5/52.5	49/50/51	49.5/50.5/52.5	32.3	39.3	54.8	50.5
228/257/300	185/195/257	143/161/209	288/302/334	185/195/257	143/161/209	291/332/354	185/195/257	2	51/53.5/54	50/51.5/53	51/53.5/54	36.4	44.4	61.0	60.0
34/40/40	20/27/31	16/20/27	30/40/53	20/27/31	16/20/27	33/37/59	20/27/31	1	36/38.5/42	34/38/40.5	36/38.5/42	12.0	15.1	26.2	22.7
43/58/63	26/34/42	22/29/40	37/47/66	26/34/42	22/29/40	40/49/75	26/34/42	1	37/40.5/44	36/39/42.5	37/40.5/44	14.4	18.0	31.9	24.6
61/71/75	45/55/61	29/38/53	57/62/94	46/55/61	29/38/53	53/64/95	46/55/61	1	40/42.5/46	39/41.5/44.5	40/42.5/46	16.1	20.0	34.8	27.6
75/83/90	51/63/75	38/48/62	72/108/113	52/63/75	38/48/62	75/107/125	52/63/75	1	42/44.5/47	41.5/43.5/46.5	42/44.5/47	17.5	21.7	34.8	29.3
94/108/118	61/83/97	52/61/76	89/129/142	61/83/97	52/61/76	98/139/155	61/83/97	1	45/46.5/48	44/45.5/47.5	45/46.5/48	18.8	23.2	37.6	32.0
121/129/150	75/96/115	62/76/92	134/150/158	75/96/115	62/76/92	148/158/170	75/96/115	1	45.5/48/49	45.5/47.5/48.5	45.5/48/49	21.1	26.3	40.4	42.0
134/150/170	99/116/136	64/80/102	130/170/195	102/116/136	64/80/102	118/183/213	102/116/136	2	46/47/49.5	45/46.5/48	46/47/49.5	26.3	32.2	48.9	44.2
152/171/200	115/145/175	93/115/140	199/206/220	115/145/175	93/115/140	217/226/248	115/145/175	2	47.5/49/50.5	46.5/48.5/50	47.5/49/50.5	29.2	35.2	51.8	46.3
189/210/245	155/180/221	110/135/168	221/261/277	155/180/221	110/135/168	257/273/301	155/180/221	2	48.5/51/53	48.5/50.5/52	48.5/51/53	33.4	40.4	57.4	52.5
226/252/295	182/193/255	140/157/203	285/296/328	182/193/255	140/157/203	288/326/348	182/193/255	2	50.5/52.5/53.5	50/51/53	50.5/52.5/53.5	37.7	45.7	64.0	63.0
34/40/40	20/27/31	16/20/27	30/40/53	20/27/31	16/20/27	33/37/59	20/27/31	1	36/39/42	34/38/40.5	36/39/42	12.7	15.8	28.0	24.2
44/58/66	26/34/42	22/29/40	37/47/66	26/34/42	22/29/40	40/49/75	26/34/42	1	36/40.5/43	36/38.5/42.5	36/40.5/43	15.3	18.9	34.0	26.6
61/71/75	45/55/61	29/38/53	57/62/94	45/55/61	29/38/53	53/64/95	45/55/61	1	40/43.5/45.5	39.5/41.5/44.5	40/43.5/45.5	17.0	21.0	37.0	29.1
75/83/93	51/63/74	38/48/62	72/108/113	51/63/74	38/48/62	75/107/125	51/63/74	1	41.5/44.5/47	41.5/43.5/46.5	41.5/44.5/47	18.6	22.8	37.0	31.1
94/108/118	61/83/97	52/61/76	89/129/142	61/83/97	52/61/76	98/139/155	61/83/97	1	45/47/48.5	44/45.5/47.5	45/47/48.5	20.2	24.7	40.0	34.5
121/129/150	75/96/115	62/76/92	134/150/158	75/96/115	62/76/92	148/158/170	75/96/115	1	46/48.5/50	45.5/47.5/48.5	46/48.5/50	21.8	26.9	43.0	44.8
134/150/170	99/116/136	64/80/102	130/170/195	99/116/136	64/80/102	118/183/213	99/116/136	2	46/48/50	45/46.5/48	46/48/50	27.1	33.0	52.0	47.2
152/171/200	115/145/175	93/115/140	199/206/220	115/145/175	93/115/140	217/226/248	115/145/175	2	48/49.5/51	46.5/48.5/50	48/49.5/51	30.1	36.1	55.0	48.8
189/210/245	155/180/221	110/135/168	221/261/277	155/180/221	110/135/168	257/273/301	155/180/221	2	50/51/52	48.5/50.5/52	50/51/52	34.5	41.5	61.0	55.5
226/252/295	182/193/255	140/157/203	285/296/328	182/193/255	140/157/203	288/326/348	182/193/255	2	52/53.5/54	50/51/53	52/53.5/54	39.0	47.0	68.0	66.6
34/40/40	20/27/31	16/20/27	37/47/66	20/27/31	16/20/27	40/49/75	20/27/31	1	36/39/42	34/38/40.5	36/39/42	12.7	15.8	28.0	24.0
44/58/66	26/34/42	22/29/40	57/62/94	26/34/42	22/29/40	53/64/95	26/34/42	1	36/40.5/43	36/38.5/42.5	36/40.5/43	15.3	18.9	34.0	27.0
61/71/75	45/55/61	29/38/53	72/108/113	45/55/61	29/38/53	75/107/125	45/55/61	1	40/43.5/45.5	39.5/41.5/44.5	40/43.5/45.5	17.0	21.0	37.0	29.0
75/83/93	51/63/74	38/48/62	72/108/117	51/63/74	38/48/62	75/107/129	51/63/74	1	41.5/44.5/47	41.5/43.5/46.5	41.5/44.5/47	18.6	22.8	37.0	31.0
94/108/118	61/83/97	52/61/76	89/129/142	61/83/97	52/61/76	98/139/155	61/83/97	1	45/47/48.5	44/45.5/47.5	45/47/48.5	20.2	24.7	40.0	35.0
121/129/150	75/96/115	62/76/92	134/150/158	75/96/115	62/76/92	148/158/170	75/96/115	1	46/48.5/50	45.5/47.5/48.5	46/48.5/50	21.8	26.9	43.0	45.0
134/150/170	102/116/136	64/80/102	130/170/195	102/116/136	64/80/102	118/183/213	102/116/136	2	46/48/50	45/46.5/48	46/48/50	27.1	33.0	52.0	47.0
152/171/200	115/145/175	93/115/140	199/206/220	115/145/175	93/115/140	217/226/248	115/145/175	2	48/49.5/51	45.5/48.5/50	48/49.5/51	30.1	36.1	55.0	49.0
189/210/245	155/180/221	110/135/168	221/261/277	155/180/221	110/135/168	257/273/301	155/180/221	2	50/51/52	48/50.5/52	50/51/52	34.5	41.5	61.0	56.0
226/252/295	182/193/255	140/157/203	285/296/328	182/193/255	140/157/203	288/326/348	182/193/255	2	52/53.5/54	50/51/53	52/53.5/54	39.0	47.0	68.0	67.0

- Notes:**
- Rated cooling conditions: air inlet at 27℃DB/19.5℃CWB , chilled water inlet/outlet at 7℃/12℃.
 - Rated heating conditions: air inlet at 21℃DB , hot water inlet/outlet at 60℃/50℃.
 - The power input of 230V/50Hz AC motors are the same with that of 220V/50Hz AC motors.
 - The above air flow, total heat / sensible heat, heating capacity are based on the YGFC-H series CC model units.
If FCU with accessories like return plenum etc., performance data will be reduced accordingly.
For the VC models, correction factor for air flow is 0.95, while total heat / sensible heat, heating capacity should be referred to above table.
For the CE/VE models, air flow is the same as the CC model.
 - Left & Right unit can be changed in the field, but cooling and heating capacity should be multiplied with correction factor 0.9-0.95.
 - Inlet/outlet hot water pipe diameter for 4 pipes unit is R_c1/2.
 - External static pressure type
Concealed units: S for standard static pressure (12Pa), H for high static pressure (30Pa), U for ultra-high static pressure (50Pa).
Exposed units: S for standard static pressure (0Pa).
 - BLDC motor is only for ceiling concealed CC/CB/CD units, which can work at static pressure type S, H or U by switching static pressure setting in field (the default setting is type S). Please generate detail performance from selection software.
 - The above weight is based on AC motor unit. There is additional 3.5kg for BLDC motor unit.
 - The above sound level is for units without accessories, which is tested in semi-anechoic room in accordance with GB/T19232 standard.
 - For X/Y/Z BLDC unit, the allowed power supply is 220-240V, ~50/60Hz.
 - The performance data on above sheet was tested under 220V~50Hz.

Optional Accessories - Brushless DC (BLDC) Motor

YGFC units equipped with BLDC motors are energy-saving, environmental friendly, quiet and comfortable. They can be used in a variety of buildings including villas, apartments, hotels, hospitals, office buildings, and public places.



High Efficiency & Energy Saving

- Double the efficiency of AC motor - average power consumption is only 50-70% of AC motor unit.

Smart BLDC

- In automatic mode, the unit automatically performs stepless adjustment of fan speed, optimizing energy consumption. In manual mode, the user can set fan speed as high, medium, or low.

Low Noise

Smart BLDC

- Using sine wave PWM control, the motor operates smoothly, reducing vibration and noise. Noise is lower than an AC motor by 1 ~ 2 dB (A).
- Can operate at lower speed at a part load, resulting in lower noise.

Intelligent Control

Smart BLDC

- Can be individually or centrally controlled. A single wired controller can control up to 8 same type units.
- RS485 communication with Modbus protocol allows connection to central BAS.
- Elegant design standard LCD thermostat or LCD touchscreen thermostat, available in a variety of colors.
- Easy operation, with automatic and manual modes. Includes timer, fault alarm, parameter setting, and other functions.



WF-21-00 Standard LCD Thermostat for BLDC

BLDC

- Compliant with normal AC controller and best choice for retrofit.

Comfort & Safety

Smart BLDC

- Indoor temperature PID calculation and stepless airflow adjustment allow for precise room temperature control, improving occupant comfort.
- Power factor correction module improves efficiency.
- Step-up module ensure safety and stability of units, allowing a wider range of input voltages to avoid performance degradation or unit damage from external voltage fluctuations.
- Overcurrent and overheat protection prevent motor burnout.

BLDC

- Advanced sine-wave drive method, more reliable, less vibration noise.
- Overcurrent, overload and overheat protection prevent motor burnout.

Flexible Design

Smart BLDC

- Ability to set fan maximum and minimum speeds, to maintain indoor airflow requirements.
- Users can adjust dipswitch to choose among 12Pa/30Pa/50Pa static pressure, depending on the required application.
- Optional TiO₂ and valve package (on/off type).

BLDC

- Optional TiO₂ and valve package (on/off type).

Optional Accessories - TiO₂ Healthy Air Sterilizer Nano-TiO₂ Disinfection Technology

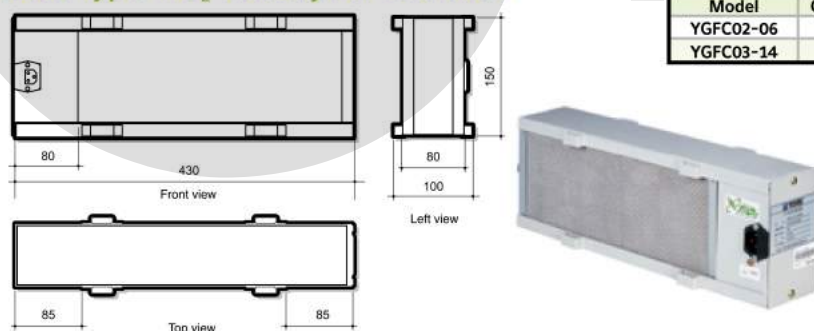


Industrial Leading Technology - Nano-TiO₂ Healthy Air Sterilizer (optional)

By oxidizing and decomposing the harmful substances in the air, YORK Nano-TiO₂ healthy sterilization technology kills airborne germs, eliminates bad odors, and other harmful particles safely and efficiently.

- Biological pollutant - e.g. bacteria and germs
- Organic pollutant - volatile organic compounds (VOCs) e.g. formaldehyde, benzene
- Molds, fungi
- Inorganic gaseous pollutant - e.g. NOx, SOx
- Smoke and offensive odours

Duct Type TiO₂ Healthy Air Sterilizer

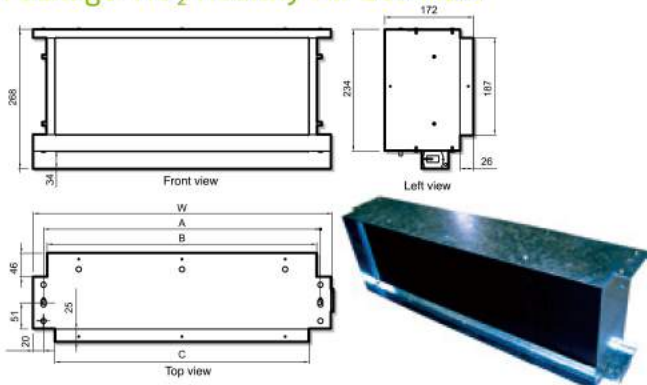


Nano-TiO₂ Healthy Air Sterilization Technology Contains the Following Features:

- YORK is the first brand in the industry to apply Nano grade TiO₂ technology to fan coils, residential and commercial central air conditioners, and residential split units.
- Nano-grade TiO₂ has been recognised in 125 countries
- TiO₂ photo-catalysis not only filters bacteria but also kills them
- The ultraviolet light (UVA) in Nano-TiO₂ Healthy Air Sterilizer is designed to be durable, lasting up to 8,000 hours

Model	Quantity of Sterilizer	Power Input (W)	Weight (kg)
YGFC02-06	1	22	2.59
YGFC03-14	2	22*2	2.59*2

Package TiO₂ Healthy Air Sterilizer



Model	Power Input (W)	Weight (kg)	W	A	B	C
YGFC-02	36	4.5	514	474	460	428
YGFC-03	54	5.6	664	624	610	578
YGFC-04	54	6.1	744	704	690	658
YGFC-05	54	6.6	804	764	750	718
YGFC-06	72	7.3	904	864	850	818
YGFC-07	90	8.6	1084	1044	1030	998
YGFC-08	108	10.0	1284	1244	1230	1198
YGFC-10	126	10.4	1334	1294	1280	1248
YGFC-12	144	12.2	1584	1544	1530	1498
YGFC-14	162	14.0	1834	1794	1780	1748

Notes: Power supply for TiO₂ healthy air sterilizer option is 220V-1Ph-50Hz or 220V-1Ph-60Hz.

Optional Accessories – Valve Package

Valve Package

Optional offer to factory assembled valve packaged consists of 2- or 3-way ON/OFF valve complete with electric actuator motor and mounting kit.

Easy Installation

- Industrial standard thread joint for pipe connection.
- Terminal box for electrical wiring connection.

Low Installation Cost

- Eliminate field installed for controls valve packaged and its accessories.
- Quick installation time and save field workmanship cost.

Compact Design

- Extended drain pan up to substantial length for piping connection.



Specifications

Valve Package Type	Valve							Actuator		
	Type	Body Size	Pipe connection	Pipe Center to Center (mm) (mm)	Kvs	Close-Off Pressure (kPa)	Operating Pressure	Type	Power Supply	Action
2-Way Valve Package – 2 Pipe	VG4420 (2-Way Valve)	DN20	3/4"	-	2.5	340	1.6MPa	VA7010-8503	230VAC	ON/OFF
			Female Thread							
2-Way Valve Package – 4 Pipe		DN20 (Cooling)	3/4" (Cooling)	2.5						
		DN15 (Heating)	1/2" (Heating)	2.1						
	Female Thread									
3-Way Valve Package – 2 Pipe	VG4520 (3-Way Valve with Bypass)	DN20	3/4"	50	2.5	340 (Control Port)				
			Male Thread							
3-Way Valve Package – 4 Pipe		DN20 (Cooling)	3/4" (Cooling)	50	2.5	170 (Bypass port)				
		DN15 (Heating)	1/2" (Heating)	40	2.1					
Male Thread										

Note:

1. Valve connection type: Male or female thread joint conform to BS standard (BSP Taper, ISO R7/1, BS 21, DIN 2999, GB/T 7306.2); Valve body material: Brass CW617N.
2. Please refer to the component literature for detailed information.

Other Optional Accessories



APC-TMS1000 thermostat



APC-TMS2000/2100DA thermostat

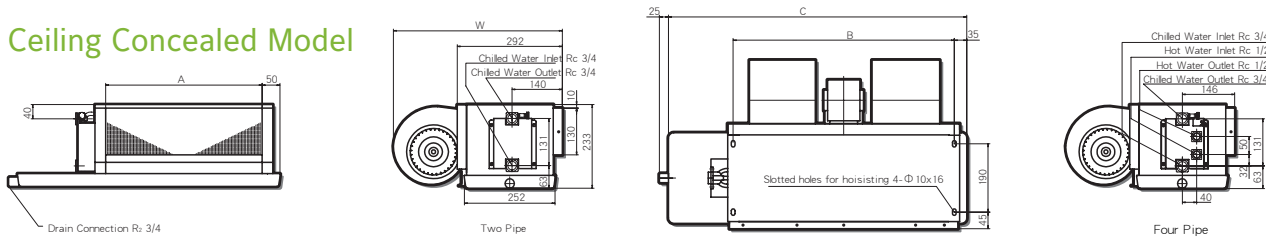


2- or 3-way valve

Notes: Power supply please refer to the describe of corresponding accessory.

Dimensions

Ceiling Concealed Model

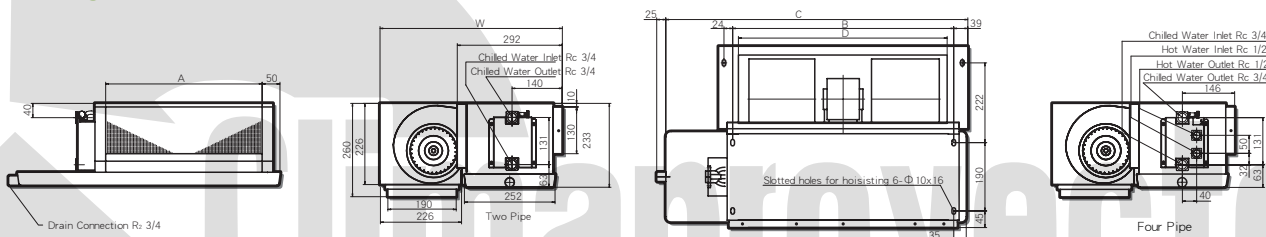


Model	A	B	C(Length)	C*(Length)	W	H	Plenum Conn Dim(mm x mm)
YGFC-02CC-2(3/4/A)-S(H/U)	435	465	740	840	470	233	485 x 130
YGFC-03CC-2(3/4/A)-S(H/U)	585	615	840	940	470	233	635 x 130
YGFC-04CC-2(3/4/A)-S(H/U)	665	695	940	1040	470	233	715 x 130
YGFC-05CC-2(3/4/A)-S(H/U)	725	755	1040	1160	470	233	775 x 130
YGFC-06CC-2(3/4/A)-S(H/U)	825	855	1160	1260	470	233	875 x 130
YGFC-07CC-2(3/4/A)-S(H/U)	1005	1035	1360	1460	470	233	1055 x 130
YGFC-08CC-2(3/4/A)-S(H/U)	1205	1235	1460	1560	470	233	1255 x 130
YGFC-10CC-2(3/4/A)-S(H/U)	1255	1285	1560	1660	470	233	1305 x 130
YGFC-12CC-2(3/4/A)-S(H/U)	1505	1535	1760	1860	470	233	1555 x 130
YGFC-14CC-2(3/4/A)-S(H/U)	1755	1785	2060	2160	470	233	1805 x 130

Notes:

1. Facing the air outlet, the left type unit has pipes on the left side, right type unit opposite.
2. C* is the size of unit with an extended drain pan(optional).
3. BLDC motor units need to include 100mm extended drain pan.
4. Valve package units need to include 100mm extended drain pan.

Ceiling Concealed Model with Bottom Return Air Plenum

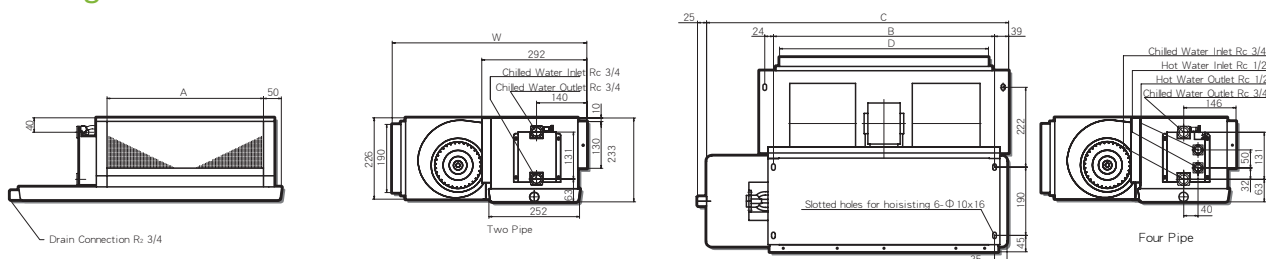


Model	A	B	C(Length)	C*(Length)	D	W	H	Plenum Conn Dim(mm x mm)
YGFC-02CD-2(3/4/A)-S(H/U)	435	465	740	840	431	507	233	485 x 130
YGFC-03CD-2(3/4/A)-S(H/U)	585	615	840	940	581	507	233	635 x 130
YGFC-04CD-2(3/4/A)-S(H/U)	665	695	940	1040	661	507	233	715 x 130
YGFC-05CD-2(3/4/A)-S(H/U)	725	755	1040	1160	721	507	233	775 x 130
YGFC-06CD-2(3/4/A)-S(H/U)	825	855	1160	1260	821	507	233	875 x 130
YGFC-07CD-2(3/4/A)-S(H/U)	1005	1035	1360	1460	1001	507	233	1055 x 130
YGFC-08CD-2(3/4/A)-S(H/U)	1205	1235	1460	1560	1201	507	233	1255 x 130
YGFC-10CD-2(3/4/A)-S(H/U)	1255	1285	1560	1660	1251	507	233	1305 x 130
YGFC-12CD-2(3/4/A)-S(H/U)	1505	1535	1760	1860	1501	507	233	1555 x 130
YGFC-14CD-2(3/4/A)-S(H/U)	1755	1785	2060	2160	1751	507	233	1805 x 130

Notes:

1. Facing the air outlet, the left type unit has pipes on the left side, right type unit opposite.
2. C* is the size of unit with an extended drain pan.
3. The back return air plenum and the bottom return air plenum can be retrofitted according to the field requirement.
4. Filter frame is provided as standard. Filter media is provided as an option.
5. BLDC motor units need to include 100mm extended drain pan.
6. Valve package units need to include 100mm extended drain pan.

Ceiling Concealed Model with Back Return Air Plenum



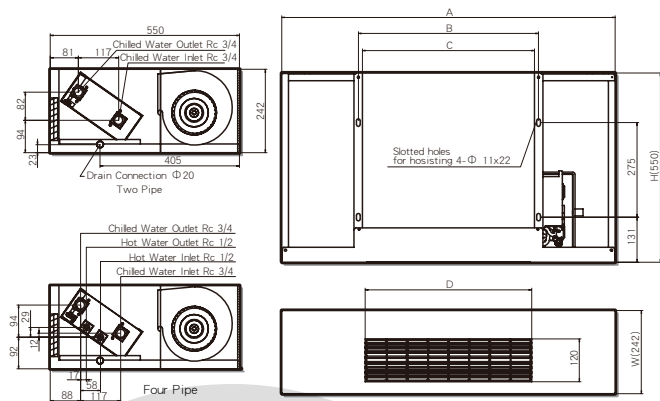
Model	A	B	C(Length)	C*(Length)	D	W	H	Plenum Conn Dim(mm x mm)
YGFC-02CB-2(3/4/A)-S(H/U)	435	465	740	840	431	541	233	485 x 130
YGFC-03CB-2(3/4/A)-S(H/U)	585	615	840	940	581	541	233	635 x 130
YGFC-04CB-2(3/4/A)-S(H/U)	665	695	940	1040	661	541	233	715 x 130
YGFC-05CB-2(3/4/A)-S(H/U)	725	755	1040	1160	721	541	233	775 x 130
YGFC-06CB-2(3/4/A)-S(H/U)	825	855	1160	1260	821	541	233	875 x 130
YGFC-07CB-2(3/4/A)-S(H/U)	1005	1035	1360	1460	1001	541	233	1055 x 130
YGFC-08CB-2(3/4/A)-S(H/U)	1205	1235	1460	1560	1201	541	233	1255 x 130
YGFC-10CB-2(3/4/A)-S(H/U)	1255	1285	1560	1660	1251	541	233	1305 x 130
YGFC-12CB-2(3/4/A)-S(H/U)	1505	1535	1760	1860	1501	541	233	1555 x 130
YGFC-14CB-2(3/4/A)-S(H/U)	1755	1785	2060	2160	1751	541	233	1805 x 130

Notes:

1. Facing the air outlet, the left type unit has pipes on the left side, right type unit opposite.
2. C* is the size of unit with an extended drain pan.
3. The back return air plenum and the bottom return air plenum can be retrofitted according to the field requirement.
4. Filter frame is provided as standard. Filter media is provided as an option.
5. BLDC motor units need to include 100mm extended drain pan.
6. Valve package units need to include 100mm extended drain pan.

Dimensions(Cont.)

Ceiling Exposed Model

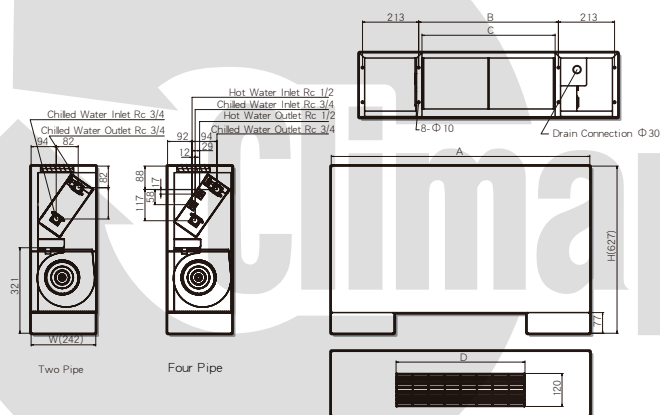


Model	A(Length)	B	C	D	W	H
YGFC-02CE-2(3/A)-S	970	524	500	484	242	550
YGFC-03CE-2(3/A)-S	1160	714	690	726	242	550
YGFC-04CE-2(3/A)-S	1260	814	790	726	242	550
YGFC-05CE-2(3/A)-S	1260	814	790	726	242	550
YGFC-06CE-2(3/A)-S	1370	924	900	847	242	550
YGFC-07CE-2(3/A)-S	1470	1024	1000	968	242	550
YGFC-08CE-2(3/A)-S	1770	1324	1300	1329	242	550
YGFC-10CE-2(3/A)-S	1870	1424	1400	1329	242	550
YGFC-12CE-2(3/A)-S	2070	1624	1600	1570	242	550
YGFC-14CE-2(3/A)-S	2310	1864	1840	1811	242	550

Notes:

1. Facing the air outlet, the left type unit has pipes on the left side, right type unit opposite.
2. No extended drain pan for CE type. Filter media is provided as standard.

Vertical Exposed Model

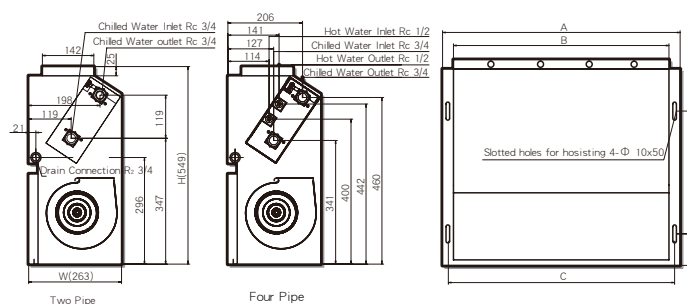


Model	A(Length)	B	C	D	W	H
YGFC-02VE-2(3/A)-S	970	520	500	484	242	627
YGFC-03VE-2(3/A)-S	1160	710	690	726	242	627
YGFC-04VE-2(3/A)-S	1260	810	790	726	242	627
YGFC-05VE-2(3/A)-S	1260	810	790	726	242	627
YGFC-06VE-2(3/A)-S	1370	920	900	847	242	627
YGFC-07VE-2(3/A)-S	1470	1020	1000	968	242	627
YGFC-08VE-2(3/A)-S	1770	1320	1300	1329	242	627
YGFC-10VE-2(3/A)-S	1870	1420	1400	1329	242	627
YGFC-12VE-2(3/A)-S	2070	1620	1600	1570	242	627
YGFC-14VE-2(3/A)-S	2310	1860	1840	1811	242	627

Notes:

1. Facing the air outlet, the left type unit has pipes on the left side, right type unit opposite.
2. No extended drain pan for VE type. Filter media is provided as standard.

Vertical Concealed Model



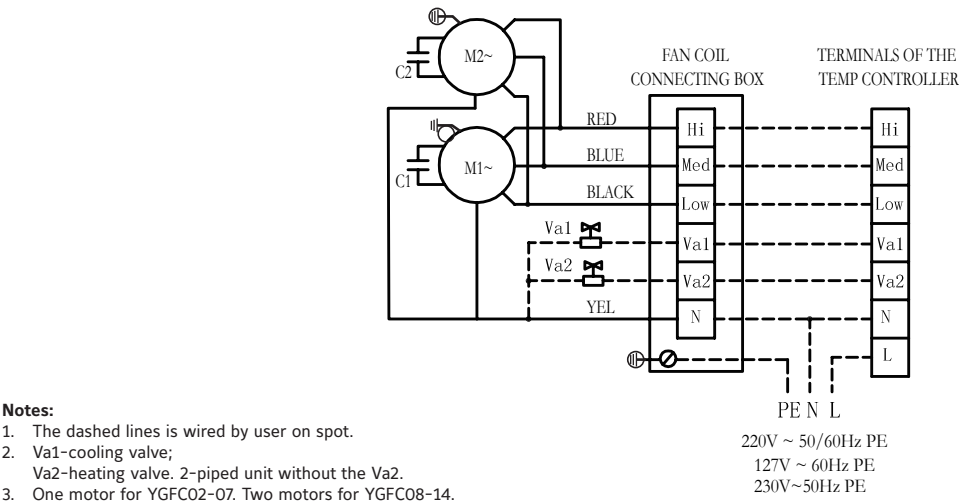
Model	A(Length)	B	C	W	H	Plenum Conn Dim(mm x mm)
YGFC-02VC-2(3/A)-S(H)	655	595	625	263	549	595×142
YGFC-03VC-2(3/A)-S(H)	755	695	725	263	549	695×142
YGFC-04VC-2(3/A)-S(H)	855	795	825	263	549	795×142
YGFC-05VC-2(3/A)-S(H)	937	877	907	263	549	877×142
YGFC-06VC-2(3/A)-S(H)	1075	1015	1045	263	549	1015×142
YGFC-07VC-2(3/A)-S(H)	1255	1195	1225	263	549	1195×142
YGFC-08VC-2(3/A)-S(H)	1375	1315	1345	263	549	1315×142
YGFC-10VC-2(3/A)-S(H)	1475	1415	1445	263	549	1415×142
YGFC-12VC-2(3/A)-S(H)	1675	1615	1645	263	549	1615×142
YGFC-14VC-2(3/A)-S(H)	1915	1855	1885	263	549	1885×142

Notes:

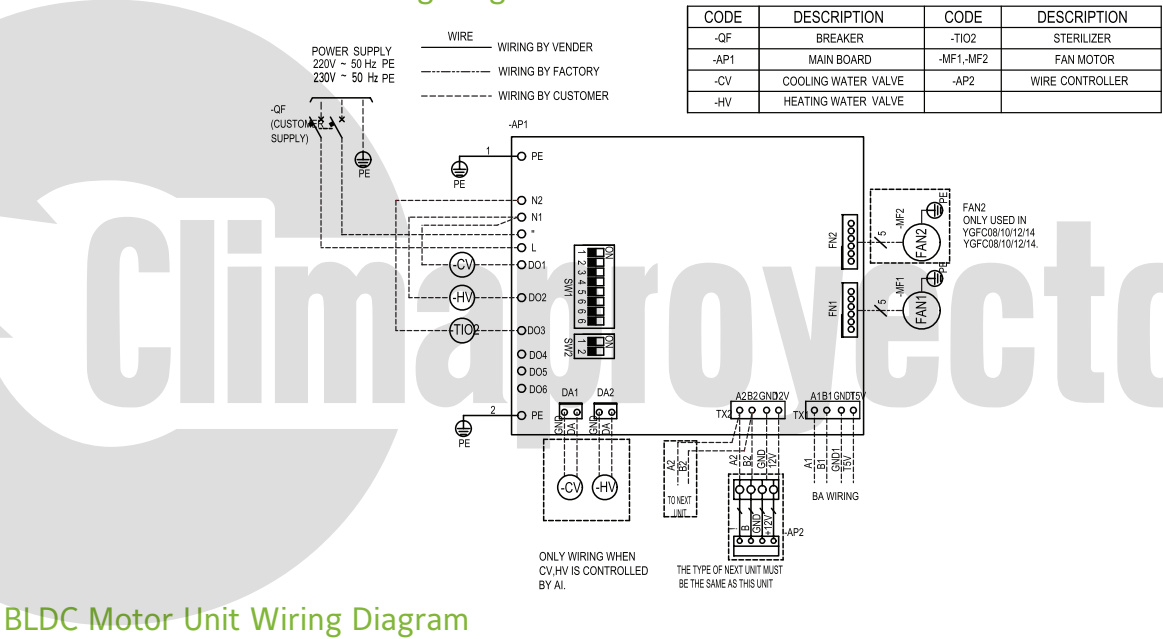
1. Facing the air outlet, the left type unit has pipes on the left side, right type unit opposite.
2. No extended drain pan for VC type. Filter frame is provided as standard. Filter media is provided as option.

Wiring Diagram

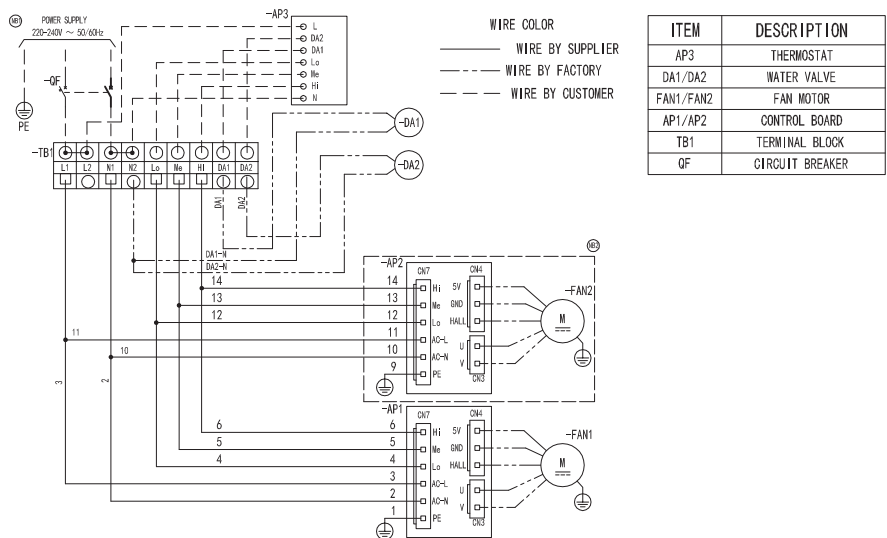
AC Motor Unit Wiring Diagram



Smart BLDC Motor Unit Wiring Diagram



BLDC Motor Unit Wiring Diagram



Air Flow & Cooling Capacity Correction Factor (Cont.)

Cooling capacity correction factor at different air flow (2 rows)

Correction factor		02-2S(H/U)	03-2S(H/U)	04-2S(H/U)	05-2S(H/U)	06-2S(H/U)	07-2S(H/U)	08-2S(H/U)	10-2S(H/U)	12-2S(H/U)	14-2S(H/U)
Air flow ratio											
Actual air flow/Air flow at high speed	0.9	Total Heat	0.94	0.94	0.94	0.93	0.92	0.91	0.92	0.91	0.91
		Sensible Heat	0.92	0.92	0.92	0.90	0.90	0.87	0.89	0.89	0.87
	0.8	Total Heat	0.87	0.87	0.88	0.86	0.86	0.85	0.85	0.84	0.85
		Sensible Heat	0.84	0.84	0.82	0.81	0.82	0.80	0.80	0.81	0.79
	0.7	Total Heat	0.79	0.79	0.80	0.79	0.79	0.78	0.78	0.78	0.79
		Sensible Heat	0.75	0.76	0.74	0.73	0.74	0.72	0.72	0.73	0.72
	0.6	Total Heat	0.71	0.71	0.72	0.71	0.72	0.70	0.70	0.71	0.72
		Sensible Heat	0.66	0.66	0.66	0.65	0.66	0.64	0.64	0.65	0.64
	0.5	Total Heat	0.62	0.62	0.64	0.63	0.63	0.62	0.61	0.62	0.63
		Sensible Heat	0.57	0.57	0.56	0.56	0.57	0.55	0.55	0.56	0.56

Cooling capacity correction factor at different air flow (3 rows)

Correction factor		02-3S(H/U)	03-3S(H/U)	04-3S(H/U)	05-3S(H/U)	06-3S(H/U)	07-3S(H/U)	08-3S(H/U)	10-3S(H/U)	12-3S(H/U)	14-3S(H/U)
Air flow ratio											
Actual air flow/Air flow at high speed	0.9	Total Heat	0.93	0.93	0.89	0.94	0.92	0.87	0.89	0.92	0.91
		Sensible Heat	0.91	0.92	0.88	0.92	0.87	0.86	0.88	0.88	0.89
	0.8	Total Heat	0.85	0.85	0.80	0.87	0.85	0.81	0.81	0.85	0.84
		Sensible Heat	0.83	0.83	0.77	0.84	0.78	0.79	0.79	0.79	0.81
	0.7	Total Heat	0.77	0.77	0.73	0.80	0.79	0.74	0.74	0.78	0.77
		Sensible Heat	0.73	0.74	0.69	0.76	0.70	0.71	0.71	0.71	0.73
	0.6	Total Heat	0.68	0.69	0.65	0.72	0.71	0.66	0.66	0.70	0.69
		Sensible Heat	0.64	0.64	0.61	0.67	0.62	0.62	0.62	0.63	0.65
	0.5	Total Heat	0.58	0.59	0.57	0.63	0.62	0.58	0.58	0.61	0.61
		Sensible Heat	0.54	0.55	0.52	0.57	0.54	0.53	0.53	0.54	0.56

Cooling capacity correction factor at different air flow (4 rows)

Correction factor		02-4S(H/U)	03-4S(H/U)	04-4S(H/U)	05-4S(H/U)	06-4S(H/U)	07-4S(H/U)	08-4S(H/U)	10-4S(H/U)	12-4S(H/U)	14-4S(H/U)
Air flow ratio											
Actual air flow/Air flow at high speed	0.9	Total Heat	0.92	0.92	0.93	0.91	0.92	0.93	0.93	0.90	0.93
		Sensible Heat	0.91	0.91	0.92	0.90	0.90	0.91	0.92	0.89	0.91
	0.8	Total Heat	0.84	0.84	0.85	0.84	0.84	0.85	0.85	0.84	0.85
		Sensible Heat	0.82	0.82	0.83	0.81	0.82	0.83	0.83	0.82	0.83
	0.7	Total Heat	0.75	0.76	0.77	0.76	0.77	0.78	0.77	0.76	0.78
		Sensible Heat	0.73	0.73	0.74	0.73	0.74	0.74	0.74	0.73	0.74
	0.6	Total Heat	0.66	0.67	0.68	0.68	0.69	0.69	0.69	0.68	0.69
		Sensible Heat	0.63	0.64	0.65	0.64	0.64	0.65	0.65	0.65	0.66
	0.5	Total Heat	0.56	0.57	0.59	0.59	0.60	0.60	0.59	0.60	0.60
		Sensible Heat	0.53	0.54	0.55	0.55	0.55	0.55	0.55	0.55	0.56

Cooling capacity correction factor at different air flow (3+1 rows)

Correction factor		02-AS(H/U)	03-AS(H/U)	04-AS(H/U)	05-AS(H/U)	06-AS(H/U)	07-AS(H/U)	08-AS(H/U)	10-AS(H/U)	12-AS(H/U)	14-AS(H/U)
Air flow ratio											
Actual air flow/Air flow at high speed	0.9	Total Heat	0.93	0.93	0.89	0.94	0.92	0.90	0.91	0.89	0.91
		Sensible Heat	0.91	0.91	0.87	0.92	0.86	0.89	0.90	0.85	0.89
	0.8	Total Heat	0.85	0.85	0.80	0.87	0.85	0.83	0.83	0.83	0.84
		Sensible Heat	0.82	0.83	0.77	0.84	0.78	0.81	0.81	0.78	0.81
	0.7	Total Heat	0.76	0.77	0.73	0.80	0.78	0.75	0.76	0.76	0.77
		Sensible Heat	0.73	0.74	0.69	0.74	0.70	0.72	0.72	0.70	0.73
	0.6	Total Heat	0.68	0.68	0.65	0.72	0.71	0.68	0.68	0.68	0.69
		Sensible Heat	0.64	0.64	0.61	0.65	0.62	0.64	0.64	0.62	0.65
	0.5	Total Heat	0.58	0.59	0.57	0.63	0.62	0.59	0.59	0.60	0.61
		Sensible Heat	0.54	0.55	0.52	0.58	0.53	0.54	0.54	0.53	0.56

Note: Above correction factors are just for reference. Please contact our local office for actual cooling capacity.

Air Flow & Cooling Capacity Correction Factor (Cont.)

Heating capacity correction factor at different air flow (2 rows)

Correction factor		02-2S(H/U)	03-2S(H/U)	04-2S(H/U)	05-2S(H/U)	06-2S(H/U)	07-2S(H/U)	08-2S(H/U)	10-2S(H/U)	12-2S(H/U)	14-2S(H/U)
Air flow ratio											
Actual air flow/ Air flow at high speed	0.9	0.94	0.93	0.94	0.94	0.94	0.91	0.91	0.90	0.93	0.93
	0.8	0.87	0.86	0.86	0.87	0.87	0.84	0.84	0.83	0.86	0.86
	0.7	0.78	0.78	0.78	0.80	0.80	0.76	0.77	0.76	0.79	0.79
	0.6	0.70	0.69	0.70	0.72	0.72	0.69	0.68	0.69	0.71	0.71
	0.5	0.60	0.60	0.61	0.62	0.63	0.60	0.60	0.60	0.63	0.63

Heating capacity correction factor at different air flow (3 rows)

Correction factor		02-3S(H/U)	03-3S(H/U)	04-3S(H/U)	05-3S(H/U)	06-3S(H/U)	07-3S(H/U)	08-3S(H/U)	10-3S(H/U)	12-3S(H/U)	14-3S(H/U)
Air flow ratio											
Actual air flow/ Air flow at high speed	0.9	0.92	0.92	0.93	0.93	0.93	0.90	0.90	0.90	0.92	0.92
	0.8	0.83	0.84	0.85	0.86	0.85	0.82	0.82	0.82	0.85	0.85
	0.7	0.75	0.76	0.77	0.77	0.77	0.74	0.74	0.74	0.77	0.77
	0.6	0.66	0.66	0.68	0.69	0.69	0.66	0.66	0.66	0.69	0.69
	0.5	0.56	0.56	0.58	0.59	0.59	0.57	0.57	0.58	0.60	0.60

Heating capacity correction factor at different air flow (4 rows)

Correction factor		02-4S(H/U)	03-4S(H/U)	04-4S(H/U)	05-4S(H/U)	06-4S(H/U)	07-4S(H/U)	08-4S(H/U)	10-4S(H/U)	12-4S(H/U)	14-4S(H/U)
Air flow ratio											
Actual air flow/ Air flow at high speed	0.9	0.91	0.92	0.92	0.92	0.92	0.90	0.90	0.88	0.92	0.92
	0.8	0.82	0.83	0.83	0.84	0.84	0.81	0.82	0.81	0.84	0.84
	0.7	0.73	0.74	0.74	0.75	0.76	0.73	0.73	0.73	0.76	0.76
	0.6	0.64	0.64	0.65	0.66	0.67	0.64	0.64	0.64	0.67	0.67
	0.5	0.54	0.54	0.55	0.57	0.57	0.55	0.55	0.55	0.57	0.57

Heating capacity correction factor at different air flow (3+1 rows)

Correction factor		02-AS(H/U)	03-AS(H/U)	04-AS(H/U)	05-AS(H/U)	06-AS(H/U)	07-AS(H/U)	08-AS(H/U)	10-AS(H/U)	12-AS(H/U)	14-AS(H/U)
Air flow ratio											
Actual air flow/ Air flow at high speed	0.9	0.94	0.95	0.92	0.93	0.92	0.93	0.94	0.92	0.93	0.93
	0.8	0.88	0.89	0.85	0.87	0.86	0.87	0.88	0.87	0.87	0.87
	0.7	0.82	0.82	0.79	0.82	0.81	0.81	0.81	0.81	0.81	0.82
	0.6	0.73	0.74	0.72	0.75	0.74	0.75	0.74	0.75	0.75	0.75
	0.5	0.65	0.66	0.65	0.67	0.67	0.67	0.67	0.67	0.68	0.68

Note: Above correction factors are just for reference. Please contact our local office for actual heating capacity.

Air flow & ESP Performance

2-Rows standard type unit

Air flow		02-2S	03-2S	04-2S	05-2S	06-2S	07-2S	08-2S	10-2S	12-2S	14-2S
ESP	0Pa	413	611	752	923	1099	1206	1432	1807	2133	2496
	12Pa	360	520	690	870	1030	1170	1360	1740	2040	2400
	20Pa	319	456	652	828	993	1131	1303	1669	1945	2316
	30Pa	267	376	606	774	947	1081	1231	1579	1827	2210

2-Rows high static pressure type unit

Air flow		02-2H	03-2H	04-2H	05-2H	06-2H	07-2H	08-2H	10-2H	12-2H	14-2H
ESP	0Pa	436	628	834	1026	1142	1292	1574	1986	2276	2676
	30Pa	360	520	690	870	1030	1170	1360	1740	2040	2400
	40Pa	329	476	634	802	963	1115	1266	1630	1914	2254
	50Pa	298	432	578	734	895	1060	1172	1520	1788	2108

2-Rows ultra-high static pressure type unit

Air flow		02-2U	03-2U	04-2U	05-2U	06-2U	07-2U	08-2U	10-2U	12-2U	14-2U
ESP	30Pa	425	600	800	1005	1159	1295	1527	1922	2296	2670
	50Pa	360	520	690	870	1030	1170	1360	1740	2040	2400
	60Pa	318	460	631	802	946	1112	1232	1601	1875	2278
	70Pa	276	399	572	734	861	1054	1103	1462	1709	2155

3-Rows standard type unit

Air flow		02-3S	03-3S	04-3S	05-3S	06-3S	07-3S	08-3S	10-3S	12-3S	14-3S
ESP	0Pa	400	645	731	912	1068	1199	1471	1811	2162	2459
	12Pa	350	520	680	850	1020	1170	1360	1710	2040	2380
	20Pa	318	457	580	809	979	1126	1308	1655	1955	2304
	30Pa	278	377	454	759	927	1072	1242	1585	1849	2208

3-Rows high static pressure type unit

Air flow		02-3H	03-3H	04-3H	05-3H	06-3H	07-3H	08-3H	10-3H	12-3H	14-3H
ESP	0Pa	416	626	832	972	1154	1320	1548	1960	2304	2666
	30Pa	350	520	680	850	1020	1170	1360	1710	2040	2380
	40Pa	324	485	627	787	957	1115	1280	1603	1916	2241
	50Pa	297	449	574	723	893	1059	1199	1496	1792	2101

3-Rows ultra-high static pressure type unit

Air flow		02-3U	03-3U	04-3U	05-3U	06-3U	07-3U	08-3U	10-3U	12-3U	14-3U
ESP	30Pa	411	592	791	965	1153	1285	1523	1890	2277	2595
	50Pa	350	520	680	850	1020	1170	1360	1710	2040	2380
	60Pa	313	458	620	779	938	1110	1228	1575	1869	2241
	70Pa	275	395	560	707	856	1049	1095	1440	1697	2101

4-Rows and 4-Pipes standard type unit

Air flow		02-AS	03-AS	04-AS	05-AS	06-AS	07-AS	08-AS	10-AS	12-AS	14-AS
ESP	0Pa	393	570	699	880	1068	1205	1419	1766	2123	2409
	12Pa	340	500	670	820	1010	1160	1350	1680	2000	2330
	20Pa	307	440	628	778	970	1127	1307	1622	1929	2253
	30Pa	265	366	576	726	920	1085	1253	1548	1839	2157

4-Rows and 4-Pipes high static pressure type unit

Air flow		02-AH	03-AH	04-AH	05-AH	06-AH	07-AH	08-AH	10-AH	12-AH	14-AH
ESP	0Pa	406	604	794	930	1142	1292	1520	1928	2280	2622
	30Pa	340	500	670	820	1010	1160	1350	1680	2000	2330
	40Pa	310	458	619	767	949	1096	1252	1595	1874	2190
	50Pa	280	415	567	714	887	1032	1153	1510	1748	2049

4-Rows and 4-Pipes ultra-high static pressure type unit

Air flow		02-AU	03-AU	04-AU	05-AU	06-AU	07-AU	08-AU	10-AU	12-AU	14-AU
ESP	30Pa	396	579	784	939	1147	1270	1518	1867	2266	2557
	50Pa	340	500	670	820	1010	1160	1350	1680	2000	2330
	60Pa	299	442	609	742	928	1103	1218	1550	1843	2210
	70Pa	258	383	548	664	846	1045	1085	1420	1685	2090

Johnson Controls (JCI) is a global diversified technology and industrial leader serving customers in more than 150 countries. Our 150,000 employees create quality products, services and solutions to optimize energy and operational efficiencies of buildings; lead-acid automotive batteries and advanced batteries for hybrid and electric vehicles; and seating components and systems for automobiles. Our commitment to sustainability dates back to our roots in 1885, with the invention of the first electric room thermostat.

Johnson Controls Building Efficiency delivers products, services and solutions that increase energy efficiency and lower operating costs in buildings for more than one million customers worldwide. Operating from 500 locations globally, the company is committed to growing the BE business. In 2014, we acquired Air Distribution Technologies and in 2015, we obtained a majority stake in the joint venture with Hitachi Appliances.



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