

# The Energy Solutions of Withair Chilled Water Fan Coil Units Catalogue



**Take Control of Your Energy Future !**

**Withair offers a wide range of clean energy products and solutions to meet the needs of your projects.**



**Ongoing innovation with cutting-edge products**



**Over 20 years of experience**



**Key parts are come from international first-class brands**



**Guaranteed support and spare parts**



**Support in design**



**Documentation for incentives**



**Two-year guarantee**



**Free training course**

## About Withair

Withair is the premium manufacturer in sustainable energy solutions supplying HVACR products & services for heating, cooling, hot water, indoor air quality, industrial refrigeration, and heat recovery that reflect today's demand for sustainable construction, comfortable indoor climate and industrial cooling & heating process application. Withair specialises in innovative custom highly-configurable products designed to meet the your needs. We insure products are designed for long life by using highest quality materials, for all controls, safety, and components we only use top world-wide recognized brands. All products are rigorously tested before leaving us, going through many stages of quality control before being shipped.

Withair® has highly effective professional team to service customers

Known for their professionalism and personal integrity, Withair's highly skilled engineers, technicians, electricians, stable manufacturing workers, strict quality controller, and quick-reaction & professional after-service staff utilize their multi-disciplinary expertise in the creation and production of every solution.

Close cooperation among Withair's design, production and service teams - who are located under one roof and linked by advanced computerized systems - enables the Company to supply the widest possible range of products - from single units to very large quantities - while assuring rapid delivery and competitive pricing.



**Low energy consumption systems**

**Use of clean energy**

**Use of environmentally-friendly cooling gases**

**ZERO direct CO2 emissions in the environment**

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# Product Outline

## Chilled Water Fan Coil Units - Minimum noise and space, Maximum options

The Withair® portfolio of fan coil unit, ventilation unit and air handling unit solutions is designed to make installations faster and easier, offers temperature and humidity control, heat recovery, deodorization, and air purification, and to maximize HVACR system performance. Using advanced technology, such as: brushless DC motor, single-zone, these systems quietly, temperature stability, reliably and efficiently deliver the comfort your building occupants need.

Withair® offers a full range of air side products and systems to meet your performance requirements. From 200cfm to the highly flexible 60,000cfm with numerous custom options, to a completely custom, energy efficient, environmentally responsible system, we have the optimal solution for commercial, industrial and process applications.

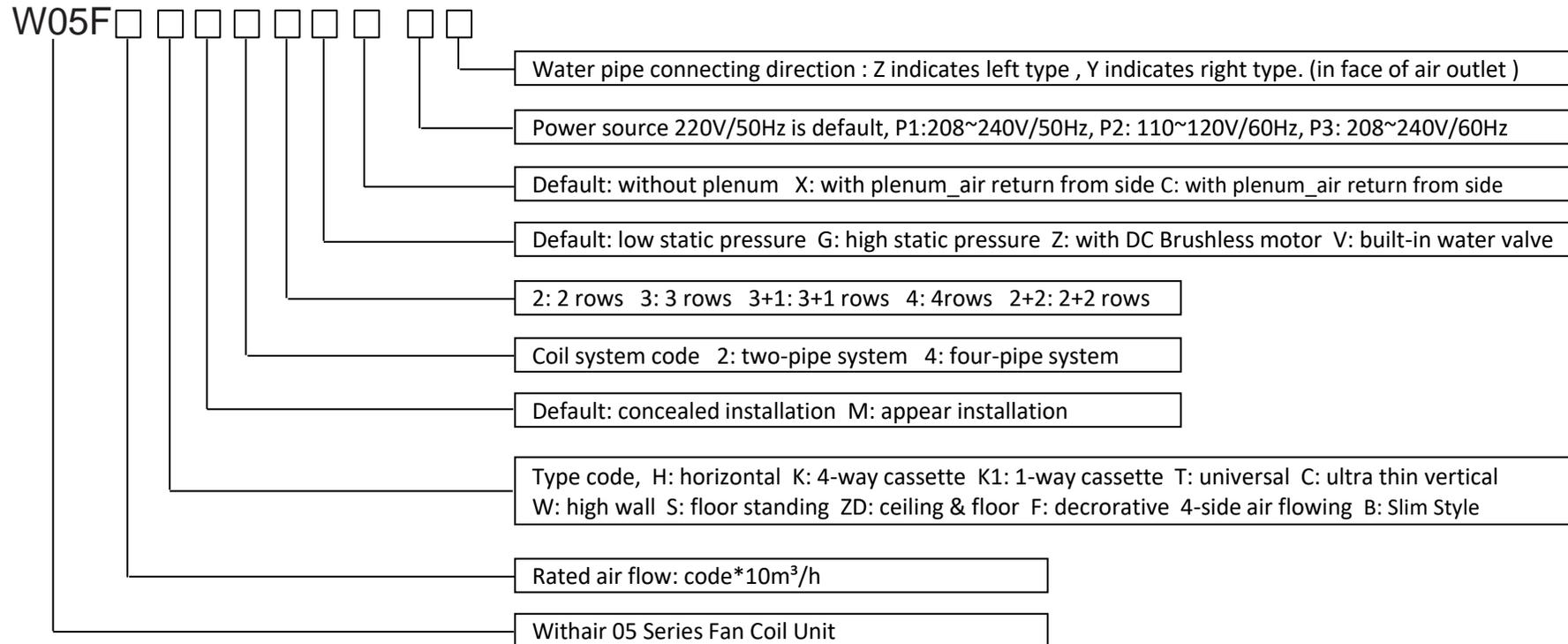
With everything from belt-drive to ducted units and unique stackable configurations – all in multiple models and capacities – Withair® fan coil units offer exceptional flexibility and availability. Today's building owners and engineers are concerned with issues such as indoor air quality and CFCs that can require high performance from all parts of the HVACR system. In addition, renovation has overtaken new construction in the fan coil units market—demanding a design that caters to renovation issues. Withair® fan coil units meets the standards of today's market and anticipate the needs of tomorrow's. These air terminal devices and heating products offer high-quality controls for efficient operation, and flexibility construction that can assure easy installation and service.

Model Type	CFM	200	300	400	500	600	800	1000	1200	1400	1600	1800	2000	2400	2800	DC motor(0~10V)	DC motor(3 speed)
	m <sup>3</sup> /h	340	510	680	850	1020	1360	1700	2040	2380	2720	3000	3400	4080	4800	Optional	
Concealed type	standard type	√	√	√	√	√	√	√	√	√						●	●
	slim type		√	√	√	√	√									●	●
	high static pressure						√	√	√	√	√	√	√	√			
Universal Type	standard type	√	√	√	√	√	√	√	√	√						●	●
	ultrathin vertical type	√	√	√	√	√										●	
High wall type	standard type	√	√	√	√	√	√										
	valve inside type	√	√	√	√	√	√										
Floor standing type	standard type						√	√	√	√	√				√		
Floor & ceiling type	standard type		√	√	√	√	√	√	√	√							●
Cassette type	one-way type	√	√	√	√												●
	four-way type	√	√	√	√	√	√	√	√	√	√					●	●
Decorative 4-side	air flowing type			√	√						√	√					●

### Conversion of Units used in this Catalog

	Unit used in catalog	Conversion
Air volume	m <sup>3</sup> /h	1 m <sup>3</sup> /h = 0.59CFM
Cooling/heating capacity	W	1 W = 3.413 Btu/h
Water flow	m <sup>3</sup> /h	1 m <sup>3</sup> /h = 4.40GPM
Water pressure drop	kPa	1 kPa = 0.3345 ftWG
External static pressure	Pa	1 Pa = 0.004 inWG
Air/water temperature	°C	°F = (9 / 5) × °C + 32

# Nomenclature



TH:Total Heat

SH:Sensible Heat

## Testing Conditions

Nominal cooling conditions:

Indoor air temperature: 27°C/19.5°C DB/WB

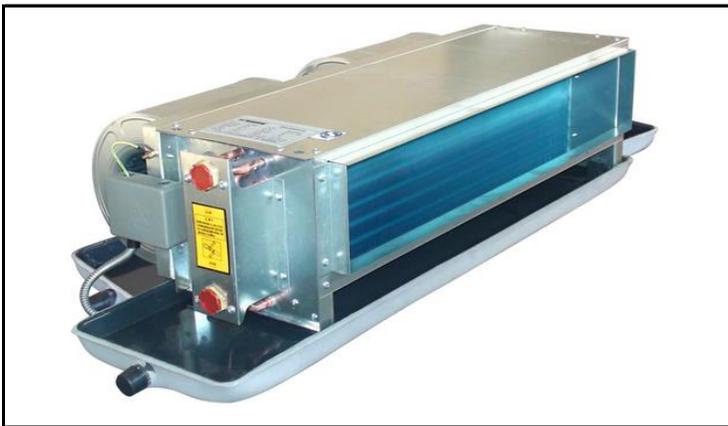
Water temperature: 7°C/12°C, at maximum speed

Nominal heating conditions:

Indoor air temperature: 21°C/15°C DB/WB

Water temperature: 6°C, at maximum speed

# Variety of Chilled Water Fan Coil Units



Chilled Water Concealed Fan Coil Unit



High Static Pressure Horizontal Ducted Fan Coil Unit



Four-way Cassette Type Fan Coil Unit



Universal Type & Ultra-thin Vertical Type Fan Coil Unit



High Wall Type Fan Coil Unit



Floor Standing Type Fan Coil Unit



Floor & Ceiling Type Fan Coil Unit



Kitchen and Bathroom Ducted & Concealed Fan Coil



Vertical High Rise Fan Coil Unit

# Chilled Water Fan Coil Units

## — Product Description —

Withair® Fan Coil Unit is designed and manufactured on the base of advanced technology, and utilizes qualified galvanized iron as structure material. Due to its super thin design, it has such advantages: beautiful outer looking, space saving, easy installation, etc. and the most obvious advantage is that it can decrease the outlet air temperature difference as low as possible to make the room more comfortable, as well as doesn't reduce the cooling capacity output. For the large air flow volume design, it can increase room ventilation frequency, supply more fresh air, and balance room temperature distribution. Benefiting from adopting of advanced material and technology, it can be widely applied in market, hospital, office building, hotel, etc.

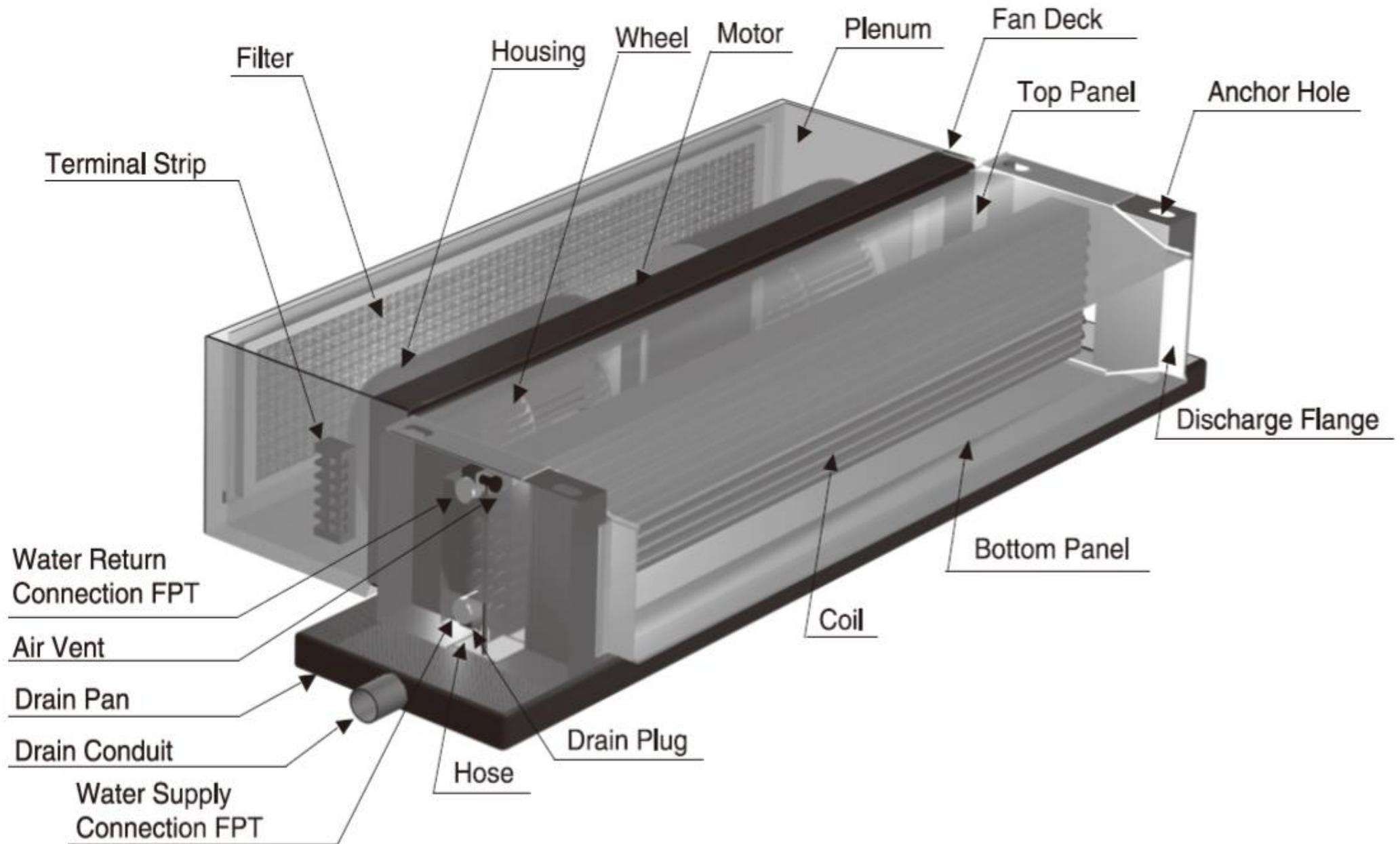
Withair® Fan Coil Unit contains ceiling exposed type, ceiling concealed type, wall type, cassette type, free standing type, universal type. and the air volume varies from 150CFM~2800CFM. the standard voltage supply is 220V/1P/50Hz, and 110V/1P/60Hz and 220V/1P/60Hz are also available. Including 6 series: ceiling concealed/exposed units, floor standing units, ceiling cassette unit and so on.

Meeting customer's various needs, presenting attractive appearance and realizing convenient installation.

## — The Key Advantages Include —

- Compact, light-weight design saves space.
- Aesthetic design with high-quality galvanized steel.
- Full faced, insulated plenum with back and bottom return.
- Optional: Electric heater, AC motor and DC brushless motor.
- Available in two-pipe, three-pipe and four-pipe configurations.
- Coil design provides good air mixing for high thermal efficiency.
- Hydrophilic aluminum foil improves efficiency and resists corrosion.
- High-efficiency centrifugal fan assembly minimizes vibration and noise.
- Highly efficient motor and centrifugal fan ensures low-noise performance.
- Filter is made of aluminum net and aluminum frame, easy to clean and replace.
- Flexible design - Exposed or concealed cabinet; 2-pipe or 4-pipe system; 2,3,4 & 6 rows.
- Bottom/back air return type plenum box and left/right hand chiller water connection for optional.
- Optimized performance - chilled-water coil for cooling, hot-water or electric coil for heating.
- Multiple ESP available: stand units come with ESP12Pa, customized 30/50/100Pa, able to suit different applications.
- Proprietary symmetric design allows pipe entrance to be installed on either side of the unit to adapt to building conditions.
- Frame and structure: panels and frame are made of galvanized steel, properly punched for fixing both accessories and the unit itself.
- Drain pan with integral thermal insulation and professional welding skill enable all condensation water to be collected and prevent leakage.
- The fan decks are composed of double suction centrifugal fans with aluminum impellers and 3-speed fan motors. Each fan motor assembly is dynamically balanced.
- The coils are made of seamless tubes expanded into aluminum fins in continuous block. The connections have brass headers with female fittings and provided with easily accessible vent and drainage valve.
- Choice of controls - Thermostats can be analog, digital display, or programmable; unit-mount or remote-mount. Controls can be interfaced with a building automation system, or operate on a stand-alone basis.

Unit Construction



**Concealed Horizontal Type Fan Coil Unit (two-pipe system with 3 rows series)**

Model		W05F-	34H2-3	51H2-3	68H2-3	85H2-3	102H2-3	136H2-3	170H2-3	204H2-3	238H2-3	
Power supply		AC 208~230V/1Ph/50Hz (60Hz as option)										
Air flow	High speed	m <sup>3</sup> /h	340	510	680	850	1020	1360	1700	2040	2380	
	Middle speed	m <sup>3</sup> /h	270	380	515	660	765	1040	1280	1550	1800	
	Low speed	m <sup>3</sup> /h	190	260	340	430	530	710	860	1050	1280	
Static pressure		Pa	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	
Cooling capacity	TH	High speed	W	2150	3200	4000	5000	5800	8000	9500	11300	12800
			SH	W	1530	2230	2850	3530	4230	5790	6850	8110
	TH	Middle speed	W	1710	2510	3305	4090	4790	6660	7695	9153	10000
			SH	W	1210	1715	2320	2890	3345	4715	5470	6340
	TH	Low speed	W	1355	2000	2470	3000	3520	5150	5870	6820	7850
			SH	W	980	1420	1735	2020	2500	3530	4075	4950
Heating capacity	High speed		W	3350	5050	6250	7900	9150	12500	15100	17800	20100
	Middle speed		W	2650	3900	5100	6350	7400	10300	11950	14200	15500
	Low speed		W	2100	3100	3850	4650	5450	8000	9100	10550	12150
Noise level	High speed	12/30/50Pa	dB(A)	37/39/42	39/41/44	41/43/46	43/45/47	45/48/49	47/49/50	48/50/52	50/52/54	52/54/56
Power input		12/30/50Pa	W	37/44/49	52/59/66	62/72/84	76/87/100	96/108/118	134/156/174	152/174/210	189/212/250	228/253/300
Coil		High efficient copper pipe to wear Hydrophilic aluminum coil; Working pressure 1.6MPa										
Fan		Centrifugal fan (forward curved galvanized steel fan wheel); Galvanized steel fan housing										
Motor		AC motor; The motor insulation system shall be Class E										
Water flow rate		m <sup>3</sup> /h	0.37	0.55	0.69	0.86	0.99	1.37	1.63	1.94	2.19	
Pressure drop		kPa	16	22	18	29	22	27	35	37	38	
Coil connection & drain pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Unit dimension	Without air return box		L×W×H (mm)	624×465×238	814×465×238	864×465×238	944×465×238	1044×465×238	1424×465×238	1474×465×238	1674×465×238	1824×465×238
	Air return from side			624×510×238	814×510×238	864×510×238	944×510×238	1044×510×238	1424×510×238	1474×510×238	1674×510×238	1824×510×238
	Air return from bottom			624×492×256	814×492×256	864×492×256	944×492×256	1044×492×256	1424×492×256	1474×492×256	1674×492×256	1824×492×256
Weight (without plelum / with plelum)		kg	12/14.6	14/16.8	15/18.5	18/21.2	19/23.2	28/32.1	32/36.5	35/39.7	37/42.4	

Notes:

- 1.Cooling condition: indoor DB=27℃(80.6°F), WB=19.5℃(67.1°F), EWT 7℃(44.6°F), temperature difference between EWT and LWT:5℃(41°F).
- 2.Heating condition: Indoor DB=21℃(69.8°F), entering water temperature 60℃(140°F), the same amount of water flow as with cooling.
- 3.Air outlet static pressure of standard model: 0 Pa (with air outlet and filter); or 12 Pa (without air outlet and filter).
- 4.Noise level is tested base on GB/T 19232-2003.
- 5.Air flow rate is tested when FCU operates in a dry state and 20℃(68°F) air inlet dry bulb temperature.
- 6.3-Row= 3-row chilled water/hot water coil.
- 7.All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

## Concealed Horizontal Type Fan Coil Unit (two-pipe system with 4 rows series)

Model		W05F-	34H2-4	51H2-4	68H2-4	85H2-4	102H2-4	136H2-4	170H2-4	204H2-4	238H2-4	
Power supply		AC 208~230V/1Ph/50Hz (60Hz as option)										
Air flow	High speed	m <sup>3</sup> /h	340	510	680	850	1020	1360	1700	2040	2380	
	Middle speed	m <sup>3</sup> /h	270	380	515	660	765	1040	1280	1550	1800	
	Low speed	m <sup>3</sup> /h	190	260	340	430	530	710	860	1050	1280	
Static pressure		Pa	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	
Cooling capacity	TH	High speed	W	2350	3500	4400	5500	6400	8800	10450	12450	14100
			SH	W	1650	2400	3100	3850	4600	6300	7450	8800
	TH	Middle speed	W	1850	2750	3600	4450	5200	7250	9250	11000	10900
			SH	W	1300	1850	2500	3150	3650	5100	5950	6900
	TH	Low speed	W	1600	2150	2650	3250	3800	5550	6350	7350	8500
			SH	W	1050	1550	1900	2200	2700	3850	4400	5350
Heating capacity	High speed		W	3700	5550	6900	8700	10050	13750	16600	19600	22100
	Middle speed		W	2900	4250	5550	6900	8050	11250	13050	15500	16900
	Low speed		W	2250	3350	4150	5000	5900	8650	9850	11400	13100
Noise level	High speed	12/30/50Pa	dB(A)	37/39/42	39/41/44	41/43/46	43/45/47	45/48/49	47/49/50	48/50/52	50/52/54	52/54/56
Power input		12/30/50Pa	W	37/44/49	52/59/66	62/72/84	76/87/100	96/108/118	134/156/174	152/174/210	189/212/250	228/253/300
Coil		High efficient copper pipe to wear Hydrophilic aluminum coil; Working pressure 1.6MPa										
Fan		Centrifugal fan (forward curved galvanized steel fan wheel); Galvanized steel fan housing										
Motor		AC motor; The motor insulation system shall be Class E										
Water flow rate		m <sup>3</sup> /h	0.41	0.61	0.76	0.95	1.09	1.51	1.79	2.13	2.41	
Pressure drop		kPa	19	25	24	34	26	33	40	42	46	
Coil connection & drain pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Unit dimension	Without air return box		L×W×H (mm)	624×465×238	814×465×238	864×465×238	944×465×238	1044×465×238	1424×465×238	1474×465×238	1674×465×238	1824×465×238
	Air return from side			624×510×238	814×510×238	864×510×238	944×510×238	1044×510×238	1424×510×238	1474×510×238	1674×510×238	1824×510×238
	Air return from bottom			624×492×256	814×492×256	864×492×256	944×492×256	1044×492×256	1424×492×256	1474×492×256	1674×492×256	1824×492×256
Weight (without plelum / with plelum)		kg	12/14.6	14/16.8	15/18.5	18/21.2	19/23.2	28/32.1	32/36.5	35/39.7	37/42.4	

### Notes:

- Cooling condition: indoor DB=27°C (80.6°F), WB=19.5°C (67.1°F), EWT 7°C (44.6°F), temperature difference between EWT and LWT:5°C (41°F).
- Heating condition: Indoor DB=21°C (69.8°F), entering water temperature 60°C (140°F), the same amount of water flow as with cooling.
- Air outlet static pressure of standard model: 0 Pa (with air outlet and filter); or 12 Pa (without air outlet and filter).
- Noise level is tested base on GB/T 19232-2003.
- Air flow rate is tested when FCU operates in a dry state and 20°C (68°F) air inlet dry bulb temperature.
- 4-Row= 4-row chilled water/hot water coil.
- All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

## Concealed Horizontal Type Fan Coil Unit (four-pipe system with 3+1 rows series)

Model		W05F-	34H4-(3+1)	51H4-(3+1)	68H4-(3+1)	85H4-(3+1)	102H4-(3+1)	136H4-(3+1)	170H4-(3+1)	204H4-(3+1)	238H4-(3+1)	
Power supply		AC 208~230V/1Ph/50Hz (60Hz as option)										
Air flow	High speed	m <sup>3</sup> /h	340	510	680	850	1020	1360	1700	2040	2380	
	Middle speed	m <sup>3</sup> /h	270	380	515	660	765	1040	1280	1550	1800	
	Low speed	m <sup>3</sup> /h	190	260	340	430	530	710	860	1050	1280	
Static pressure		Pa	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	
Cooling capacity	TH	High speed	W	2150	3200	4000	5000	5800	8000	9500	11300	12800
			SH	W	1530	2230	2850	3530	4230	5790	6850	8110
	TH	Middle speed	W	1710	2510	3305	4090	4790	6660	7695	9153	10000
			SH	W	1210	1715	2320	2890	3345	4715	5470	6340
	TH	Low speed	W	1355	2000	2470	3000	3520	5150	5870	6820	7850
			SH	W	980	1420	1735	2020	2500	3530	4075	4950
Heating capacity	High speed		W	1350	2000	2500	3150	3650	5000	6000	7100	8000
	Middle speed		W	1050	1550	2050	2550	2950	4100	4750	5650	6150
	Low speed		W	850	1250	1550	1850	2150	3200	3600	4200	4850
Noise level	High speed	12/30/50Pa	dB(A)	37/39/42	39/41/44	41/43/46	43/45/47	45/48/49	47/49/50	48/50/52	50/52/54	52/54/56
Power input		12/30/50Pa	W	37/44/49	52/59/66	62/72/84	76/87/100	96/108/118	134/156/174	152/174/210	189/212/250	228/253/300
Coil		High efficient copper pipe to wear Hydrophilic aluminum coil; Working pressure 1.6MPa										
Fan		Centrifugal fan (forward curved galvanized steel fan wheel); Galvanized steel fan housing										
Motor		AC motor; The motor insulation system shall be Class E										
Water flow rate	Cool	m <sup>3</sup> /h	0.37	0.55	0.69	0.86	0.99	1.37	1.63	1.94	2.19	
	Heat	m <sup>3</sup> /h	0.12	0.17	0.21	0.27	0.31	0.43	0.51	0.61	0.69	
Pressure drop	Cool	kPa	16	22	18	29	22	27	35	37	38	
	Heat	kPa	5	8	8	10	10	12	15	16	18	
Coil connection & drain pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Unit dimension	Without air return box	LxWxH (mm)	624x465x238	814x465x238	864x465x238	944x465x238	1044x465x238	1424x465x238	1474x465x238	1674x465x238	1824x465x238	
	Air return from side		624x510x238	814x510x238	864x510x238	944x510x238	1044x510x238	1424x510x238	1474x510x238	1674x510x238	1824x510x238	
	Air return from bottom		624x492x256	814x492x256	864x492x256	944x492x256	1044x492x256	1424x492x256	1474x492x256	1674x492x256	1824x492x256	
Weight (without plelum / with plelum)		kg	12/14.6	14/16.8	15/18.5	18/21.2	19/23.2	28/32.1	32/36.5	35/39.7	37/42.4	

### Notes:

- Cooling condition: indoor DB=27°C(80.6°F), WB=19.5°C(67.1°F), EWT 7°C(44.6°F), temperature difference between EWT and LWT:5°C(41°F).
- Heating condition: Indoor DB=21°C(69.8°F), entering water temperature 60°C(140°F), the same amount of water flow as with cooling.
- Air outlet static pressure of standard model: 0 Pa (with air outlet and filter); or 12 Pa (without air outlet and filter).
- Noise level is tested base on GB/T 19232-2003.
- Air flow rate is tested when FCU operates in a dry state and 20°C(68°F) air inlet dry bulb temperature.
- 4-Row= 3-row chilled water, 1-row hot water coil.
- All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

## Concealed Horizontal Type Fan Coil Unit (four-pipe system with 2+2 rows series)

Model		W05F-	34H4-(2+2)	51H4-(2+2)	68H4-(2+2)	85H4-(2+2)	102H4-(2+2)	136H4-(2+2)	170H4-(2+2)	204H4-(2+2)	238H4-(2+2)	
Power supply		AC 208~230V/1Ph/50Hz (60Hz as option)										
Air flow	High speed	m <sup>3</sup> /h	340	510	680	850	1020	1360	1700	2040	2380	
	Middle speed	m <sup>3</sup> /h	270	380	515	660	765	1040	1280	1550	1800	
	Low speed	m <sup>3</sup> /h	190	260	340	430	530	710	860	1050	1280	
Static pressure		Pa	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	
Cooling capacity	TH	High speed	W	1550	2300	2900	3600	4200	5750	6850	8150	9200
			SH	W	1100	1650	2100	2600	3100	4250	5050	5950
	TH	Middle speed	W	1250	1800	2400	2950	3450	4800	5550	6600	7200
			SH	W	900	1250	1700	2100	2450	3450	4000	4650
	TH	Low speed	W	1000	1450	1800	2150	2550	3700	4250	4900	5650
			SH	W	700	1050	1300	1500	1850	2600	3000	3650
Heating capacity	High speed		W	2550	3800	4800	5950	6950	9500	11300	13450	15200
	Middle speed		W	2050	2950	3950	4850	5700	7900	9150	10900	11900
	Low speed		W	1650	2400	2950	3550	4200	6100	7000	8100	9300
Noise level	High speed	12/30/50Pa	dB(A)	37/39/41	39/41/44	41/43/46	43/45/47	45/48/48	47/49/50	48/50/52	50/52/54	52/54/56
Power input		12/30/50Pa	W	37/44/49	52/59/66	62/72/84	76/87/100	96/108/118	134/156/174	152/174/210	189/212/250	228/253/300
Coil		High efficient copper pipe to wear Hydrophilic aluminum coil; Working pressure 1.6MPa										
Fan		Centrifugal fan (forward curved galvanized steel fan wheel); Galvanized steel fan housing										
Motor		AC motor; The motor insulation system shall be Class E										
Water flow rate	Cool	m <sup>3</sup> /h	0.27	0.4	0.5	0.62	0.72	0.98	1.18	1.4	1.57	
	Heat	m <sup>3</sup> /h	0.23	0.32	0.4	0.51	0.59	0.82	0.96	1.16	1.31	
Pressure drop	Cool	kPa	10.5	15	13	19.5	16	19.5	25	26.5	28	
	Heat	kPa	9	13	11	17	14	17	22	23	25	
Coil connection & drain pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Unit dimension	Without air return box	LxWxH (mm)	624x465x238	814x465x238	864x465x238	944x465x238	1044x465x238	1424x465x238	1474x465x238	1674x465x238	1824x465x238	
	Air return from side		624x510x238	814x510x238	864x510x238	944x510x238	1044x510x238	1424x510x238	1474x510x238	1674x510x238	1824x510x238	
	Air return from bottom		624x492x256	814x492x256	864x492x256	944x492x256	1044x492x256	1424x492x256	1474x492x256	1674x492x256	1824x492x256	
Weight (without plelum / with plelum)		kg	12/14.6	14/16.8	15/18.5	18/21.2	19/23.2	28/32.1	32/36.5	35/39.7	37/42.4	

### Notes:

- Cooling condition: indoor DB=27°C(80.6°F), WB=19.5°C(67.1°F), EWT 7°C(44.6°F), temperature difference between EWT and LWT:5°C(41°F).
- Heating condition: Indoor DB=21°C(69.8°F), entering water temperature 60°C(140°F), the same amount of water flow as with cooling.
- Air outlet static pressure of standard model: 0 Pa (with air outlet and filter); or 12 Pa (without air outlet and filter).
- Noise level is tested base on GB/T 19232-2003.
- Air flow rate is tested when FCU operates in a dry state and 20°C(68°F) air inlet dry bulb temperature.
- 4-Row= 2-row chilled water,2-row hot water coil.
- All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

## Concealed Horizontal Type Fan Coil Unit with DC Brushless Motor (two-pipe system with 3 rows series)

Model		W05F-	34H2-3Z	51H2-3Z	68H2-3Z	85H2-3Z	102H2-3Z	136H2-3Z	170H2-3Z	204H2-3Z	238H2-3Z	
Power supply		DC 208~230V/1Ph/50Hz (60Hz as option)										
Air flow	High speed	m <sup>3</sup> /h	340	510	680	850	1020	1360	1700	2040	2380	
	Middle speed	m <sup>3</sup> /h	270	380	515	660	765	1040	1280	1550	1800	
	Low speed	m <sup>3</sup> /h	190	260	340	430	530	710	860	1050	1280	
Static pressure		Pa	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	
Cooling capacity	TH	High speed	W	2150	3200	4000	5000	5800	8000	9500	11300	12800
			SH	W	1530	2230	2850	3530	4230	5790	6850	8110
	TH	Middle speed	W	1710	2510	3305	4090	4790	6660	7695	9153	10000
			SH	W	1210	1715	2320	2890	3345	4715	5470	6340
	TH	Low speed	W	1355	2000	2470	3000	3520	5150	5870	6820	7850
			SH	W	980	1420	1735	2020	2500	3530	4075	4950
Heating capacity	High speed		W	3350	5050	6250	7900	9150	12500	15100	17800	20100
	Middle speed		W	2650	3900	5100	6350	7400	10300	11950	14200	15500
	Low speed		W	2100	3100	3850	4650	5450	8000	9100	10550	12150
Noise level	High speed	12/30/50Pa	dB(A)	34/36/39	36/38/41	38/40/43	40/42/44	42/45/46	44/46/48	45/47/49	47/49/51	50/52/54
Power input		12/30/50Pa	W	21/25/28	30/34/38	36/42/54	44/52/64	56/63/73	78/91/108	89/102/134	111/124/147	134/148/176
Coil		High efficient copper pipe to wear Hydrophilic aluminum coil; Working pressure 1.6MPa										
Fan		Centrifugal fan (forward curved galvanized steel fan wheel); Galvanized steel fan housing										
Motor		DC Brushless Motor; The motor insulation system shall be Class E										
Water flow rate		m <sup>3</sup> /h	0.37	0.55	0.69	0.86	0.99	1.37	1.63	1.94	2.19	
Pressure drop		kPa	16	22	18	29	22	27	35	37	38	
Coil connection & drain pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Unit dimension	Without air return box		L×W×H (mm)	624×465×238	814×465×238	864×465×238	944×465×238	1044×465×238	1424×465×238	1474×465×238	1674×465×238	1824×465×238
	Air return from side			624×510×238	814×510×238	864×510×238	944×510×238	1044×510×238	1424×510×238	1474×510×238	1674×510×238	1824×510×238
	Air return from bottom			624×492×256	814×492×256	864×492×256	944×492×256	1044×492×256	1424×492×256	1474×492×256	1674×492×256	1824×492×256
Weight (without plelum / with plelum)		kg	12/14.6	14/16.8	15/18.5	18/21.2	19/23.2	28/32.1	32/36.5	35/39.7	37/42.4	

### Notes:

- Cooling condition: indoor DB=27°C (80.6°F), WB=19.5°C (67.1°F), EWT 7°C (44.6°F), temperature difference between EWT and LWT:5°C (41°F).
- Heating condition: Indoor DB=21°C (69.8°F), entering water temperature 60°C (140°F), the same amount of water flow as with cooling.
- Air outlet static pressure of standard model: 0 Pa (with air outlet and filter); or 12 Pa (without air outlet and filter).
- Noise level is tested base on GB/T 19232-2003.
- Air flow rate is tested when FCU operates in a dry state and 20°C (68°F) air inlet dry bulb temperature.
- 3-Row= 3-row chilled water/hot water coil.
- All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

## Concealed Horizontal Type Fan Coil Unit with DC Brushless Motor (two-pipe system with 4 rows series)

Model		W05F-	34H2-4Z	51H2-4Z	68H2-4Z	85H2-4Z	102H2-4Z	136H2-4Z	170H2-4Z	204H2-4Z	238H2-4Z	
Power supply		DC 208~230V/1Ph/50Hz (60Hz as option)										
Air flow	High speed	m <sup>3</sup> /h	340	510	680	850	1020	1360	1700	2040	2380	
	Middle speed	m <sup>3</sup> /h	270	380	515	660	765	1040	1280	1550	1800	
	Low speed	m <sup>3</sup> /h	190	260	340	430	530	710	860	1050	1280	
Static pressure		Pa	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	
Cooling capacity	TH	High speed	W	2350	3500	4400	5500	6400	8800	10450	12450	14100
			SH	W	1650	2400	3100	3850	4600	6300	7450	8800
	TH	Middle speed	W	1850	2750	3600	4450	5200	7250	9250	11000	10900
			SH	W	1300	1850	2500	3150	3650	5100	5950	6900
	TH	Low speed	W	1600	2150	2650	3250	3800	5550	6350	7350	8500
			SH	W	1050	1550	1900	2200	2700	3850	4400	5350
Heating capacity	High speed		W	3700	5550	6900	8700	10050	13750	16600	19600	22100
	Middle speed		W	2900	4250	5550	6900	8050	11250	13050	15500	16900
	Low speed		W	2250	3350	4150	5000	5900	8650	9850	11400	13100
Noise level	High speed	12/30/50Pa	dB(A)	34/36/39	36/38/41	38/40/43	40/42/44	42/45/46	44/46/48	45/47/49	47/49/51	50/52/54
Power input		12/30/50Pa	W	23/27/30	33/37/41	39/46/59	48/57/70	61/69/80	85/100/118	97/112/147	122/136/161	147/162/193
Coil		High efficient copper pipe to wear Hydrophilic aluminum coil; Working pressure 1.6MPa										
Fan		Centrifugal fan (forward curved galvanized steel fan wheel); Galvanized steel fan housing										
Motor		DC Brushless Motor; The motor insulation system shall be Class E										
Water flow rate		m <sup>3</sup> /h	0.41	0.61	0.76	0.95	1.09	1.51	1.79	2.13	2.41	
Pressure drop		kPa	19	25	24	34	26	33	40	42	46	
Coil connection & drain pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Unit dimension	Without air return box		L×W×H (mm)	624×465×238	814×465×238	864×465×238	944×465×238	1044×465×238	1424×465×238	1474×465×238	1674×465×238	1824×465×238
	Air return from side			624×510×238	814×510×238	864×510×238	944×510×238	1044×510×238	1424×510×238	1474×510×238	1674×510×238	1824×510×238
	Air return from bottom			624×492×256	814×492×256	864×492×256	944×492×256	1044×492×256	1424×492×256	1474×492×256	1674×492×256	1824×492×256
Weight (without plelum / with plelum)		kg	12/14.6	14/16.8	15/18.5	18/21.2	19/23.2	28/32.1	32/36.5	35/39.7	37/42.4	

### Notes:

- Cooling condition: indoor DB=27℃(80.6°F), WB=19.5℃(67.1°F), EWT 7℃(44.6°F), temperature difference between EWT and LWT:5℃(41°F).
- Heating condition: Indoor DB=21℃(69.8°F), entering water temperature 60℃(140°F), the same amount of water flow as with cooling.
- Air outlet static pressure of standard model: 0 Pa (with air outlet and filter); or 12 Pa (without air outlet and filter).
- Noise level is tested base on GB/T 19232-2003.
- Air flow rate is tested when FCU operates in a dry state and 20℃(68°F) air inlet dry bulb temperature.
- 4-Row= 4-row chilled water/hot water coil.
- All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

## Concealed Horizontal Type Fan Coil Unit with DC Brushless Motor (four-pipe system with 3+1 rows series)

Model		W05F-	34H4-(3+1)Z	51H4-(3+1)Z	68H4-(3+1)Z	85H4-(3+1)Z	102H4-(3+1)Z	136H4-(3+1)Z	170H4-(3+1)Z	204H4-(3+1)Z	238H4-(3+1)Z	
Power supply		DC 208~230V/1Ph/50Hz (60Hz as option)										
Air flow	High speed	m <sup>3</sup> /h	340	510	680	850	1020	1360	1700	2040	2380	
	Middle speed	m <sup>3</sup> /h	270	380	515	660	765	1040	1280	1550	1800	
	Low speed	m <sup>3</sup> /h	190	260	340	430	530	710	860	1050	1280	
Static pressure		Pa	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	
Cooling capacity	TH	High speed	W	2150	3200	4000	5000	5800	8000	9500	11300	12800
			SH	W	1530	2230	2850	3530	4230	5790	6850	8110
	TH	Middle speed	W	1710	2510	3305	4090	4790	6660	7695	9153	10000
			SH	W	1210	1715	2320	2890	3345	4715	5470	6340
	TH	Low speed	W	1355	2000	2470	3000	3520	5150	5870	6820	7850
			SH	W	980	1420	1735	2020	2500	3530	4075	4950
Heating capacity	High speed		W	1350	2000	2500	3150	3650	5000	6000	7100	8000
	Middle speed		W	1050	1550	2050	2550	2950	4100	4750	5650	6150
	Low speed		W	850	1250	1550	1850	2150	3200	3600	4200	4850
Noise level	High speed		dB(A)	34/36/39	36/38/41	38/40/43	40/42/44	42/45/46	44/46/48	45/47/49	47/49/51	50/52/54
Power input	High speed		W	23/27/30	33/37/41	39/46/59	48/57/70	61/69/80	85/100/118	97/112/147	122/136/161	147/162/193
Coil		High efficient copper pipe to wear Hydrophilic aluminum coil; Working pressure 1.6MPa										
Fan		Centrifugal fan (forward curved galvanized steel fan wheel); Galvanized steel fan housing										
Motor		DC Brushless Motor; The motor insulation system shall be Class E										
Water flow rate	Cool	m <sup>3</sup> /h	0.37	0.55	0.69	0.86	0.99	1.37	1.63	1.94	2.19	
	Heat	m <sup>3</sup> /h	0.12	0.17	0.21	0.27	0.31	0.43	0.51	0.61	0.69	
Pressure drop	Cool	kPa	16	22	18	29	22	27	35	37	38	
	Heat	kPa	5	8	8	10	10	12	15	16	18	
Coil connection & drain pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Unit dimension	Without air return box	LxWxH (mm)	624x465x238	814x465x238	864x465x238	944x465x238	1044x465x238	1424x465x238	1474x465x238	1674x465x238	1824x465x238	
	Air return from side		624x510x238	814x510x238	864x510x238	944x510x238	1044x510x238	1424x510x238	1474x510x238	1674x510x238	1824x510x238	
	Air return from bottom		624x492x256	814x492x256	864x492x256	944x492x256	1044x492x256	1424x492x256	1474x492x256	1674x492x256	1824x492x256	
Weight (without plelum / with plelum)		kg	12/14.6	14/16.8	15/18.5	18/21.2	19/23.2	28/32.1	32/36.5	35/39.7	37/42.4	

### Notes:

- Cooling condition: indoor DB=27°C(80.6°F), WB=19.5°C(67.1°F), EWT 7°C(44.6°F), temperature difference between EWT and LWT:5°C(41°F).
- Heating condition: Indoor DB=21°C(69.8°F), entering water temperature 60°C(140°F), the same amount of water flow as with cooling.
- Air outlet static pressure of standard model: 0 Pa (with air outlet and filter); or 12 Pa (without air outlet and filter).
- Noise level is tested base on GB/T 19232-2003.
- Air flow rate is tested when FCU operates in a dry state and 20°C(68°F) air inlet dry bulb temperature.
- 4-Row= 3-row chilled water, 1-row hot water coil.
- All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

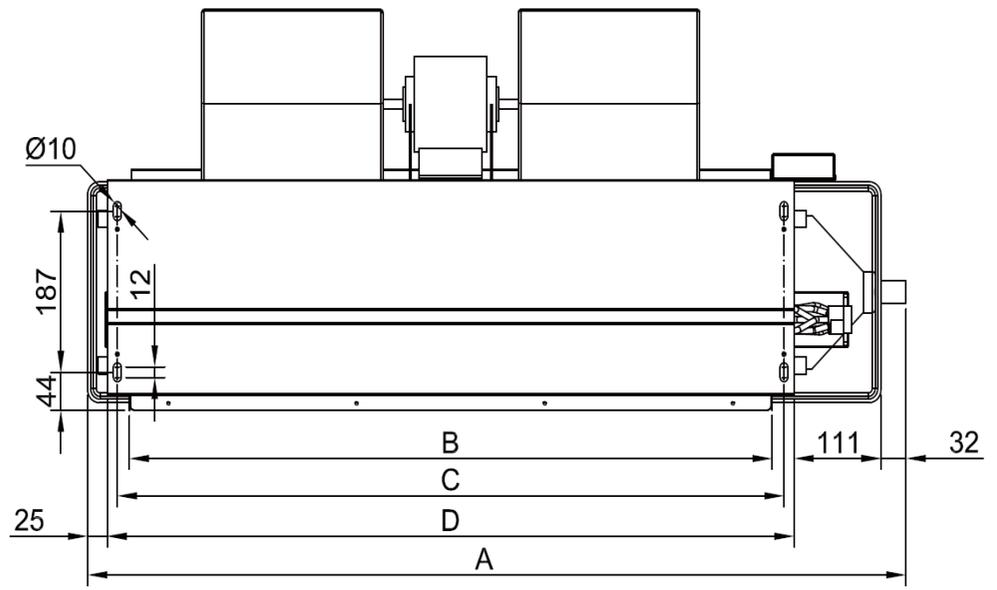
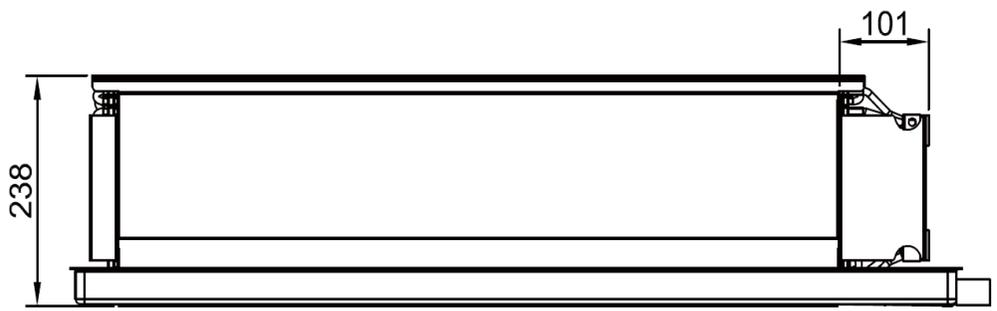
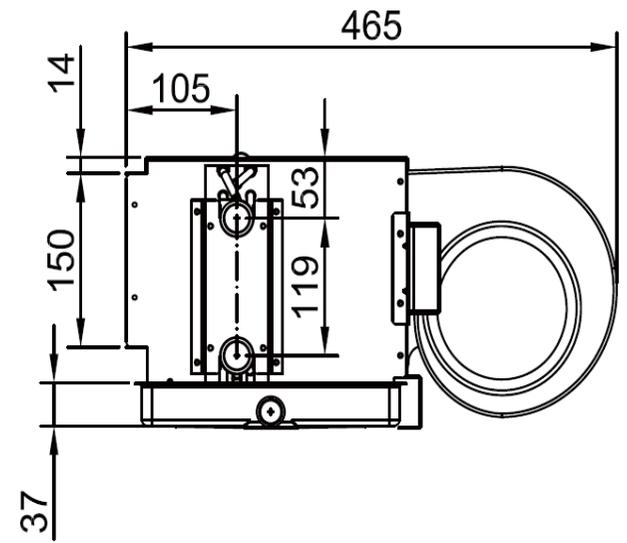
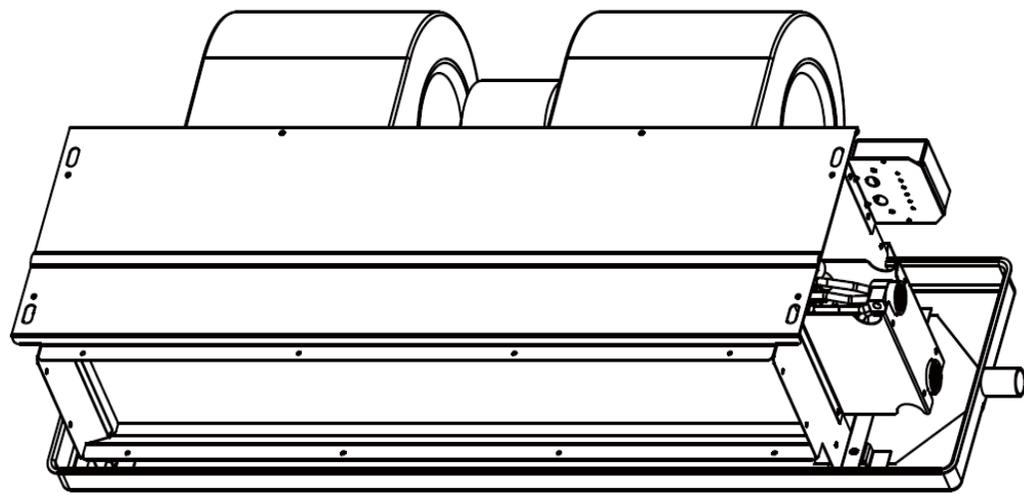
## Concealed Horizontal Type Fan Coil Unit with DC Brushless Motor (four-pipe system with 2+2 rows series)

Model		W05F-	34H4-(2+2)Z	51H4-(2+2)Z	68H4-(2+2)Z	85H4-(2+2)Z	102H2-(2+2)Z	136H4-(2+2)Z	170H4-(2+2)Z	204H4-(2+2)Z	238H4-(2+2)Z	
Power supply		DC 208~230V/1Ph/50Hz (60Hz as option)										
Air flow	High speed	m <sup>3</sup> /h	340	510	680	850	1020	1360	1700	2040	2380	
	Middle speed	m <sup>3</sup> /h	270	380	515	660	765	1040	1280	1550	1800	
	Low speed	m <sup>3</sup> /h	190	260	340	430	530	710	860	1050	1280	
Static pressure		Pa	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	12(30,50)	
Cooling capacity	TH	High speed	W	1550	2300	2900	3600	4200	5750	6850	8150	9200
			SH	W	1100	1650	2100	2600	3100	4250	5050	5950
	TH	Middle speed	W	1250	1800	2400	2950	3450	4800	5550	6600	7200
			SH	W	900	1250	1700	2100	2450	3450	4000	4650
	TH	Low speed	W	1000	1450	1800	2150	2550	3700	4250	4900	5650
			SH	W	700	1050	1300	1500	1850	2600	3000	3650
Heating capacity	High speed		W	2550	3800	4800	5950	6950	9500	11300	13450	15200
	Middle speed		W	2050	2950	3950	4850	5700	7900	9150	10900	11900
	Low speed		W	1650	2400	2950	3550	4200	6100	7000	8100	9300
Noise level	High speed		dB(A)	34/36/39	36/38/41	38/40/43	40/42/44	42/45/46	44/46/48	45/47/49	47/49/51	50/52/54
Power input	High speed		W	23/27/30	33/37/41	39/46/59	48/57/70	61/69/80	85/100/118	97/112/147	122/136/161	147/162/193
Coil		High efficient copper pipe to wear Hydrophilic aluminum coil; Working pressure 1.6MPa										
Fan		Centrifugal fan (forward curved galvanized steel fan wheel); Galvanized steel fan housing										
Motor		DC Brushless Motor; The motor insulation system shall be Class E										
Water flow rate	Cool	m <sup>3</sup> /h	0.27	0.4	0.5	0.62	0.72	0.98	1.18	1.4	1.57	
	Heat	m <sup>3</sup> /h	0.23	0.32	0.4	0.51	0.59	0.82	0.96	1.16	1.31	
Pressure drop	Cool	kPa	10.5	15	13	19.5	16	19.5	25	26.5	28	
	Heat	kPa	9	13	11	17	14	17	22	23	25	
Coil connection & drain pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Unit dimension	Without air return box	LxWxH (mm)	624x465x238	814x465x238	864x465x238	944x465x238	1044x465x238	1424x465x238	1474x465x238	1674x465x238	1824x465x238	
	Air return from side		624x510x238	814x510x238	864x510x238	944x510x238	1044x510x238	1424x510x238	1474x510x238	1674x510x238	1824x510x238	
	Air return from bottom		624x492x256	814x492x256	864x492x256	944x492x256	1044x492x256	1424x492x256	1474x492x256	1674x492x256	1824x492x256	
Weight (without plelum / with plelum)		kg	12/14.6	14/16.8	15/18.5	18/21.2	19/23.2	28/32.1	32/36.5	35/39.7	37/42.4	

### Notes:

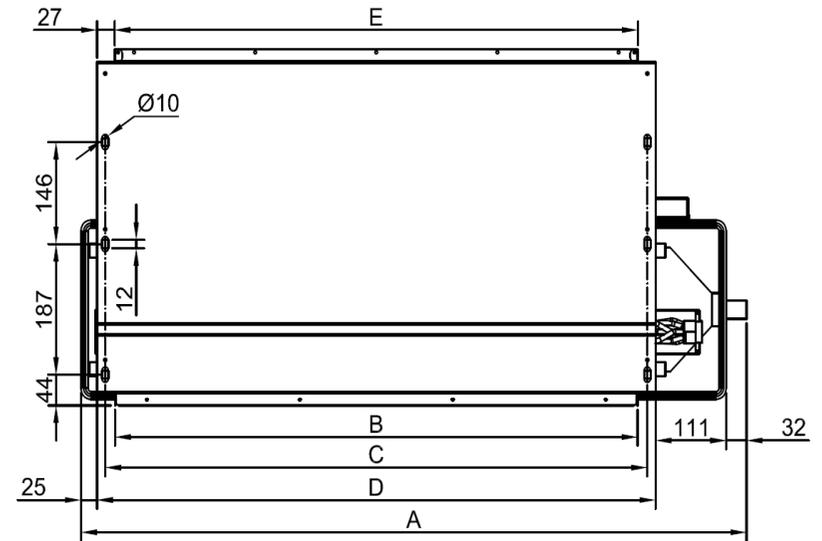
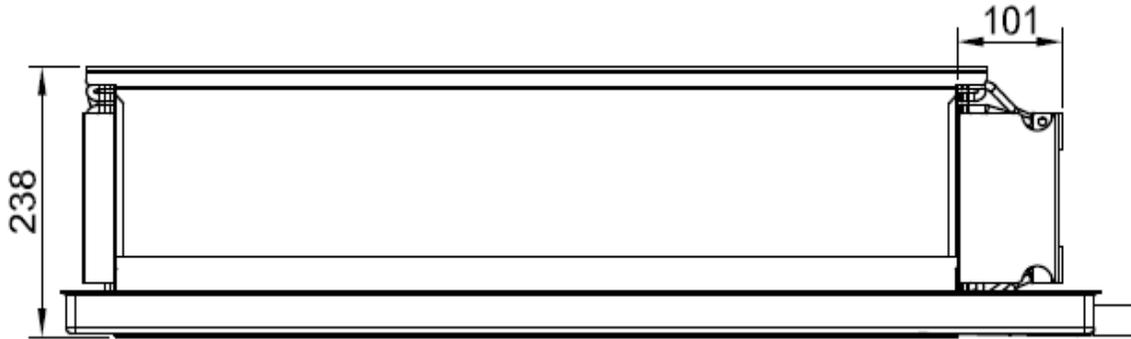
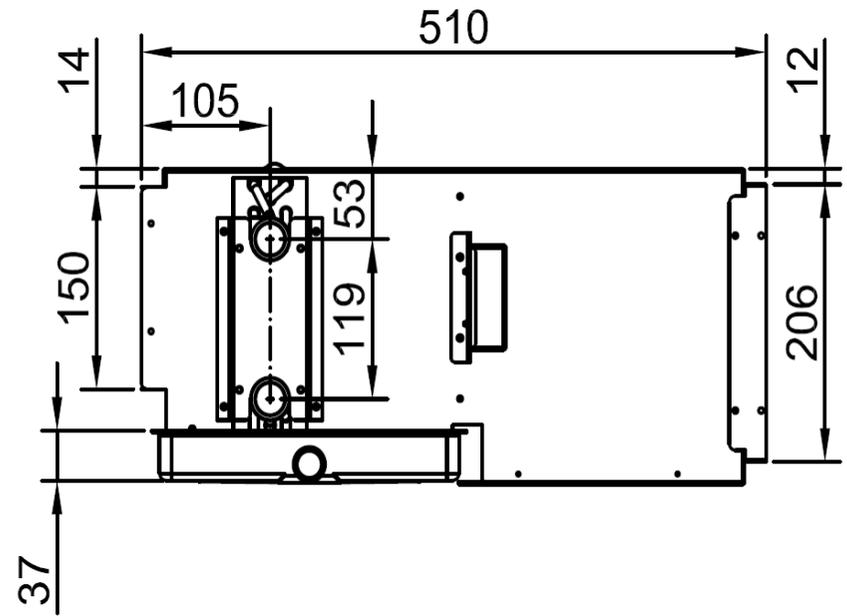
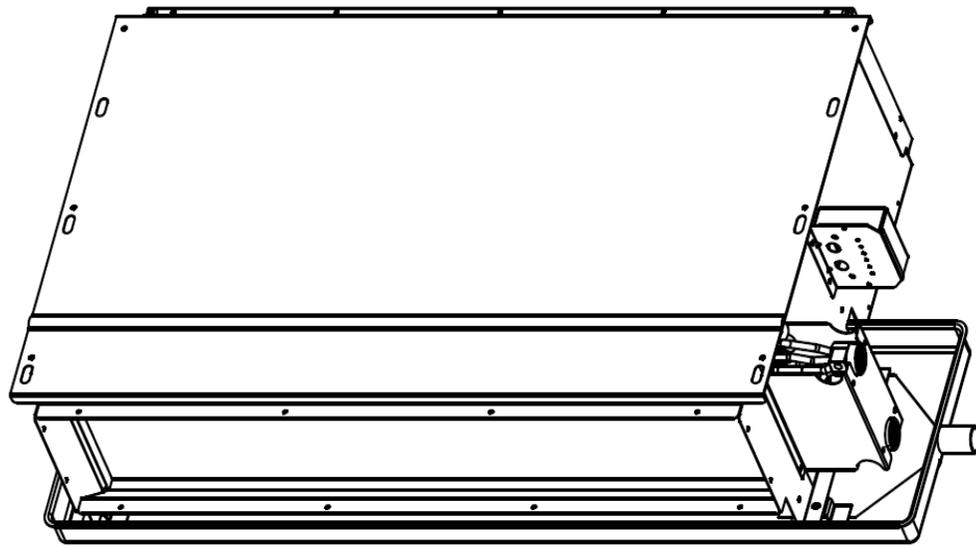
- Cooling condition: indoor DB=27°C(80.6°F), WB=19.5°C(67.1°F), EWT 7°C(44.6°F), temperature difference between EWT and LWT:5°C(41°F).
- Heating condition: Indoor DB=21°C(69.8°F), entering water temperature 60°C(140°F), the same amount of water flow as with cooling.
- Air outlet static pressure of standard model: 0 Pa (with air outlet and filter); or 12 Pa (without air outlet and filter).
- Noise level is tested base on GB/T 19232-2003.
- Air flow rate is tested when FCU operates in a dry state and 20°C(68°F) air inlet dry bulb temperature.
- 4-Row= 2-row chilled water,2-row hot water coil.
- All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

— Installation Dimension (Without plenum) —



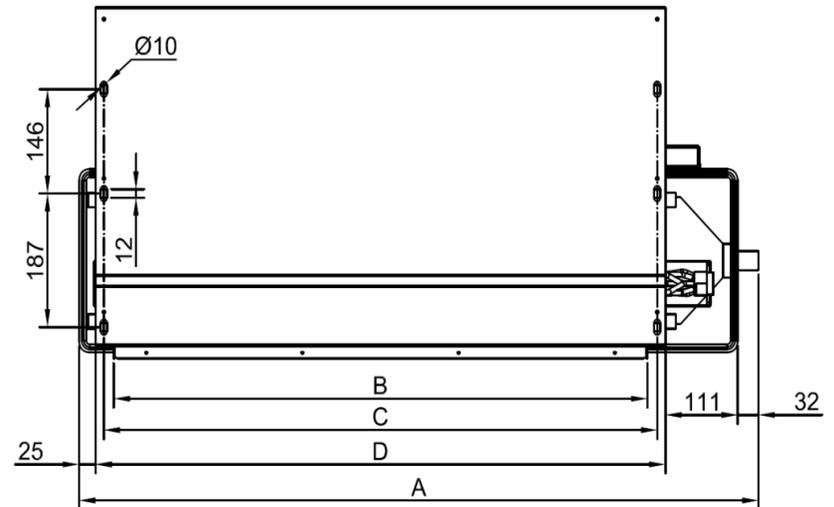
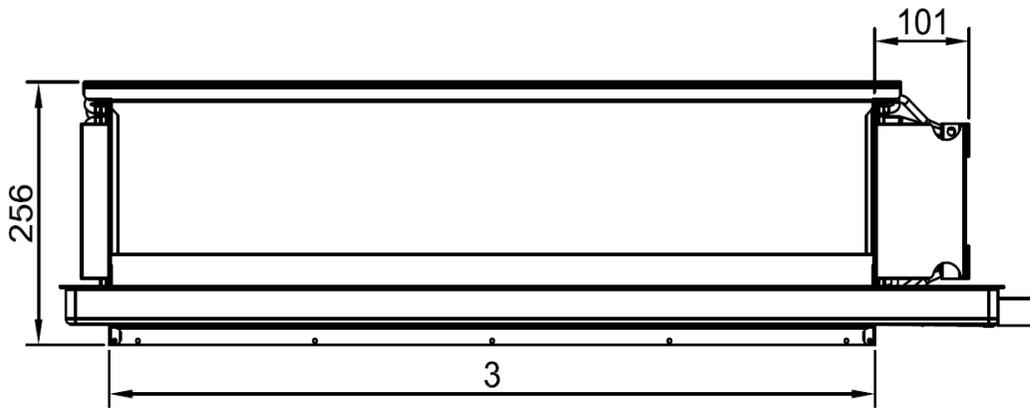
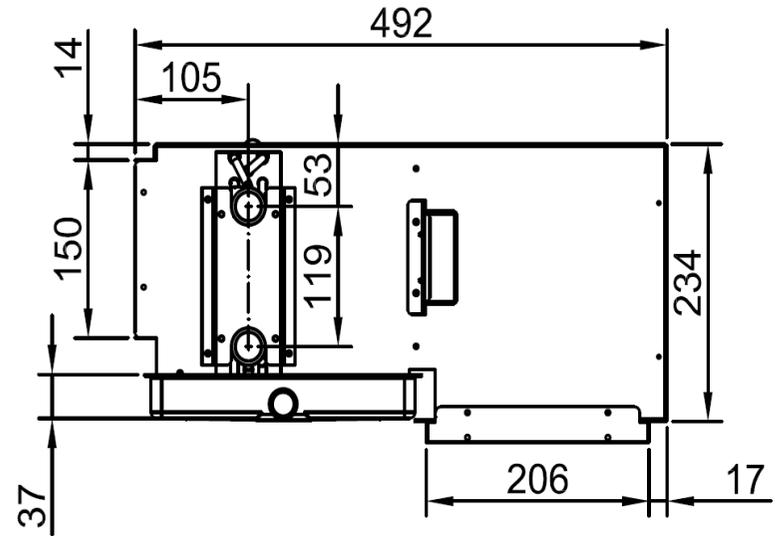
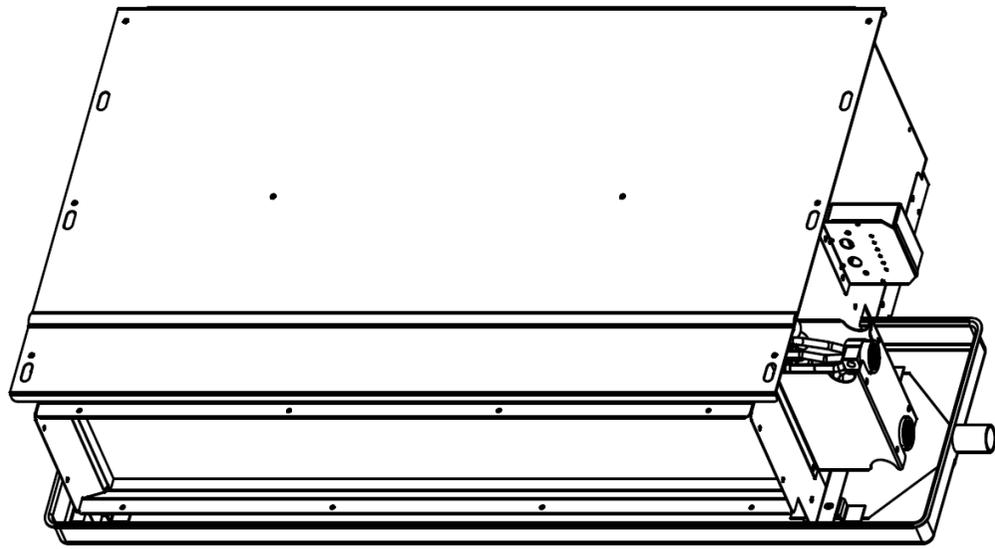
Model (2 pipe series)		W05F-34H2	W05F-51H2	W05F-68H2	W05F-85H2	W05F-102H2	W05F-136H2	W05F-170H2	W05F-204H2	W05F-238H2
Length of FCU	A	624	814	864	944	1044	1424	1474	1674	1824
Length of air outlet	B	400	590	640	720	820	1200	1250	1450	1600
Length of mounting	C	430	620	670	750	850	1230	1280	1480	1630
Length of body	D	456	646	696	776	876	1256	1306	1506	1656

Installation Dimension (With plenum\_air return from side)



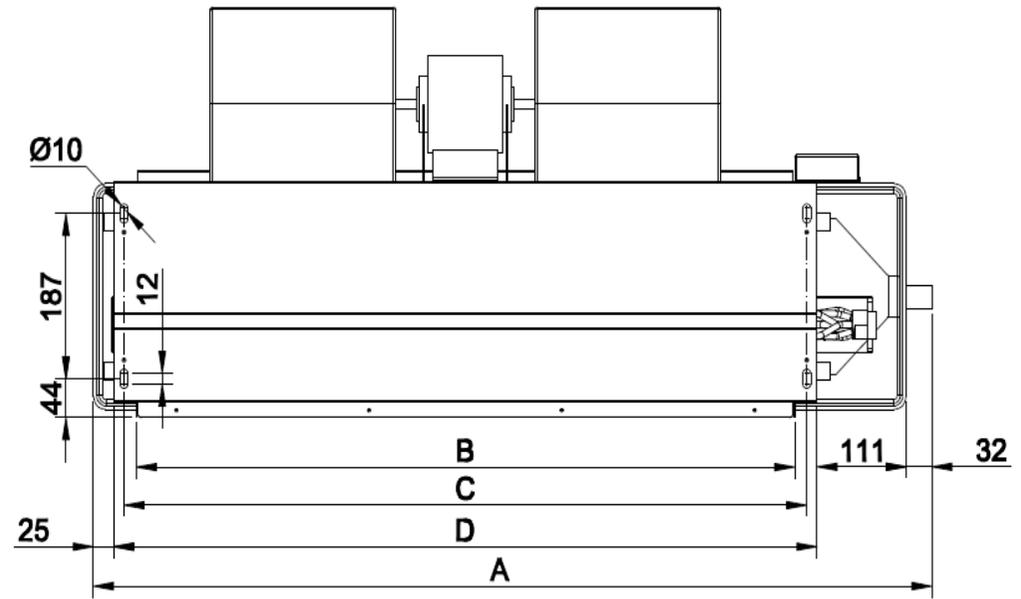
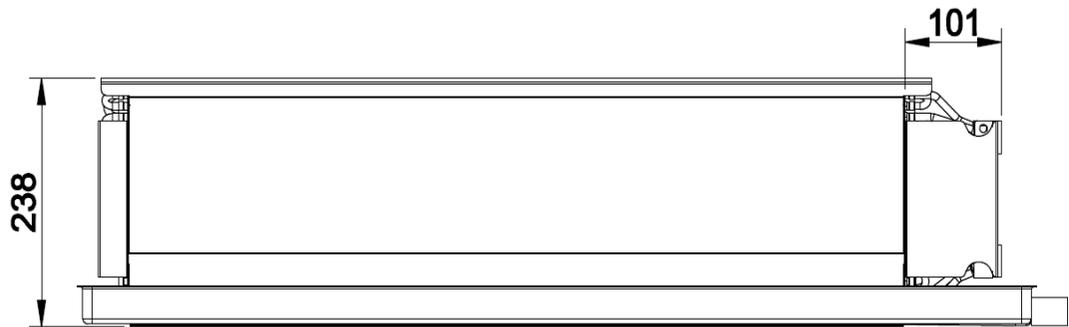
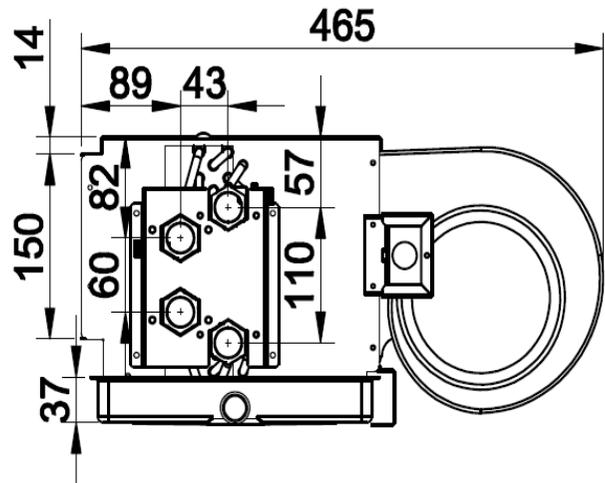
Model (2 pipe series)		W05F-34H2	W05F-51H2	W05F-68H2	W05F-85H2	W05F-102H2	W05F-136H2	W05F-170H2	W05F-204H2	W05F-238H2
Length of FCU	A	624	814	864	944	1044	1424	1474	1674	1824
Length of air outlet	B	400	590	640	720	820	1200	1250	1450	1600
Length of mounting	C	430	620	670	750	850	1230	1280	1480	1630
Length of body	D	456	646	696	776	876	1256	1306	1506	1656
Length of air return	E	491	681	731	811	821	1201	1251	1451	1601

— Installation Dimension (With plenum\_air return from bottom) —



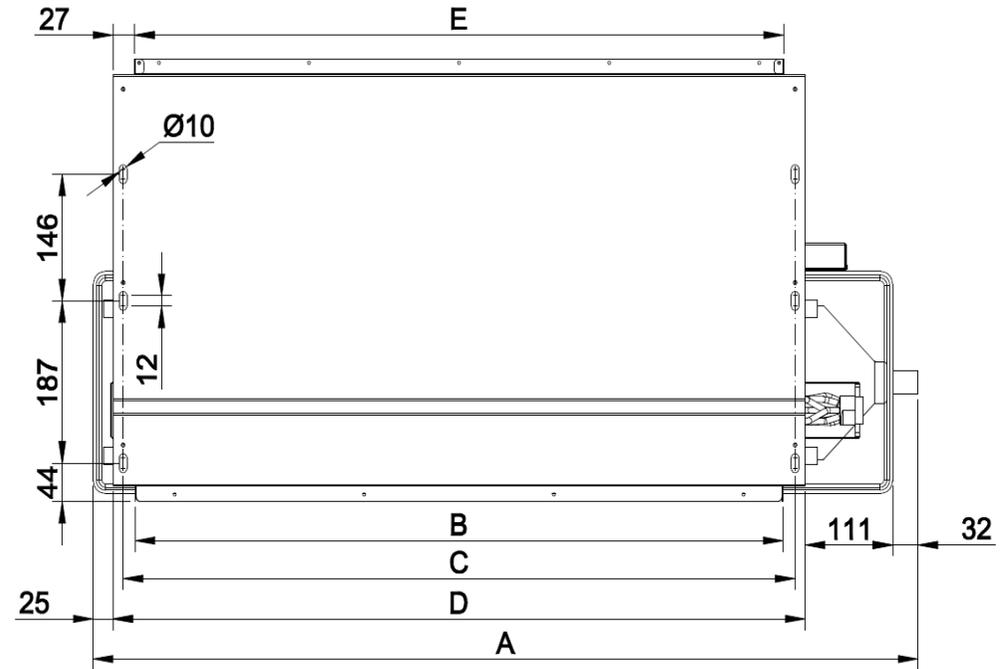
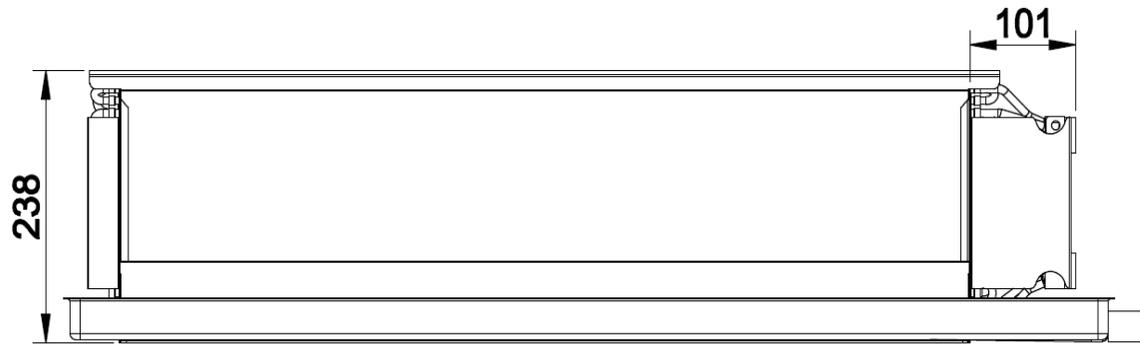
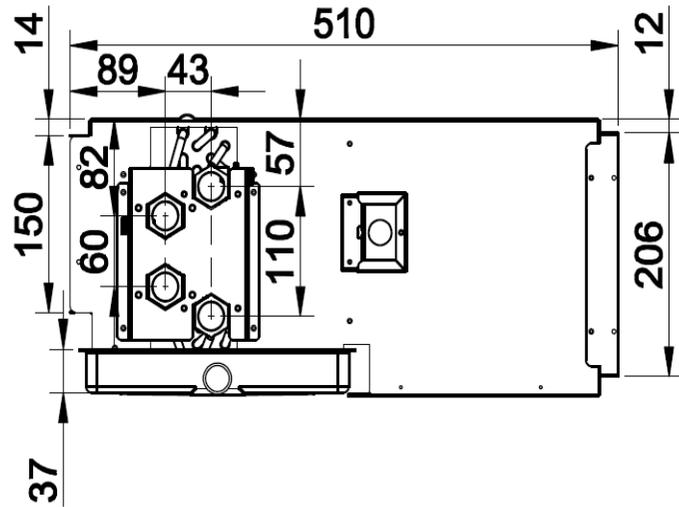
Model (2 pipe series)		W05F-34H2	W05F-51H2	W05F-68H2	W05F-85H2	W05F-102H2	W05F-136H2	W05F-170H2	W05F-204H2	W05F-238H2
Length of FCU	A	624	814	864	944	1044	1424	1474	1674	1824
Length of air outlet	B	400	590	640	720	820	1200	1250	1450	1600
Length of mounting	C	430	620	670	750	850	1230	1280	1480	1630
Length of body	D	456	646	696	776	876	1256	1306	1506	1656
Length of air return	E	491	681	731	811	821	1201	1251	1451	1601

— Installation Dimension (Without plenum) —



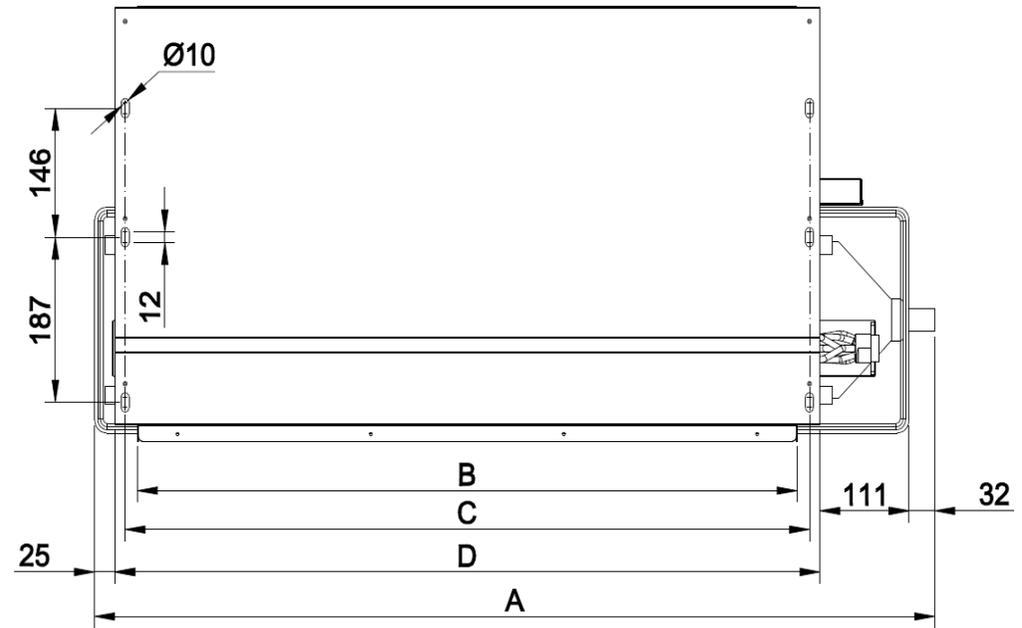
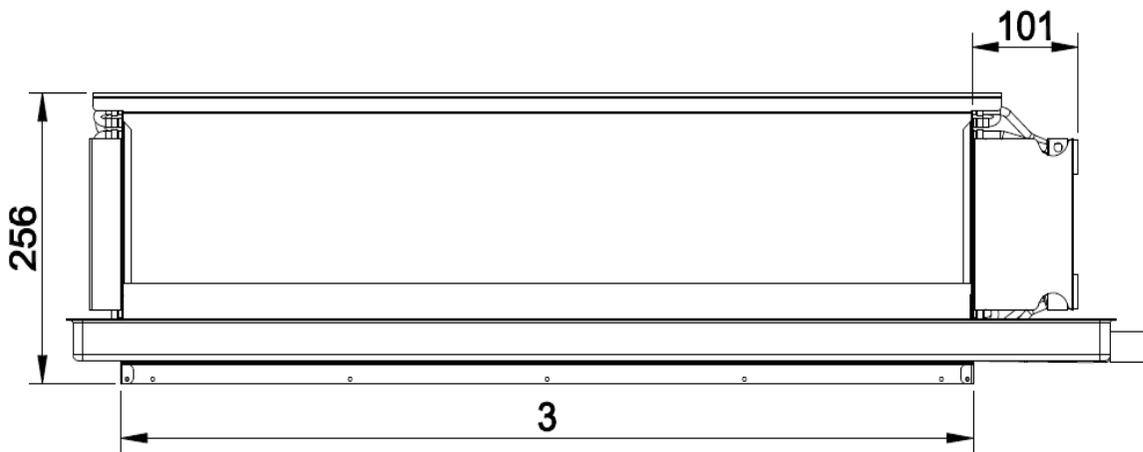
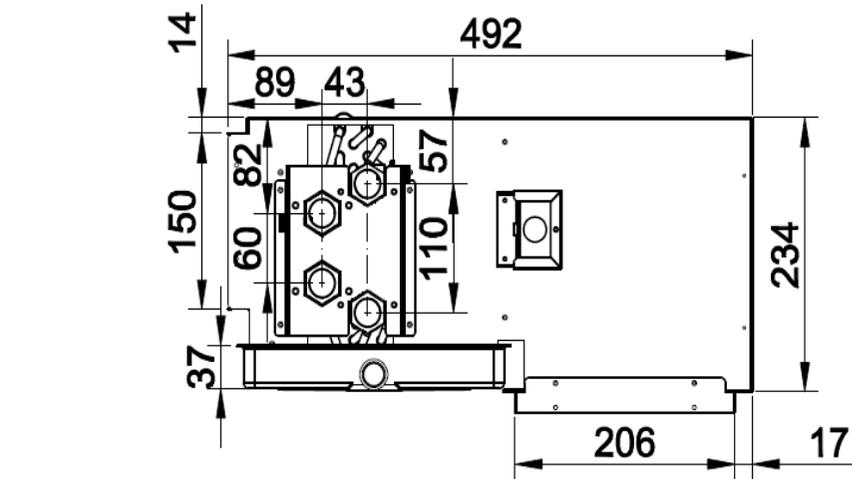
Model (4 pipe series)		W05F-34H4	W05F-51H4	W05F-68H4	W05F-85H4	W05F-102H4	W05F-136H4	W05F-170H4	W05F-204H4	W05F-238H4
Length of FCU	A	624	814	864	944	1044	1424	1474	1674	1824
Length of air outlet	B	400	590	640	720	820	1200	1250	1450	1600
Length of mounting	C	430	620	670	750	850	1230	1280	1480	1630
Length of body	D	456	646	696	776	876	1256	1306	1506	1656

Installation Dimension (With plenum\_air return from side)



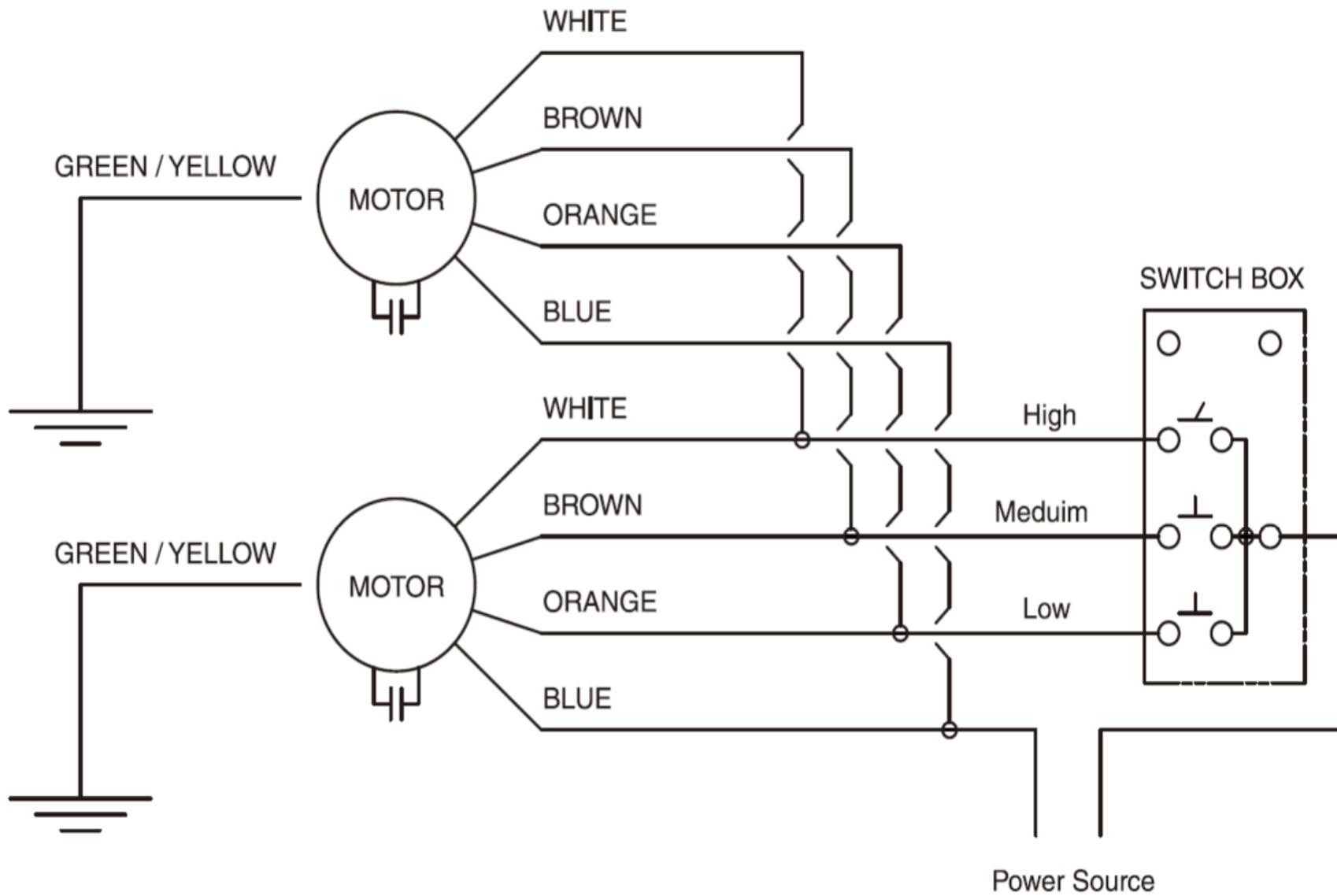
Model (4 pipe series)		W05F-34H4	W05F-51H4	W05F-68H4	W05F-85H4	W05F-102H4	W05F-136H4	W05F-170H4	W05F-204H4	W05F-238H4
Length of FCU	A	624	814	864	944	1044	1424	1474	1674	1824
Length of air outlet	B	400	590	640	720	820	1200	1250	1450	1600
Length of mounting	C	430	620	670	750	850	1230	1280	1480	1630
Length of body	D	456	646	696	776	876	1256	1306	1506	1656
Length of air return	E	491	681	731	811	821	1201	1251	1451	1601

Installation Dimension (With plenum\_air return from bottom)



Model (4 pipe series)		W05F-34H4	W05F-51H4	W05F-68H4	W05F-85H4	W05F-102H4	W05F-136H4	W05F-170H4	W05F-204H4	W05F-238H4
Length of FCU	A	624	814	864	944	1044	1424	1474	1674	1824
Length of air outlet	B	400	590	640	720	820	1200	1250	1450	1600
Length of mounting	C	430	620	670	750	850	1230	1280	1480	1630
Length of body	D	456	646	696	776	876	1256	1306	1506	1656
Length of air return	E	491	681	731	811	821	1201	1251	1451	1601

# Wiring Diagram



**Note: electrical connection should be made to the unit according to local codes and ordinances.**

# Performance Parameter Correction Coefficient Table

Model	Water flow (l/h)	Entering air temperature DB=27°C WB=19.5°C									
		Entering water temperature (°C)									
		5		6		7		8		9	
		TH (W)	SH (W)	TH (W)	SH (W)	TH (W)	SH (W)	TH (W)	SH (W)	TH (W)	SH (W)
W05F-34	294	2124	1379	1992	1365	1859	1328	1724	1277	1595	1208
	352	2328	1473	2183	1436	2037	1405	1890	1349	1748	1285
	412	2523	1558	2380	1506	2220	1480	2059	1420	1905	1361
W05F-51	375	2792	2095	2634	1975	2462	1847	2283	1778	2117	1709
	465	3062	2297	2889	2167	2700	2026	2504	1908	2323	1834
	558	3215	2412	3033	2276	2835	2127	2626	2045	2435	1966
W05F-68	496	3726	2795	3515	2637	3285	2464	3047	2369	2826	2227
	645	4083	3063	3852	2890	3600	2701	3340	2597	3098	2497
	745	4290	3218	4047	3036	3782	2837	3508	2631	3254	2441
W05F-85	620	4657	3494	4393	3296	4106	3080	3809	2961	3527	2847
	790	5104	3829	4815	3612	4500	3376	4174	3131	3872	2905
	929	5411	4059	5105	3830	4771	3579	4425	3441	4105	3337
W05F-102	742	5588	4192	5272	3955	4927	3696	4570	3553	4240	3417
	935	6125	4595	5778	4335	5400	4051	5010	3895	4646	3745
	1114	6553	4916	6182	4638	5778	4335	5360	4016	4972	3846
W05F-136	990	7451	5209	7029	5211	6569	4931	6118	4731	5675	4478
	1250	8166	5493	7704	5481	7200	5218	6679	4999	6195	4761
	1486	8657	5678	8167	5709	7633	5397	7081	5179	6568	4963
W05F-170	1238	9314	6712	8787	6717	8212	6356	7617	6097	7066	5598
	1550	10208	7078	9630	7064	9000	6726	8348	6444	7744	6135
	1858	10923	7319	10305	7360	9631	6957	8934	6676	8287	6419
W05F-204	1486	11176	8147	10544	8150	9854	7711	9141	7397	8480	7112
	1857	12249	8589	11556	8570	10800	8160	10018	7817	9293	7444
	2228	13142	9013	12398	8964	11587	8519	10748	8175	9970	7833
W05F-238	1490	12545	9973	11844	9594	10932	9074	10233	8596	9371	7965
	2230	14821	10227	13799	9728	12600	9080	11965	8734	11196	8397
	2980	16060	10760	15033	10222	14267	9916	13224	9389	12196	8781

Model	Water flow (l/h)	Entering air temperature 21°C									
		Entering water temperature (°C)									
		40	45	50	55	60	65	70	75	80	
W05F-34	294	1584	1996	2415	2832	3243	3654	4093	4495	4911	
	352	1684	2105	2548	2982	3405	3837	4278	4697	5128	
	412	1718	2165	2620	3070	3507	3956	4411	4843	5288	
W05F-51	375	2296	2870	3473	4064	4653	5249	5853	6426	7018	
	465	2407	3009	3640	4267	4886	5511	6144	6746	7366	
	558	2480	3100	3751	4396	5033	5677	6330	6951	7591	
W05F-68	496	3162	3954	4824	5654	6491	7321	8164	8964	9789	
	620	3343	4179	5057	5926	6804	7674	8557	9396	10242	
	745	3425	4316	5222	6120	7008	7906	8815	9670	10541	
W05F-85	620	3960	4950	5990	7020	8045	9076	10120	11101	12067	
	775	4095	5160	6295	7379	8448	9529	10625	11656	12670	
	929	4251	5355	6480	7594	8703	9817	10946	12008	13065	
W05F-102	742	4584	5729	6933	8111	9295	10485	11690	12824	13953	
	930	4764	6004	7264	8500	9741	10987	12250	13439	14648	
	1114	4902	6176	7473	8758	10037	11322	12625	13850	15096	
W05F-136	990	5852	7374	8922	10439	11963	13495	15047	17332	17967	
	1239	6145	7743	9368	10961	12562	14170	15799	17851	18874	
	1486	6314	7955	9625	11291	12939	14595	16237	19513	19457	
W05F-170	1238	7498	9448	11526	13486	15455	17433	19437	22347	23242	
	1548	7916	9975	12069	14121	16197	18270	20371	23016	24358	
	1858	8147	10265	12421	14557	16682	18817	20981	26877	25110	
W05F-204	1486	9155	11534	13957	16358	18746	21145	23576	23823	28216	
	1857	9609	12108	14651	17142	19645	22160	24707	27103	29570	
	2228	9907	12483	15104	17673	20235	22804	25427	27893	30431	
W05F-238	1490	8968	113534	13857	16258	18746	21145	23676	26123	28616	
	2230	9609	12108	14751	17342	20040	22660	25107	27803	30570	
	2980	12607	12683	15204	17973	20635	23304	26027	28793	31531	

In the table above, the capacity value is the parameter at high speed;the capacity value at medium & low air speed is the parameter multiplied by the correction factor.

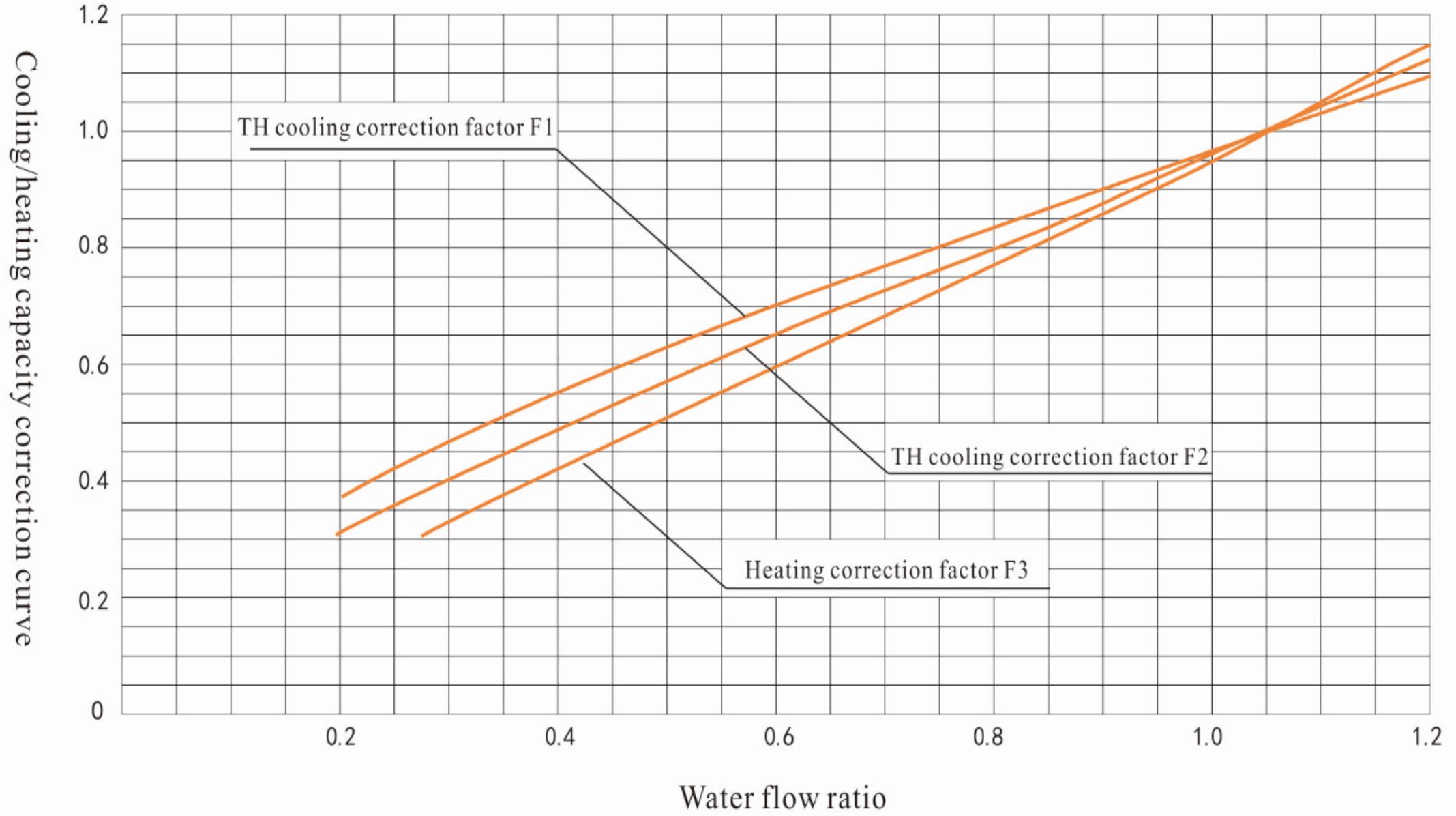
### Cooling performance correction coefficient table

Model		W05F-34	W05F-51	W05F-68	W05F-85	W05F-102	W05F-136	W05F-170	W05F-204
Mid speed	TH	0.89	0.90	0.89	0.89	0.90	0.89	0.90	0.91
	SH	0.86	0.86	0.87	0.87	0.86	0.86	0.87	0.87
Low speed	TH	0.77	0.76	0.76	0.76	0.77	0.77	0.75	0.75
	SH	0.72	0.72	0.73	0.73	0.75	0.75	0.74	0.74

### Heating performance correction coefficient table

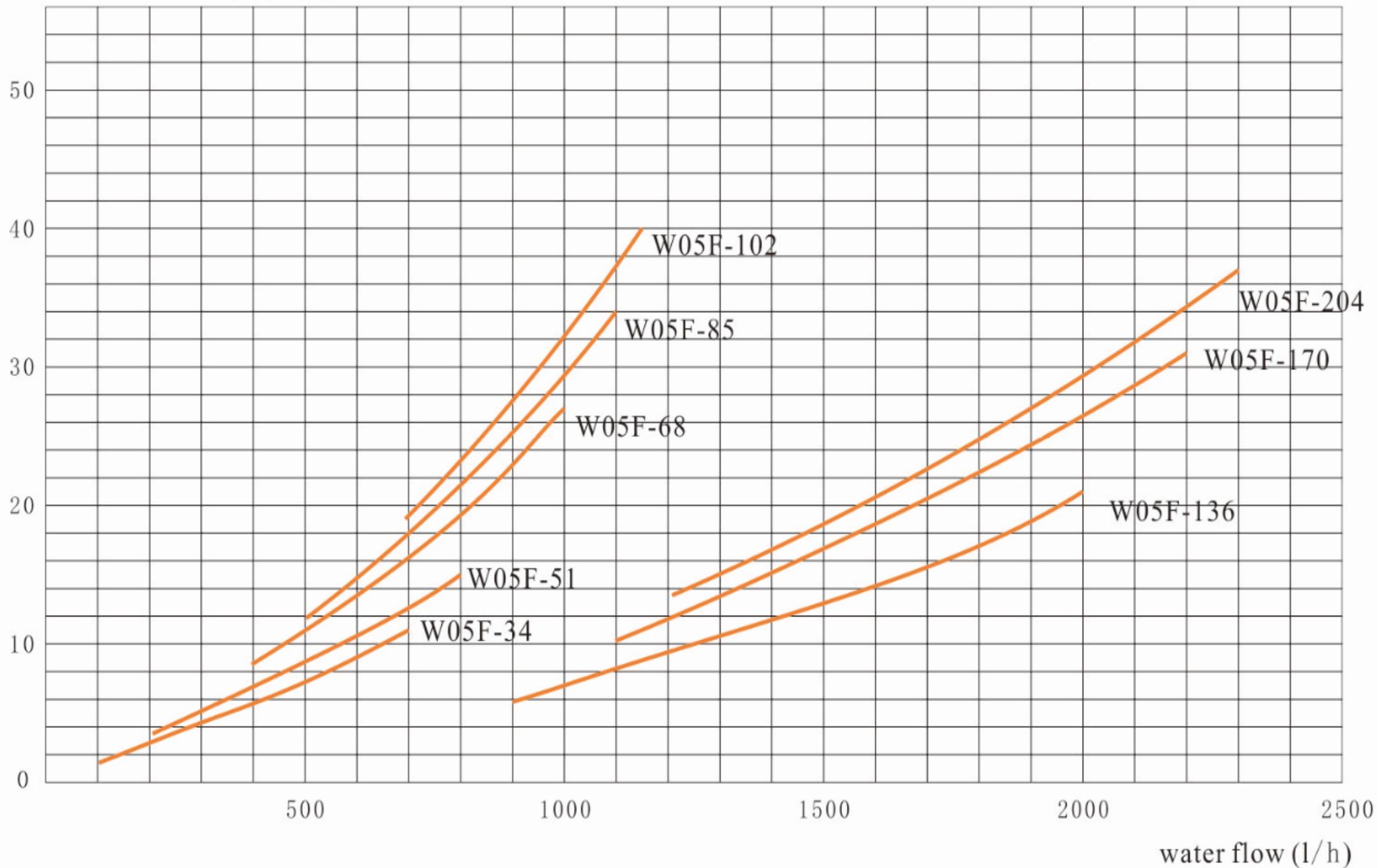
Mode	W05F-34	W05F-51	W05F-68	W05F-85	W05F-102	W05F-136	W05F-170	W05F-204
Mid speed	0.84	0.86	0.87	0.87	0.87	0.86	0.85	0.85
Low speed	0.74	0.75	0.84	0.75	0.75	0.76	0.74	0.74

### Cooling/heating capacity correction curve

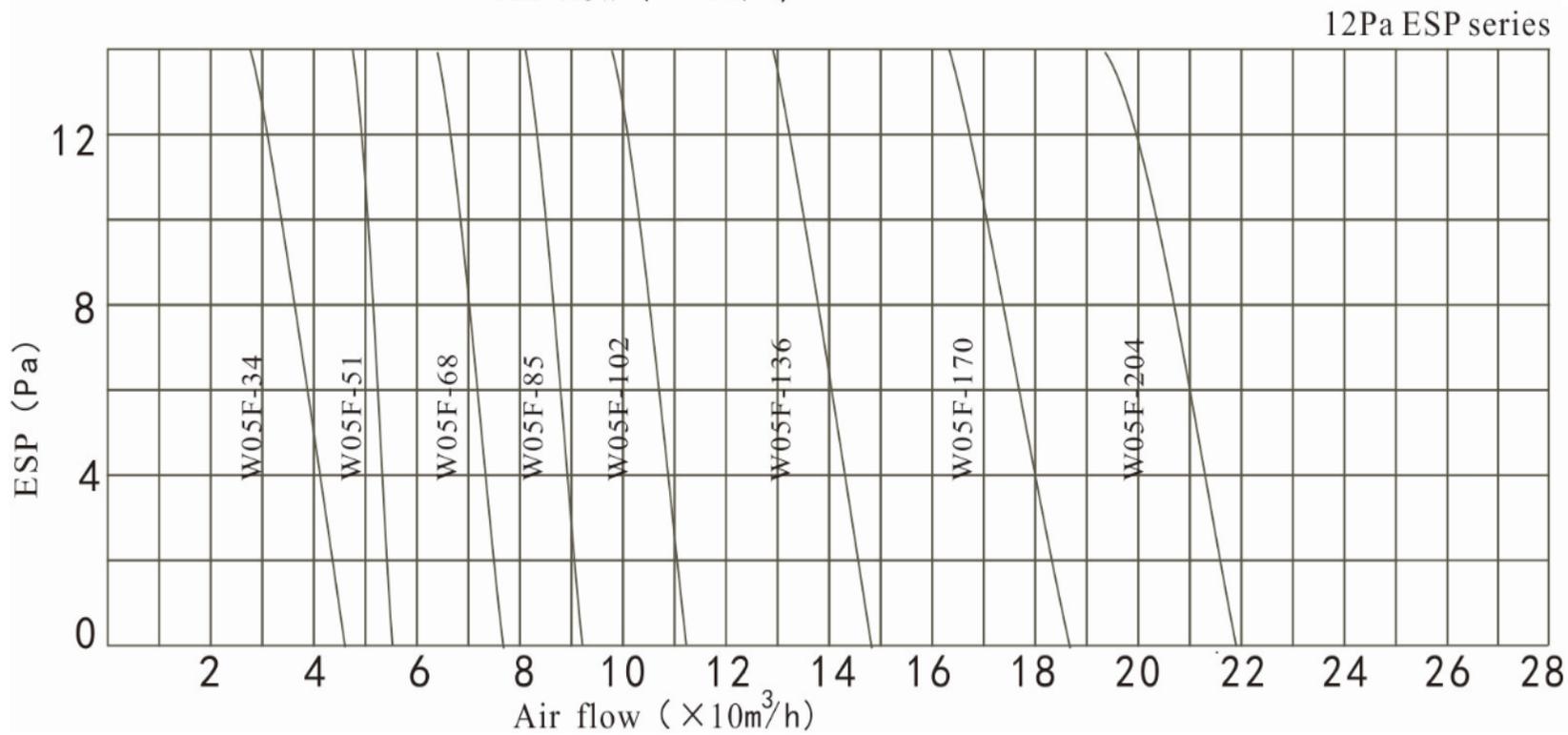
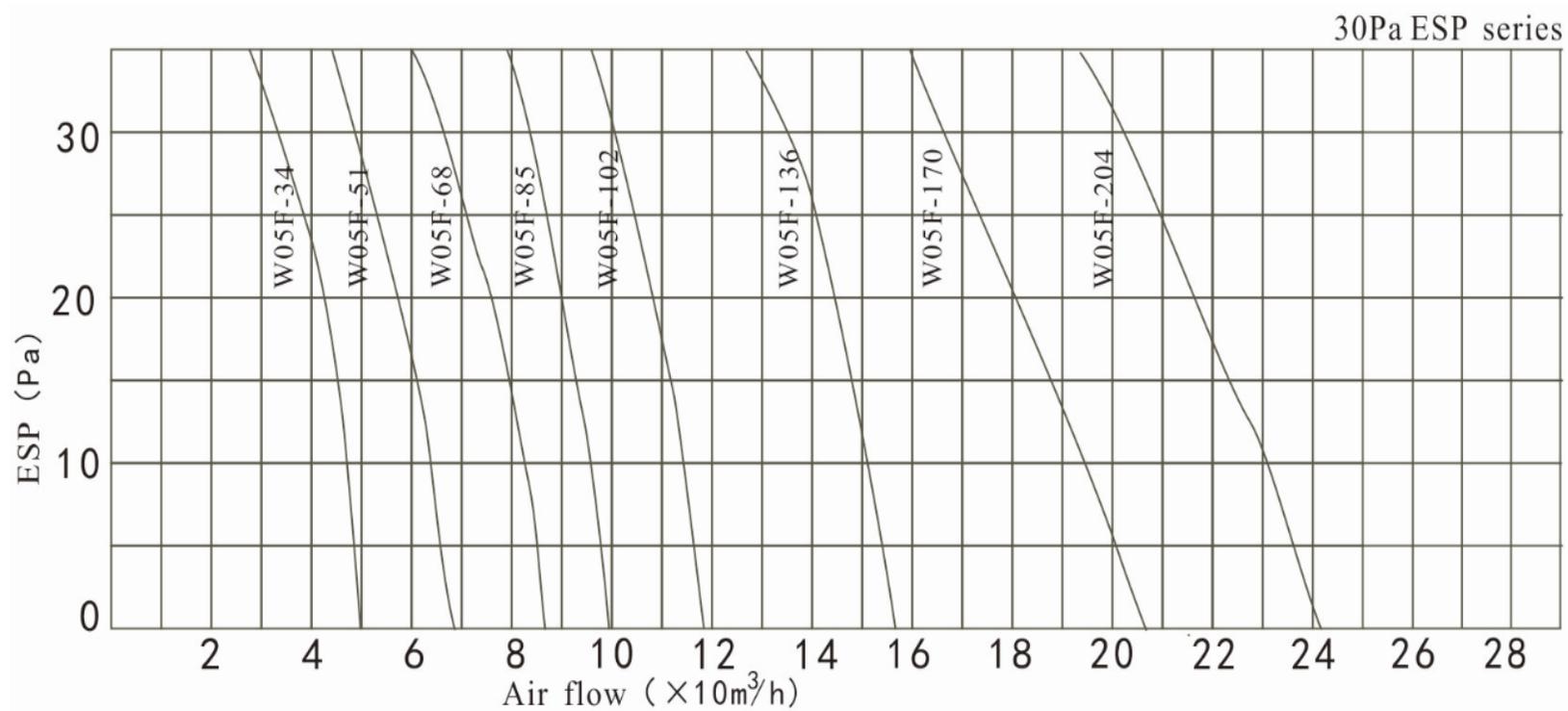


— Pressure Drop Performance Curve —

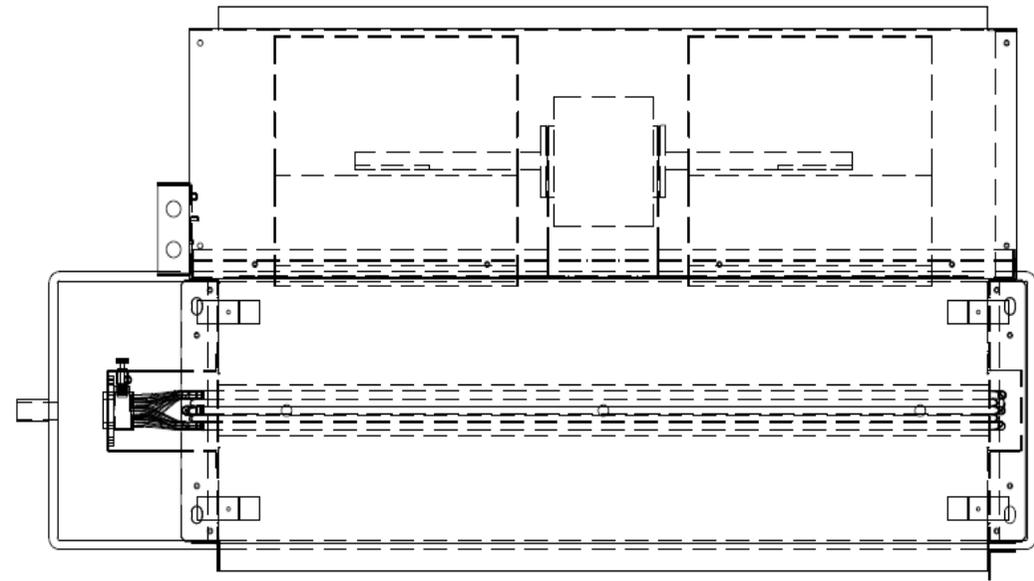
Pressure drop (kPa)



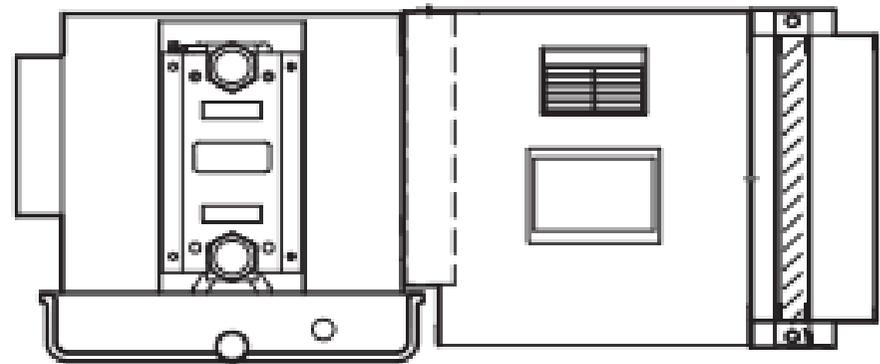
— Pressure Drop Performance Curve —



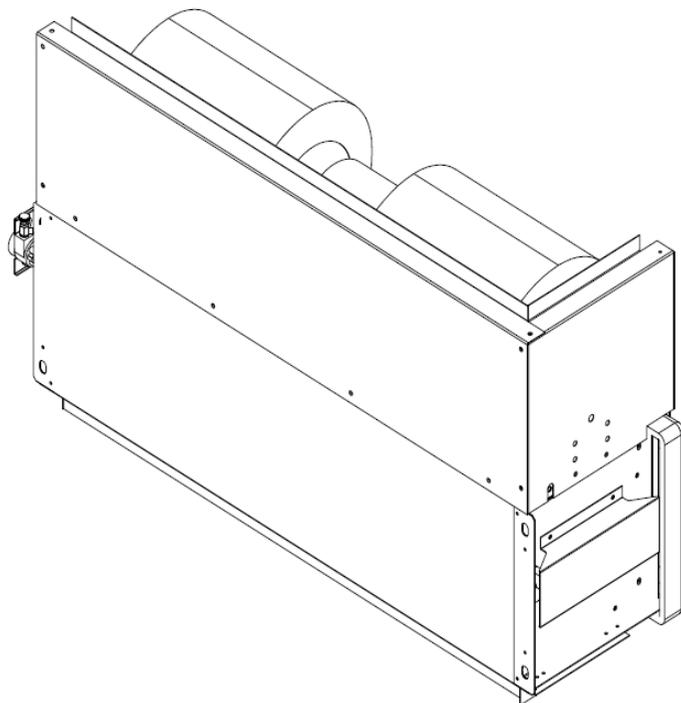
— View of Horizontal Fan Coil Unit (two-pipe) —



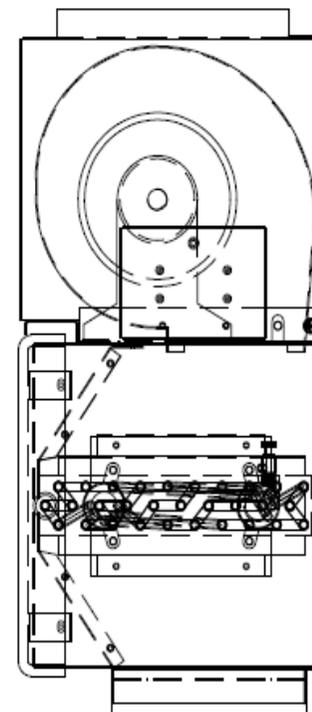
**Top View**



**Plenum Back with Filter**

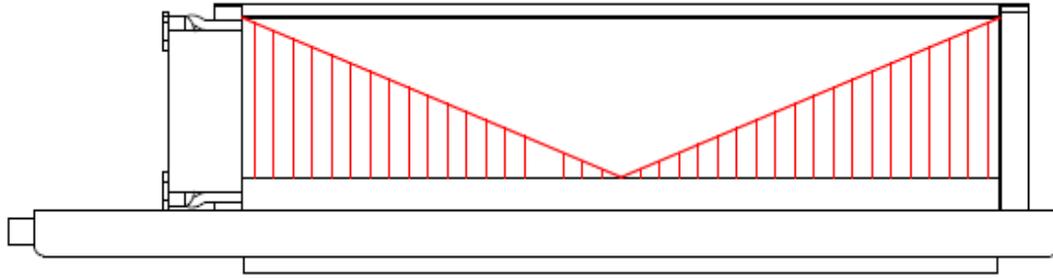


**Front View**

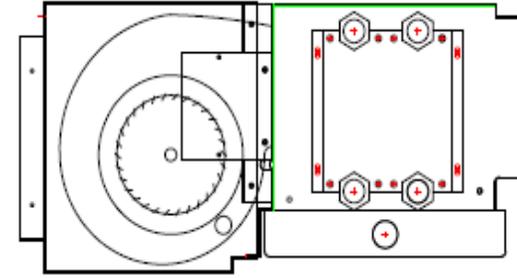


**Side View**

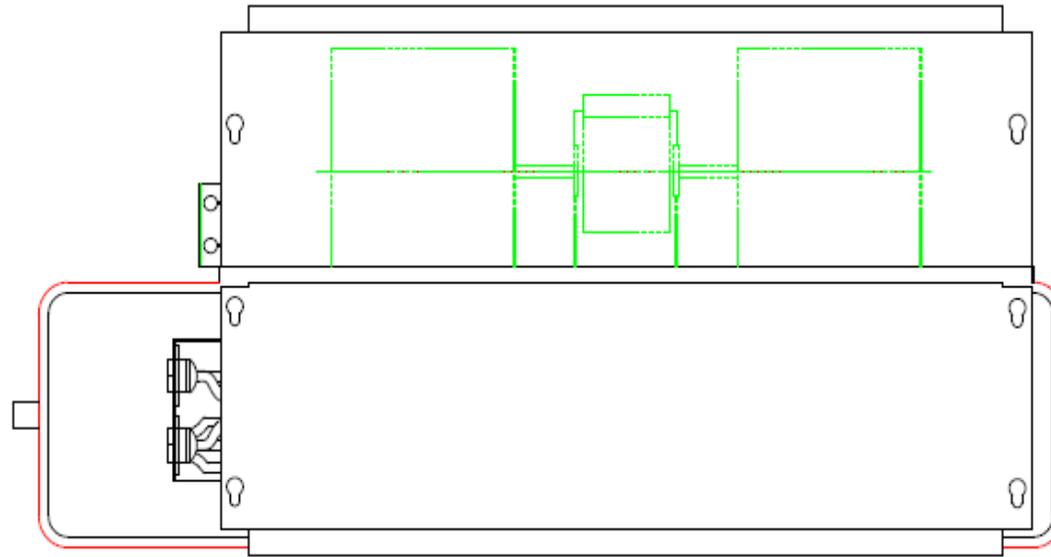
— View of Horizontal Fan Coil Unit (four-pipe) —



**Front View**



**Side View**



**Top View**



### — Characteristic —

**1. 200mm Slim design, beautiful looking, save the space of ceiling**

The fan coil is only 200mm thickness, which is suitable to be installed in a height-limited ceiling;

**2. Left/Right pipe connection direction as option**

The water pipe connection direction can be customized, it will benefit to shorten the installation cost;

**3. Air return box is standard, and air direction can be exchanged between side return and bottom return**

No need to add any material, it is easy to change the fan coil air return direction from side to bottom or from bottom to side;

**4. Use plastic fan, which can offer softer air flowing and reduce the noise level**

**5. Air volume range is from 300CFM to 800CFM (510~1360m<sup>3</sup>/h), which is fully satisfied to the necessary of home use**

**6. High efficiency**

Adopt good quality heat exchanger and fan motor, which is beneficial to the heat exchanging capacity and efficiency;

**7. Drain pump as option**

A 750mm lift drain pump is optional to be built-in the fan coil unit, the controlling of drain pump is also built-in;

Water float switch is standard for the FCU which built-in drain pump, to prevent the leaking of draining;

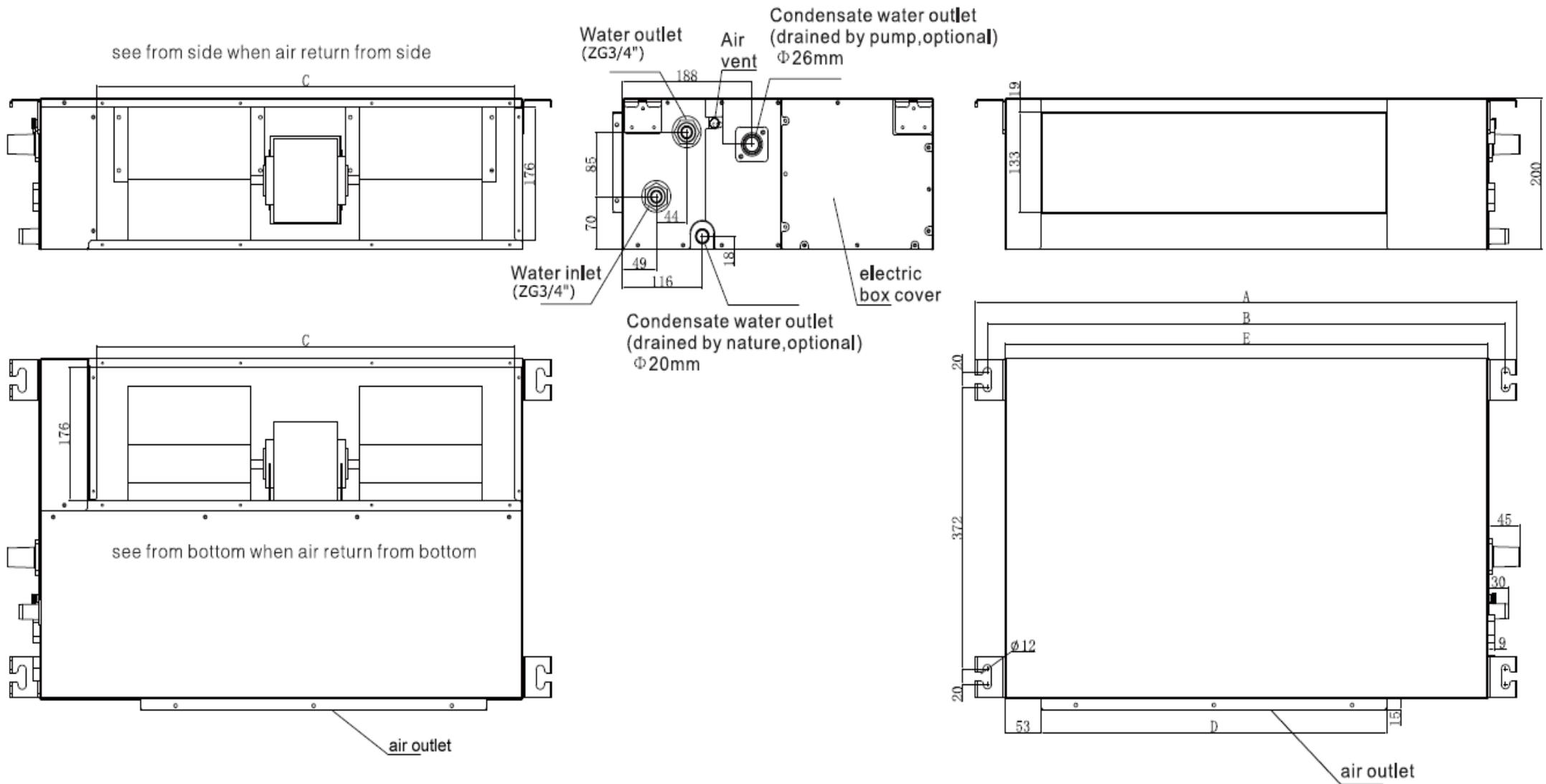
## Slim Style (Ultra thin) Ceiling Concealed Horizontal Duct Fan Coil Unit (two-pipe system )

Model		W05F-	34H2-3B	51H2-3B	60H2-3B	68H2-3B	85H2-3B	102H2-3B	120H2-3B	
Power supply		AC 208~230V/1Ph/50Hz (60Hz as option)								
Air flow	High speed	m <sup>3</sup> /h	340	510	600	680	850	1020	1200	
	Middle speed	m <sup>3</sup> /h	250	380	450	515	660	765	900	
	Low speed	m <sup>3</sup> /h	170	260	300	340	430	530	600	
Static pressure		Pa	12	12	12	12	12	12	12	
Cooling capacity	TH	High speed	W	200	2500	3100	4000	5000	5600	6300
			SH	W	1490	1863	2310	2980	3725	4172
	TH	Middle speed	W	1620	2025	2511	3240	4050	4536	5103
			SH	W	1280	1600	1984	2560	3200	3583
	TH	Low speed	W	1260	1575	1953	2520	3150	3528	3969
			SH	W	1033	1292	1601	2066	2583	2893
Heating capacity	High speed		W	3200	4100	5000	6500	8100	9100	10200
	Middle speed		W	2464	3157	3850	5005	6237	7007	7854
	Low speed		W	1936	2481	3025	3933	4901	5506	6171
Noise level	High speed		dB(A)	31	37	40	40	43	43	46
Power input	High speed		W	35	50	55	60	70	90	110
Coil		High efficient copper pipe to wear Hydrophilic aluminum coil; Working pressure 1.6MPa								
Fan		Centrifugal fan (forward curved galvanized steel fan wheel); Galvanized steel fan housing								
Motor		AC motor; The motor insulation system shall be Class E								
Water flow rate		m <sup>3</sup> /h	0.34	0.43	0.53	0.68	0.85	0.95	1.07	
Pressure drop		kPa	14	21	26	25	28	35	38	
Coil connection & drain pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Unit dimension (L×W×H)		mm	700×465×200	700×465×200	700×465×200	900×465×200	900×465×200	1100×465×200	1100×465×200	
Weight		kg	16	17	18	19	20	24	26	

### Notes:

- Cooling condition: indoor DB=27°C(80.6°F), WB=19.5°C(67.1°F), EWT 7°C(44.6°F), temperature difference between EWT and LWT:5°C(41°F).
- Heating condition: Indoor DB=21°C(69.8°F), entering water temperature 60°C(140°F), the same amount of water flow as with cooling.
- Air outlet static pressure of standard model: 0 Pa (with air outlet and filter); or 12 Pa (without air outlet and filter).
- Noise level is tested base on GB/T 19232-2003.
- Air flow rate is tested when FCU operates in a dry state and 20°C(68°F) air inlet dry bulb temperature.
- 3-Row= 3-row chilled water/hot water coil.
- All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

# Installation Dimension



Model	34H2-3B	51H2-3B	60H2-3B	68H2-3B	85H2-3B	102H2-3B	120H2-3B
A	784	784	784	984	984	1184	1184
B	750	750	750	950	950	1150	1150
C	605	605	605	805	805	1005	1005
D	500	500	500	700	700	900	900
E	700	700	700	900	900	1100	1100

## High Static Pressure Ceiling Concealed Horizontal Ducted Type Fan Coil Unit



### —— Characteristic ——

**1. Classical elegant design**

No-spangle galvanized sheet, beautiful appearance;

**2. High static pressure, long distance air supply**

The static pressure is Maximum 200Pa and Minmum 80Pa

**3. Big diameter fan, large air volume with low noise**

**4. Electric heater as option**

**5. Fresh air can be input from outside**

## High Static Pressure Ceiling Concealed Horizontal Ducted Type Fan Coil Unit (two-pipe system )

Model		W05F-	136H2-3G	170H2-3G	204H2-3G	238H2-3G	272H2-3G	306H2-3G	340H2-3G	408H2-3G	
Power supply		AC 208~230V/1Ph/50Hz (60Hz as option)									
Air flow	High speed	m <sup>3</sup> /h	1360	1700	2040	2380	2720	3060	3400	4080	
	Middle speed	m <sup>3</sup> /h	1090	1360	1635	1900	2180	2450	2720	3260	
	Low speed	m <sup>3</sup> /h	815	1020	1225	1430	1630	1830	2040	2450	
Static pressure		Pa	120	120	120	120	120	120	120	120	
Cooling capacity	TH	High speed	W	7200	9000	10800	12600	14400	16200	18000	21600
			SH	W	5350	6650	8046	9350	10650	12000	13350
	TH	Middle speed	W	5450	6800	8150	9500	10850	12250	13600	16300
			SH	W	3900	4900	5850	6850	7800	8800	9800
	TH	Low speed	W	4200	5250	6300	7350	8400	9450	10500	12600
			SH	W	2950	3700	4450	5200	5950	6650	7400
Heating capacity	High speed		W	10800	13500	16200	18900	21600	24300	27000	32400
	Middle speed		W	8200	10250	12400	14350	16400	18450	20500	24600
	Low speed		W	7000	8800	10550	12300	14050	15800	17550	21050
Noise level	High speed		dB(A)	50	51	52	54	54	56	56	57
Power input	High speed		W	380	420	450	520	550	880	900	1100
Coil		High efficient copper pipe to wear Hydrophilic aluminum coil; Working pressure 1.6MPa									
Fan		Centrifugal fan (forward curved galvanized steel fan wheel); Galvanized steel fan housing									
Motor		AC motor; The motor insulation system shall be Class E									
Water flow rate		m <sup>3</sup> /h	1.23	1.54	1.85	2.16	2.46	2.77	3.08	3.7	
Pressure drop		kPa	25	28	30	35	36	42	43	50	
Coil connection pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Condensing water pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Unit dimension (LxWxH)		mm	970x760x425	1050x760x425	1050x760x425	1190x760x425	1190x760x425	1380x760x425	1380x760x425	1640x760x425	
Weight		kg	47	49	50	54	57	60	65	82	

### Notes:

- Cooling condition: indoor DB=27°C (80.6°F), WB=19.5°C (67.1°F), EWT 7°C (44.6°F), temperature difference between EWT and LWT:5°C (41°F).
- Heating condition: Indoor DB=21°C (69.8°F), entering water temperature 60°C (140°F), the same amount of water flow as with cooling.
- Air outlet static pressure of standard model: 0 Pa (with air outlet and filter); or 12 Pa (without air outlet and filter).
- Noise level is tested base on GB/T 19232-2003.
- Air flow rate is tested when FCU operates in a dry state and 20°C (68°F) air inlet dry bulb temperature.
- 3-Row= 3-row chilled water/hot water coil.
- All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

# High Static Pressure Ceiling Concealed Horizontal Ducted Type Fan Coil Unit (four-pipe system )

Model		W05F-	136H4-3G	170H4-3G	204H4-3G	238H4-3G	272H4-3G	306H4-3G	340H4-3G	408H4-3G	
Power supply		AC 208~230V/1Ph/50Hz (60Hz as option)									
Air flow	High speed	m <sup>3</sup> /h	1360	1700	2040	2380	2720	3060	3400	4080	
	Middle speed	m <sup>3</sup> /h	1090	1360	1635	1900	2180	2450	2720	3260	
	Low speed	m <sup>3</sup> /h	815	1020	1225	1430	1630	1830	2040	2450	
Static pressure		Pa	120	120	120	120	120	120	120	120	
Cooling capacity	TH	High speed	W	7200	9000	10800	12600	14400	16200	18000	21600
			SH	W	5350	6650	8046	9350	10650	12000	13350
	TH	Middle speed	W	5450	6800	8150	9500	10850	12250	13600	16300
			SH	W	3900	4900	5850	6850	7800	8800	9800
	TH	Low speed	W	4200	5250	6300	7350	8400	9450	10500	12600
			SH	W	2950	3700	4450	5200	5950	6650	7400
Heating capacity	High speed		W	10800	13500	16200	18900	21600	24300	27000	32400
	Middle speed		W	8200	10250	12400	14350	16400	18450	20500	24600
	Low speed		W	7000	8800	10550	12300	14050	15800	17550	21050
Noise level	High speed		dB(A)	50	51	52	54	54	56	56	57
Power input	High speed		W	380	420	450	520	550	880	900	1100
Coil		High efficient copper pipe to wear Hydrophilic aluminum coil; Working pressure 1.6MPa									
Fan		Centrifugal fan (forward curved galvanized steel fan wheel); Galvanized steel fan housing									
Motor		AC motor; The motor insulation system shall be Class E									
Water flow rate	Chilled pipe	m <sup>3</sup> /h	1.23	1.54	1.85	2.16	2.46	2.77	3.08	3.7	
	Hot water pipe	m <sup>3</sup> /h	0.53	0.66	0.79	0.92	1.06	1.19	1.32	1.58	
Pressure drop	Chilled pipe	kPa	25	28	30	35	36	42	43	50	
	Hot water pipe	kPa	12	12	14	17	18	21	22	27	
Coil connection pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Condensing water pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Unit dimension (L×W×H)		mm	970×760×425	1050×760×425	1050×760×425	1190×760×425	1190×760×425	1380×760×425	1380×760×425	1640×760×425	
Weight		kg	47	49	50	54	55	60	61	80	

## Notes:

- Cooling condition: indoor DB=27°C(80.6°F), WB=19.5°C(67.1°F), EWT 7°C(44.6°F), temperature difference between EWT and LWT:5°C(41°F).
- Heating condition: Indoor DB=21°C(69.8°F), entering water temperature 60°C(140°F), the same amount of water flow as with cooling.
- Air outlet static pressure of standard model: 0 Pa (with air outlet and filter); or 12 Pa (without air outlet and filter).
- Noise level is tested base on GB/T 19232-2003.
- Air flow rate is tested when FCU operates in a dry state and 20°C(68°F) air inlet dry bulb temperature.
- 3-Row= 3-row chilled water/hot water coil.
- All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

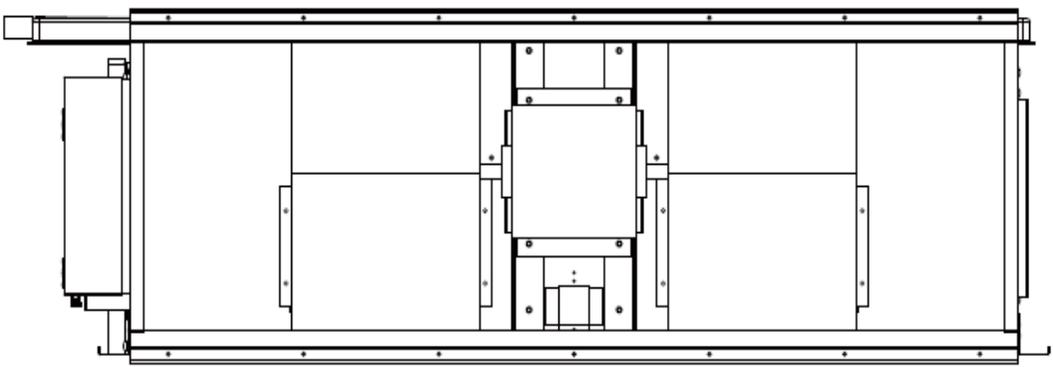
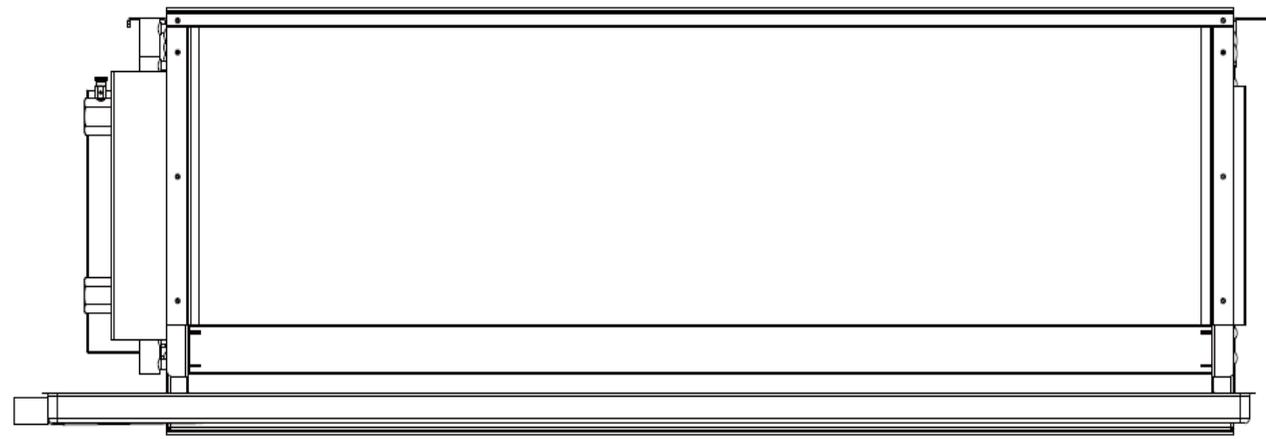
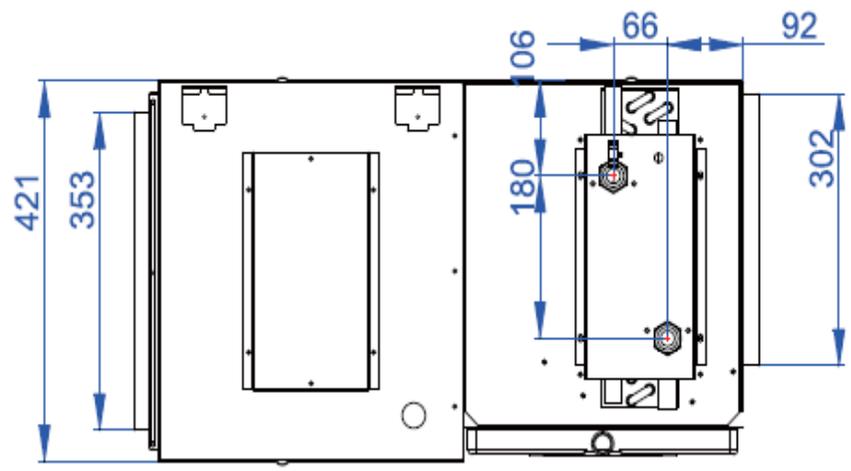
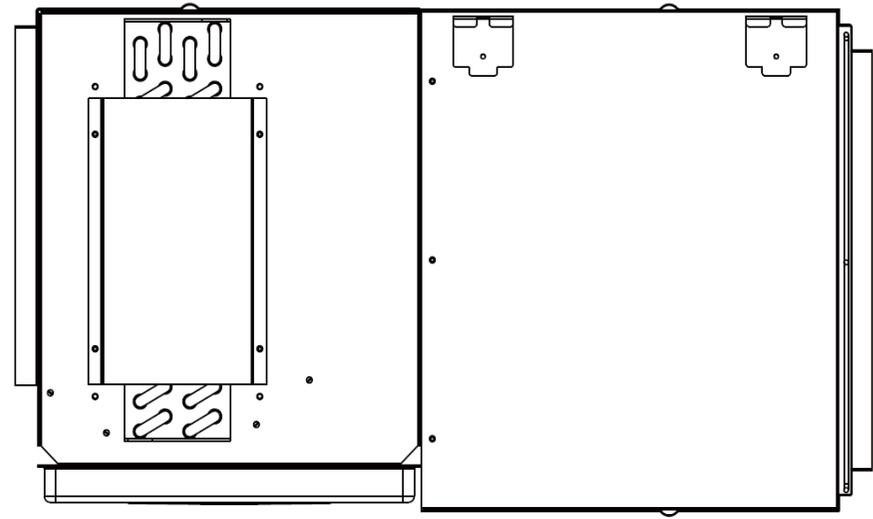
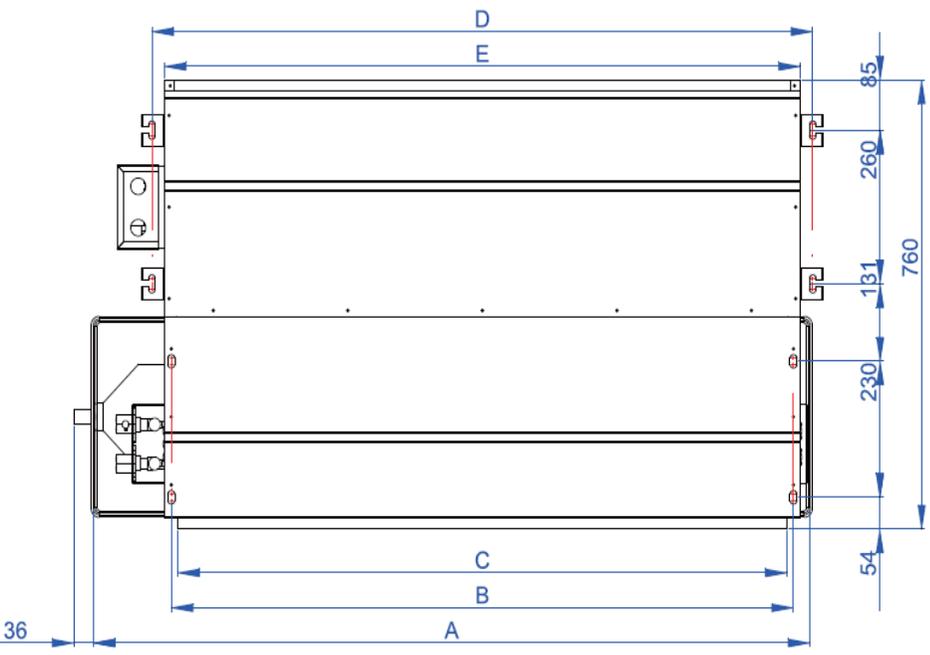
# High Static Pressure Ceiling Concealed Horizontal Ducted Type Fan Coil Unit with DC Brushless Motor (four-pipe system )

Model		W05F-	102H4-(4+2)GZ	136H4-(4+2)GZ	170H4-(4+2)GZ	204H4-(4+2)GZ	238H4-(4+2)GZ	272H4-(4+2)GZ	306H4-(4+2)GZ	340H4-(4+2)GZ	408H4-(4+2)GZ	
Power supply		DC 208~230V/1Ph/50Hz (60Hz as option)										
Air flow	High speed	m <sup>3</sup> /h	1020	1360	1700	2040	2380	2720	3060	3400	4080	
	Middle speed	m <sup>3</sup> /h	810	1090	1360	1635	1900	2180	2450	2720	3260	
	Low speed	m <sup>3</sup> /h	610	815	1020	1225	1430	1630	1830	2040	2450	
Static pressure		Pa	100	100	100	100	100	100	100	100	100	
Cooling capacity	TH	High speed	W	4500	5400	6700	7500	8100	9300	10500	11700	14000
			SH	W	3500	4200	5300	5900	6700	7700	8400	9500
	TH	Middle speed	W	3500	4200	5300	5900	6400	7300	8300	9200	11000
			SH	W	2800	3600	4400	5000	5400	6300	6900	7800
	TH	Low speed	W	2800	3400	4200	4900	5300	6100	6800	7600	9100
			SH	W	2400	2900	3600	4300	4600	5200	5800	6500
Heating capacity	High speed		W	10200	12200	15300	18400	21400	24500	27500	30600	36700
	Middle speed		W	7700	9300	11600	13900	16200	18400	20800	23100	27700
	Low speed		W	6000	7100	8900	10700	12500	14300	16100	17900	21400
Noise level	High speed		dB(A)	47	47	48	49	51	51	53	53	54
Power input	High speed		W	280	280	300	320	380	400	660	660	820
Coil		High efficient copper pipe to wear Hydrophilic aluminum coil; Working pressure 1.6MPa										
Fan		Double inlet forward curved centrifugal fan; Galvanized steel fan housing										
Motor		DC Brushless Motor; The motor insulation system shall be Class E										
Water flow rate	Chilled pipe	m <sup>3</sup> /h	0.77	0.92	1.15	1.34	1.39	1.59	1.8	2.0	2.4	
	Hot water pipe	m <sup>3</sup> /h	1.18	1.41	1.75	2.13	2.45	2.82	3.15	3.51	4.2	
Pressure drop	Chilled pipe	kPa	8	12	12	14	17	18	21	22	27	
	Hot water pipe	kPa	18	23	26	30	35	36	42	43	50	
Coil connection pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Condensing water pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Unit dimension (LxWxH)		mm	970x760x425	970x760x425	1050x760x425	1050x760x425	1190x760x425	1190x760x425	1380x760x425	1380x760x425	1640x760x425	
Weight		kg	49	49	51	52	56	59	63	68	85	

## Notes:

- 1.Cooling condition: indoor DB=27℃(80.6°F), WB=19.5℃(67.1°F), EWT 7℃(44.6°F), temperature difference between EWT and LWT:5℃(41°F).
- 2.Heating condition: Indoor DB=21℃(69.8°F), entering water temperature 60℃(140°F), the same amount of water flow as with cooling.
- 3.Air outlet static pressure of standard model: 0 Pa (with air outlet and filter); or 12 Pa (without air outlet and filter).
- 4.Noise level is tested base on GB/T 19232-2003.
- 5.Air flow rate is tested when FCU operates in a dry state and 20℃(68°F) air inlet dry bulb temperature.
- 6.6-Row= 4 rows hot water coil and 2 rows chilled water.
- 7.All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

# Installation Dimension

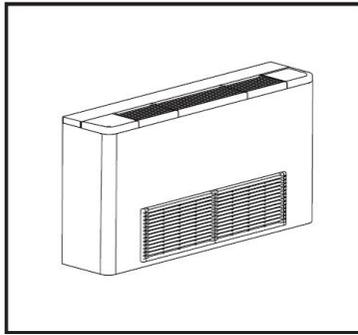


Model	A	B	C	D	E
136H	930	746	722	818	772
170H/204H	1010	826	802	898	852
238H/272H	1150	966	942	1038	992
306H/340H	1340	1156	1132	1228	1182
408H	1600	1416	1392	1488	1442

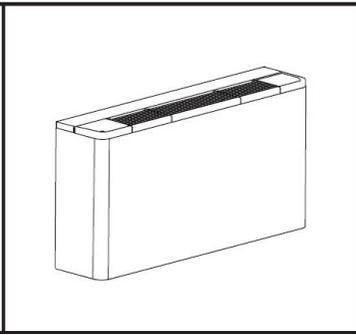
## Universal type fan coil unit



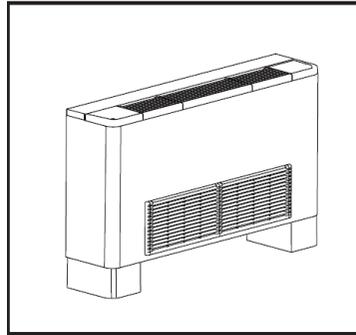
## Universal Type Fan Coil Unit



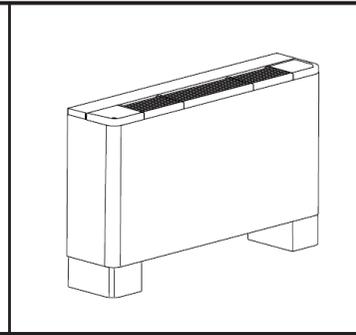
Style I



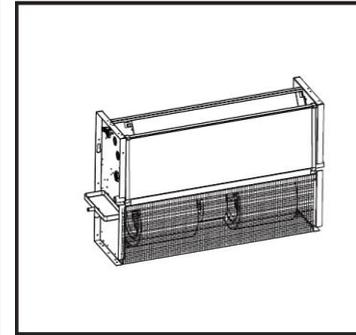
Style II



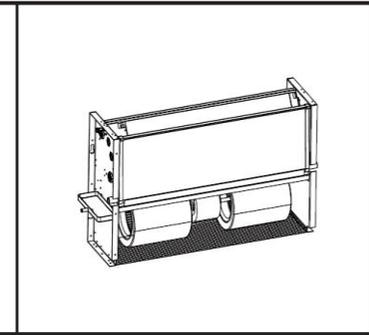
Style III



Style IV



Style V



Style VI

### Characteristic

1. Universal design, the unit can be installed by vertical or horizontal.
2. Classical elegant design
3. Six kind of air distribution solution as option
4. Left/right water pipe connection can be changed freely
5. Use PVC drain pan with 2 water outlet, hollow structure design can enhance the thermal insulation properties, at the same time to prevent from leaking.

1



# Universal Type Fan Coil Unit (two-pipe system)

Model		W05F-	34TM	51TM	68TM	85TM	102TM	136TM	170TM	204TM	238TM	
Power supply		AC 208~230V/1Ph/50Hz (60Hz as option)										
Air flow	High speed	m <sup>3</sup> /h	340	510	680	850	1020	1360	1700	2040	2380	
	Middle speed	m <sup>3</sup> /h	260	390	510	640	770	1020	1280	1530	1790	
	Low speed	m <sup>3</sup> /h	170	260	340	430	510	680	850	1020	1190	
Static pressure		Pa	0	0	0	0	0	0	0	0	0	
Cooling capacity	TH	High speed	W	1800	2700	3600	4500	5400	7200	9000	10800	12600
			SH	1368	2052	2736	3420	4103	5471	6839	8207	9575
	TH	Middle speed	W	1494	2242	2989	3736	4483	5978	7472	8967	10461
			SH	1181	1771	2362	2952	3541	4722	5903	7084	8265
	TH	Low speed	W	1181	1771	2362	2952	3541	4722	5903	7084	8265
			SH	953	1430	1907	2383	2860	3813	4765	5718	6672
Heating capacity	High speed		W	2700	4050	5400	6750	8100	10800	13500	16200	18900
	Middle speed		W	2131	3197	4262	5328	6393	8524	10655	12786	14917
	Low speed		W	1675	2511	3349	4186	5024	6697	8372	10046	11721
Noise level	High speed		dB(A)	37	39	41	43	45	46	48	50	51
Power input	High speed		W	37	52	62	76	96	134	152	189	228
Coil		High efficient copper pipe to wear Hydrophilic aluminum coil; Working pressure 1.6MPa										
Fan		Centrifugal fan (forward curved galvanized steel fan wheel); Galvanized steel fan housing										
Motor		AC motor; The motor insulation system shall be Class E										
Water flow rate		m <sup>3</sup> /h	0.31	0.46	0.62	0.77	0.93	1.23	1.54	1.85	2.16	
Pressure drop		kPa	7	15	18	23	28	30	22	30	36	
Coil connection pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Condensing water pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Unit dimension	style I	(LxWxH)	mm	858*250*608	908*250*608	1058*250*608	1208*250*608	1258*250*608	1608*250*608	1758*250*608	1908*250*608	2058*250*608
	style II		mm	858*235*608	908*235*608	1058*235*608	1208*235*608	1258*235*608	1608*235*608	1758*235*608	1908*235*608	2058*235*608
	style III		mm	858*250*496	908*250*496	1058*250*496	1208*250*496	1258*250*496	1608*250*496	1758*250*496	1908*250*496	2058*250*496
	style IV		mm	858*235*496	908*235*496	1058*235*496	1208*235*496	1258*235*496	1608*235*496	1758*235*496	1908*235*496	2058*235*496
	style I&VI		mm	688*234*494	738*234*494	888*234*494	1038*234*494	1088*234*494	1438*234*494	1588*234*494	1738*234*494	1888*234*494
Weight		kg	20	23	25.5	28	28.5	40.5	43	47	51	

## Notes:

- Cooling condition: indoor DB=27°C(80.6°F), WB=19.5°C(67.1°F), EWT 7°C(44.6°F), temperature difference between EWT and LWT:5°C(41°F).
- Heating condition: Indoor DB=21°C(69.8°F), entering water temperature 60°C(140°F), the same amount of water flow as with cooling.
- Air outlet static pressure of standard model: 0 Pa (with air outlet and filter); or 12 Pa (without air outlet and filter).
- Noise level is tested base on GB/T 19232-2003.
- Air flow rate is tested when FCU operates in a dry state and 20°C(68°F) air inlet dry bulb temperature.
- 3-Row= 3-row chilled water/hot water coil.
- All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

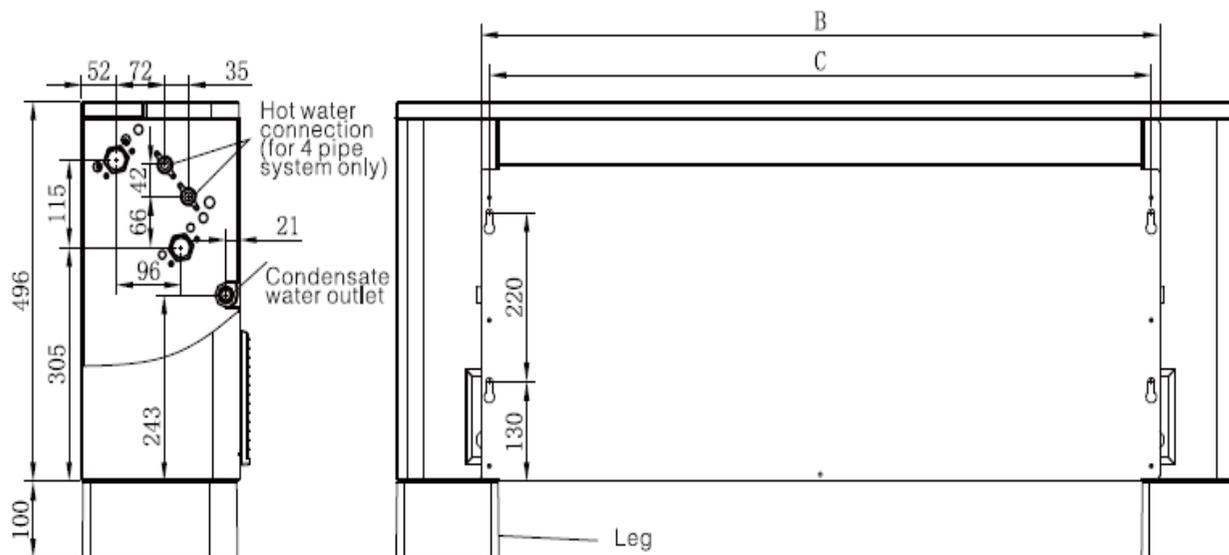
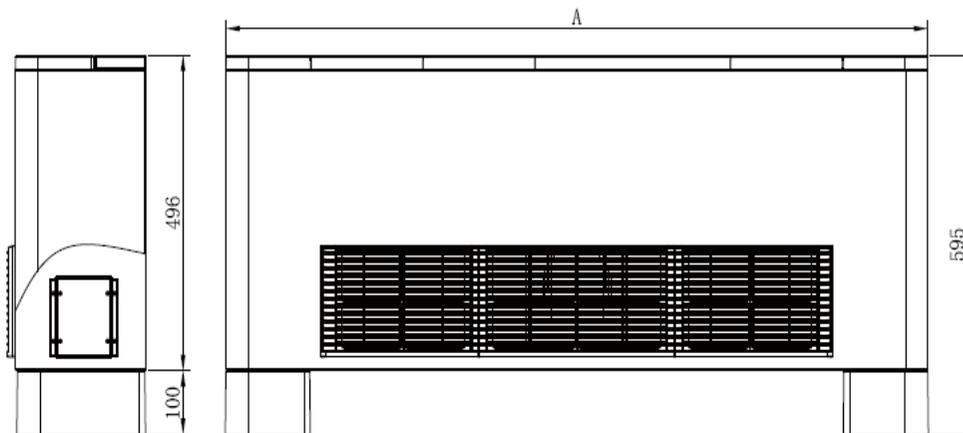
# Universal Type Fan Coil Unit (four-pipe system )

Model		W05F-	34TM4	51TM4	68TM4	85TM4	102TM4	136TM4	170TM4	204TM4	238TM4	
Power supply		AC 208~230V/1Ph/50Hz (60Hz as option)										
Air flow	High speed	m <sup>3</sup> /h	340	510	680	850	1020	1360	1700	2040	2380	
	Middle speed	m <sup>3</sup> /h	260	390	510	640	770	1020	1280	1530	1790	
	Low speed	m <sup>3</sup> /h	170	260	340	430	510	680	850	1020	1190	
Static pressure		Pa	0	0	0	0	0	0	0	0	0	
Cooling capacity	TH	High speed	W	1800	2700	3600	4500	5400	7200	9000	10800	12600
			SH	1368	2052	2736	3420	4103	5471	6839	8207	9575
	TH	Middle speed	W	1494	2242	2989	3736	4483	5978	7472	8967	10461
			SH	1181	1771	2362	2952	3541	4722	5903	7084	8265
	TH	Low speed	W	1181	1771	2362	2952	3541	4722	5903	7084	8265
			SH	953	1430	1907	2383	2860	3813	4765	5718	6672
Heating capacity	High speed		W	2700	4050	5400	6750	8100	10800	13500	16200	18900
	Middle speed		W	2131	3197	4262	5328	6393	8524	10655	12786	14917
	Low speed		W	1675	2511	3349	4186	5024	6697	8372	10046	11721
Noise level	High speed		dB(A)	37	39	41	43	45	46	48	50	51
Power input	High speed		W	37	52	62	76	96	134	152	189	228
Coil		High efficient copper pipe to wear Hydrophilic aluminum coil; Working pressure 1.6MPa										
Fan		Centrifugal fan (forward curved galvanized steel fan wheel); Galvanized steel fan housing										
Motor		AC motor; The motor insulation system shall be Class E										
Water flow rate	Chilled pipe	m <sup>3</sup> /h	0.31	0.46	0.62	0.77	0.93	1.23	1.54	1.85	2.16	
	Hot water pipe	m <sup>3</sup> /h	0.11	0.17	0.22	0.28	0.34	0.45	0.56	0.67	0.78	
Pressure drop	Chilled pipe	kPa	7	15	18	23	28	30	22	30	36	
	Hot water pipe	kPa	2.8	6	7.2	9.2	11.2	12	8.8	12	14.4	
Coil connection pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Condensing water pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Unit dimension	style I	(L×W×H)	mm	858*250*608	908*250*608	1058*250*608	1208*250*608	1258*250*608	1608*250*608	1758*250*608	1908*250*608	2058*250*608
	style II		mm	858*235*608	908*235*608	1058*235*608	1208*235*608	1258*235*608	1608*235*608	1758*235*608	1908*235*608	2058*235*608
	style III		mm	858*250*496	908*250*496	1058*250*496	1208*250*496	1258*250*496	1608*250*496	1758*250*496	1908*250*496	2058*250*496
	style IV		mm	858*235*496	908*235*496	1058*235*496	1208*235*496	1258*235*496	1608*235*496	1758*235*496	1908*235*496	2058*235*496
	style I&VI		mm	688*234*494	738*234*494	888*234*494	1038*234*494	1088*234*494	1438*234*494	1588*234*494	1738*234*494	1888*234*494
Weight		kg	23	26	29	33	36	45	47	51	55	

## Notes:

- Cooling condition: indoor DB=27°C (80.6°F), WB=19.5°C (67.1°F), EWT 7°C (44.6°F), temperature difference between EWT and LWT:5°C (41°F).
- Heating condition: Indoor DB=21°C (69.8°F), entering water temperature 60°C (140°F), the same amount of water flow as with cooling.
- Air outlet static pressure of standard model: 0 Pa (with air outlet and filter); or 12 Pa (without air outlet and filter).
- Noise level is tested base on GB/T 19232-2003.
- Air flow rate is tested when FCU operates in a dry state and 20°C (68°F) air inlet dry bulb temperature.
- 4-Row= 2-row chilled water,2-row hot water coil.
- All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

# Installation Dimension



Model	W05F-34TM	W05F-51TM	W05F-68TM	W05F-85TM	W05F-102TM	W05F-136TM	W05F-170TM	W05F-204TM	W05F-238TM
A (mm)	858	908	1058	1208	1258	1608	1758	1908	2058
B (mm)	608	658	808	958	1008	1358	1508	1658	1808
C (mm)	583	633	783	933	983	1333	1483	1633	1783
Quantity of fan	1	2	2	2	2	4	4	4	4
Quantity of motor	1	1	1	1	1	2	2	2	2

# Ultra thin vertical type fan coil unit



## Characteristic

1. Ultra thin design the width of the body is only 130mm;
2. Modern industrial style design,exquisite manufacturing technology and elegant surface.it is cater to modern decoration style;
3. Using the cross flow fan, optimization of pipeline design. Strong air and quiet running;
4. The air guide strip is installed with damping. Manually adjust the angle of the air;
5. Hidden intelligent LED temperature controller which is elegant appearance and easy to use;
6. Cold air protection system. It can stop the cold air blow out when the water temperature in the pipe is too cold;
7. Left/right water pipe and electric control box can be changed to both side;  
Easy for installing work and reduce the dependence on inventory.
8. The side metal plate can be remove before installation which make pipe connection easier;
9. The filter of this product is easy to change;
10. 2-way valve and 3-way valve as option which can decrease the cost of installation;
11. Installed by floor standing with leg, or hanging on the wall without leg;



12. Touch sreen controller is standard for DC style;
13. Auto swing function is standard and swing range is wide;
14. Remote controller is also standard for DC style;

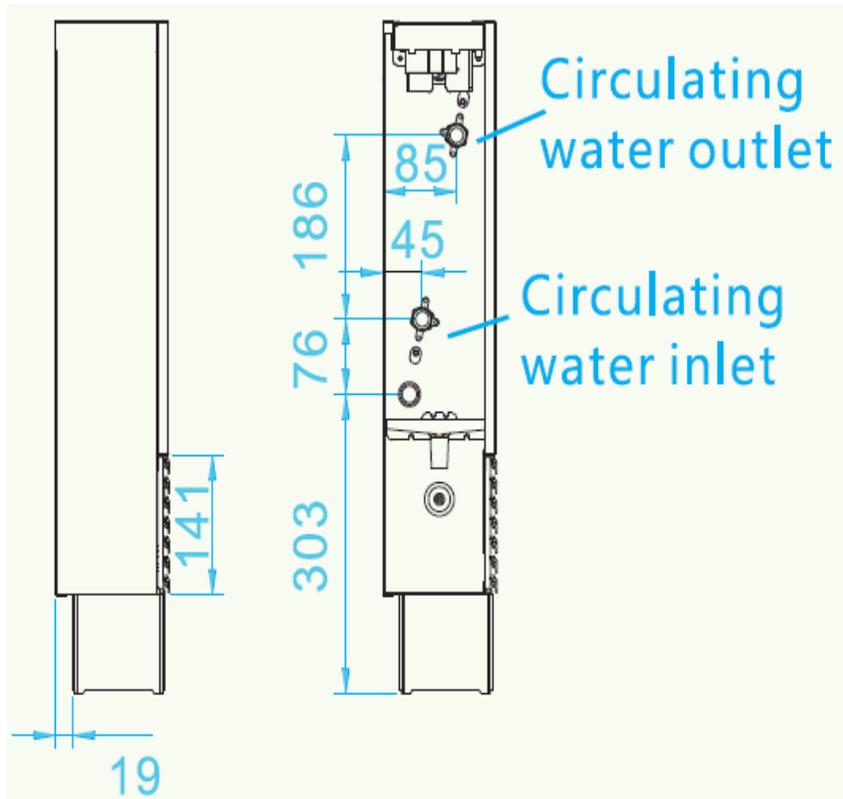
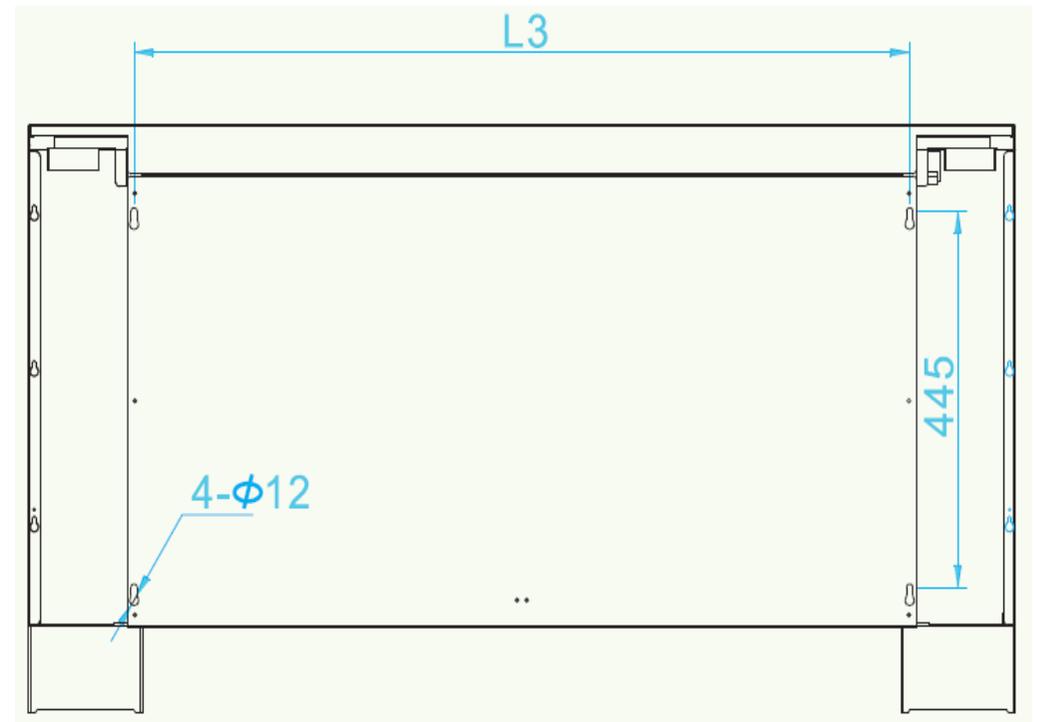
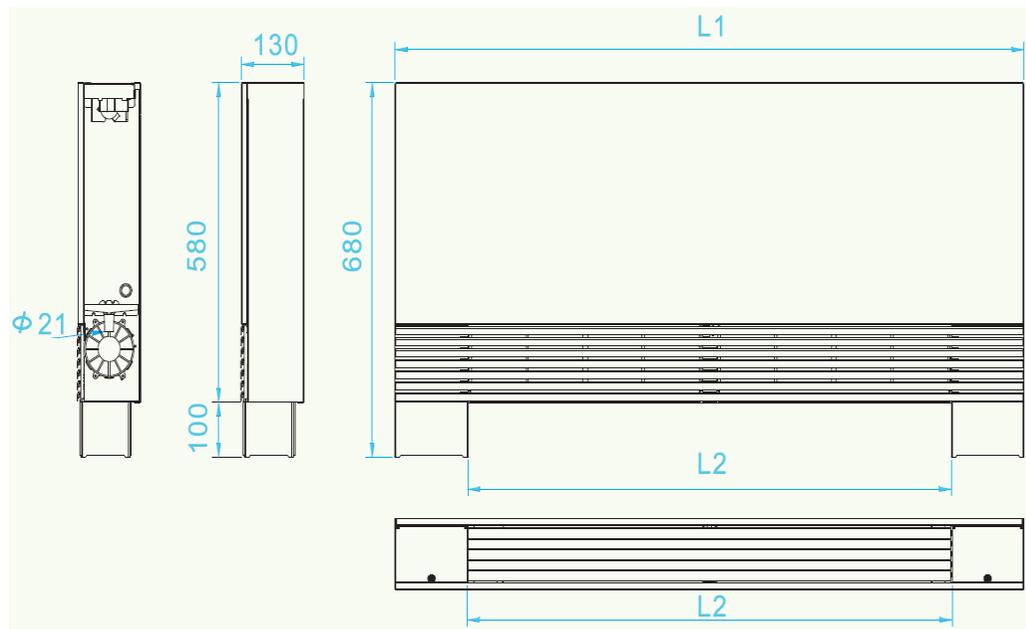
# Ultra-thin Vertical Type Fan Coil Unit (two-pipe system)

Model		W05F-	20CM	30CM	40CM	50CM	50CM	
Power supply			AC 208~230V/1Ph/50Hz (60Hz as option)					
Air flow	High speed	m <sup>3</sup> /h	200	300	400	500	600	
	Middle speed	m <sup>3</sup> /h	150	220	300	380	450	
	Low speed	m <sup>3</sup> /h	110	160	230	290	340	
Static pressure		Pa	0	0	0	0	0	
Cooling capacity	TH	High speed	W	1000	1800	2400	3000	3600
			SH	W	713	1283	1711	2139
	TH	Middle speed	W	800	1440	1920	2400	2880
			SH	W	555	999	1330	1660
	TH	Low speed	W	650	1170	1560	1950	2340
			SH	W	430	770	1025	1280
Heating capacity	High speed		W	1600	2900	3850	4800	5750
	Middle speed		W	1280	2320	3080	3840	4600
	Low speed		W	830	1510	2000	2500	2990
Noise level	High speed		dB(A)	38	39	40	41	42
Power input	High speed		W	15	18	20	26	32
Coil			High efficient copper pipe to wear Hydrophilic aluminum coil					
Fan			Cross-flow					
Motor			AC motor; The motor insulation system shall be Class E					
Water flow rate		m <sup>3</sup> /h	0.17	0.26	0.34	0.43	0.51	
Pressure drop		kPa	4	6	8	10	12	
Coil connection & drain pipe		Inch	1/2"	1/2"	1/2"	1/2"	1/2"	
Unit dimension	LxWxH	mm	700x130x681	900x130x681	1100x130x681	1300x130x681	1500x130x681	
Weight		kg	14.5	18.5	21.5	24	27	

## Notes:

- 1.Cooling condition: indoor DB=27°C(80.6°F), WB=19.5°C(67.1°F), EWT 7°C(44.6°F), temperature difference between EWT and LWT:5°C(41°F).
- 2.Heating condition: Indoor DB=21°C(69.8°F), entering water temperature 60°C(140°F), the same amount of water flow as with cooling.
- 3.Noise level is tested base on GB/T 19232-2003.
- 4.Air flow rate is tested when FCU operates in a dry state and 20°C(68°F) air inlet dry bulb temperature.
- 5.All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

# Installation Dimension



Model W05F	20CM	30CM	40CM	50CM	60CM
L1 (mm)	700	900	1100	1300	1500
L2 (mm)	400	600	800	1000	1200
L3 (mm)	422	622	822	1022	1222

# High Wall Mounted Type Fan Coil Unit

Type A



Type B



## High Wall Mounted Type Fan Coil Unit (two-pipe system)

Model		W05F-	34W2	51W2	68W2	85W2	102W2	136W2	
Power supply			AC 208~230V/1Ph/50Hz (60Hz as option)						
Air flow	High speed	m <sup>3</sup> /h	340	510	680	850	1020	1360	
	Middle speed	m <sup>3</sup> /h	260	380	515	660	765	1040	
	Low speed	m <sup>3</sup> /h	180	260	340	430	530	710	
Static pressure		Pa	0	0	0	0	0	0	
Cooling capacity	TH	High speed	W	2100	2700	4000	4500	5700	7200
	SH		W	1600	2025	3000	3375	4300	5400
	TH	Middle speed	W	1700	2214	3200	3690	4600	5904
	SH		W	1400	1650	2200	2410	3200	3926
	TH	Low speed	W	1300	1647	2400	2745	3500	4392
	SH		W	700	960	1500	1715	2200	2710
Heating capacity	High speed		W	3100	4050	5900	6750	8500	10800
	Middle speed		W	2500	3219	4700	5366	6800	8586
	Low speed		W	1700	2268	3300	3780	4800	6048
Noise level	High speed	dB(A)	39	41	42	45	46	47	
Power input	High speed	W	35	40	75	90	125	130	
Coil			High efficient copper pipe to wear Hydrophilic aluminum coil; Working pressure 1.6MPa						
Fan			Cross-flow						
Motor			AC motor; The motor insulation system shall be Class E						
Water flow rate		m <sup>3</sup> /h	0.36	0.46	0.71	0.77	0.98	0.93	
Pressure drop		kPa	12	14	17	18	23	25	
Coil connection & drain pipe		Inch	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	
Unit dimension (L×W×H)		mm	780×276×202	780×276×202	950×313×240	950×313×240	1055×313×240	1055×313×240	
Weight		kg	10	10	14	14	16	16	

### Notes:

- 1.Cooling condition: indoor DB=27°C(80.6°F), WB=19.5°C(67.1°F), EWT 7°C(44.6°F), temperature difference between EWT and LWT:5°C(41°F).
- 2.Heating condition: Indoor DB=21°C(69.8°F), entering water temperature 60°C(140°F), the same amount of water flow as with cooling.
- 3.Noise level is tested base on GB/T 19232-2003.
- 4.Air flow rate is tested when FCU operates in a dry state and 20°C(68°F) air inlet dry bulb temperature.
- 5.All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

## Floor Standing Type Fan Coil Unit

Model		W05F-	140S	160S	200S	250S	480S
Air flow rate	High (m <sup>3</sup> /h)	m <sup>3</sup> /h	1400	1600	2000	2500	4800
	Middle (m <sup>3</sup> /h)	m <sup>3</sup> /h	1200	1400	1740	2100	4000
	Low (m <sup>3</sup> /h)	m <sup>3</sup> /h	900	1100	1420	1700	3550
Cooling capacity	High (W)	m <sup>3</sup> /h	6360	7300	10000	12500	28600
	Middle (W)	m <sup>3</sup> /h	5500	6280	9000	11250	25000
	Low (W)	m <sup>3</sup> /h	4300	5160	7000	8750	20500
Heating capacity	High (W)	W	9550	10960	15000	18800	41800
	Middle (W)	W	8260	9420	12000	15500	35000
	Low (W)	W	6450	7740	10000	13000	29800
Noise level		dB(A)	≤50	≤56	≤56	≤56	≤60
Power supply			AC 208~230V/1Ph/50Hz (60Hz as option)				
Water pipe size		Inch	3/4"	3/4"	3/4"	3/4"	3/4"
Dimension	Length	mm	500	520	620	620	1200
	Width	mm	285	325	380	380	400
	Height	mm	1700	1760	1910	1910	1860
Net weight		kg	38	45	56	65	132
Gross weight		kg	42	50	62	73	158

### Notes:

- 1.Cooling condition: indoor DB=27°C (80.6°F), WB=19.5°C (67.1°F), inlet water temperature 7°C (44.6°F), temperature difference between inlet/outlet water:5°C (41°F).
- 2.Heating condition: Indoor DB=21°C (69.8°F), entering water temperature 60°C (140°F).
- 3.The motor insulation class is E.
- 4.Noise level is tested base on GB/T 19232-2003.
- 5.Air flow rate is tested when FCU operates in a dry state and 20°C (68°F) air inlet dry bulb temperature.
- 6.All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.





## — Characteristic —

1. Classical elegant design;
2. Be installed by ceiling, floor standing or wall mounted;

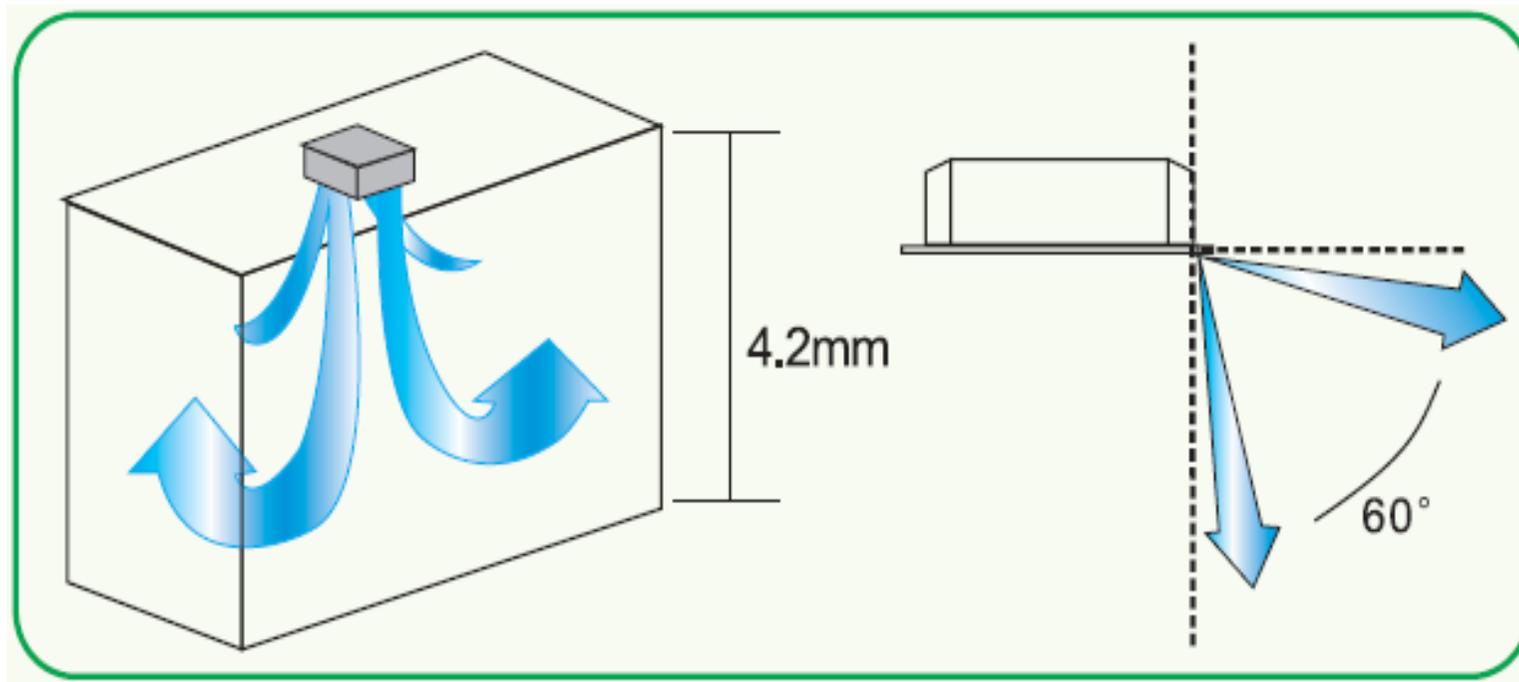


3. Remote controller thermostat or wired remote control thermostat as option;



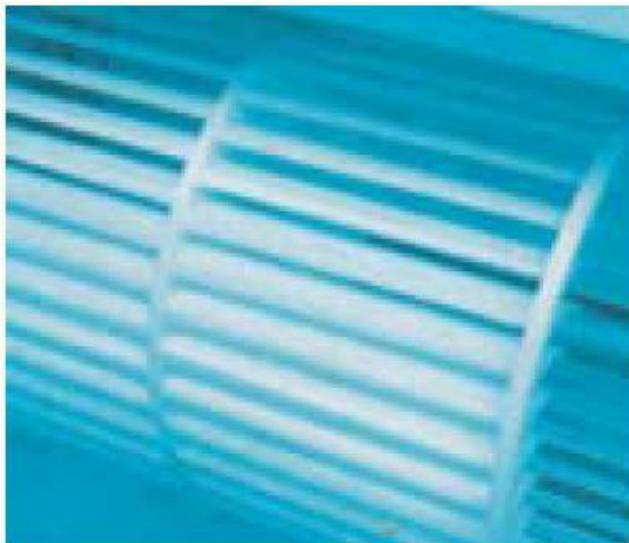
4. Auto swing;
5. Four-pipe system as option;

## 6. Wide air flowing range;



## 7. Quiet running

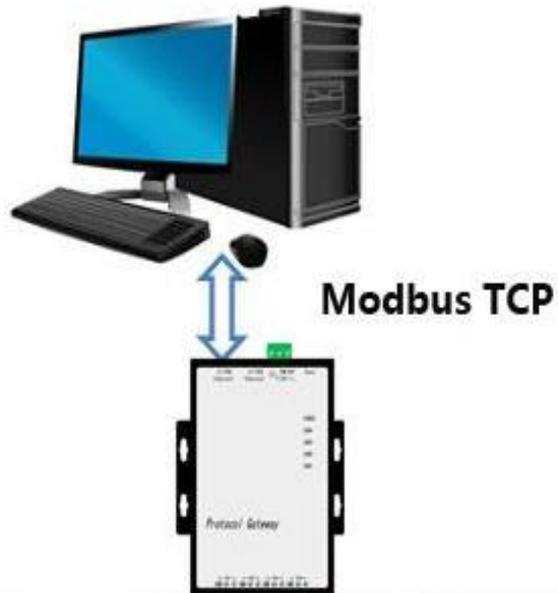
Double fan structure installed symmetrically, the unit running more stable;



8. Stainless steel hose can be installed as entering/leaving water connection (optional);



9. Easily interfaced with most widely used ModBus and proprietary supervisory system based on ModBus protocol(RS485);

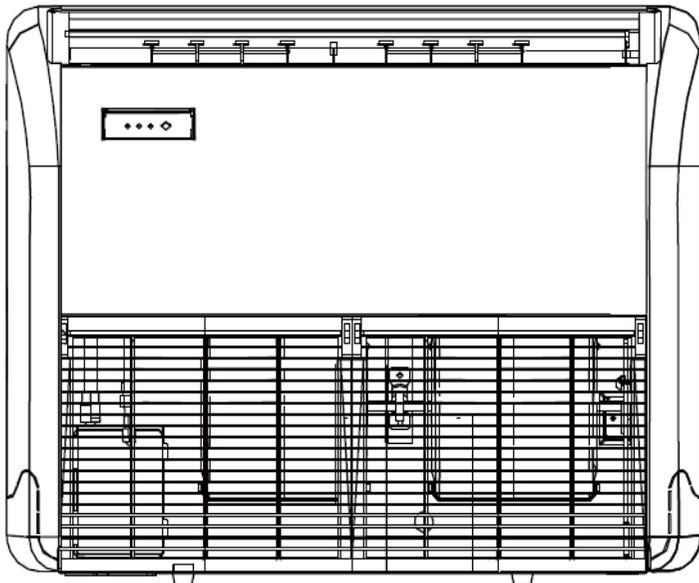


**10. Water valve can be installed inside the unit (optional);**

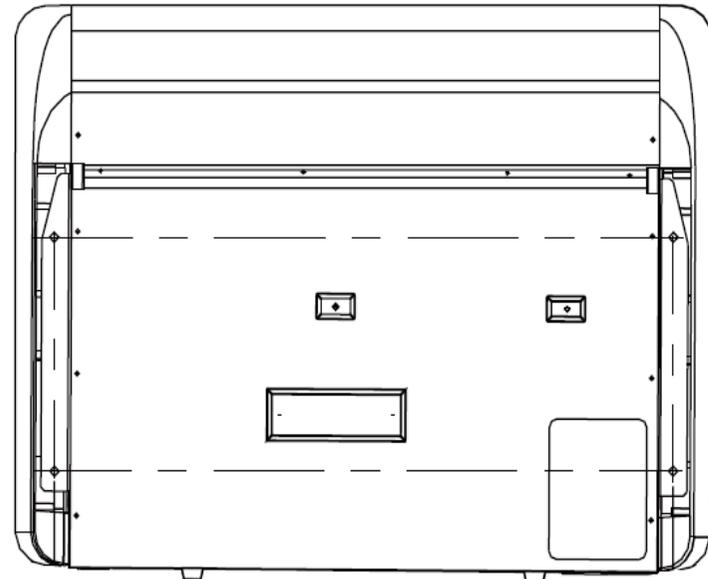
Water valve is used to control the on/off water flowing to the unit, we installed the valve into the unit, so the user do not need to installed it by themselves.



—— View of Floor & Ceiling Type Fan Coil Unit ——



**Front View**



**Side View**

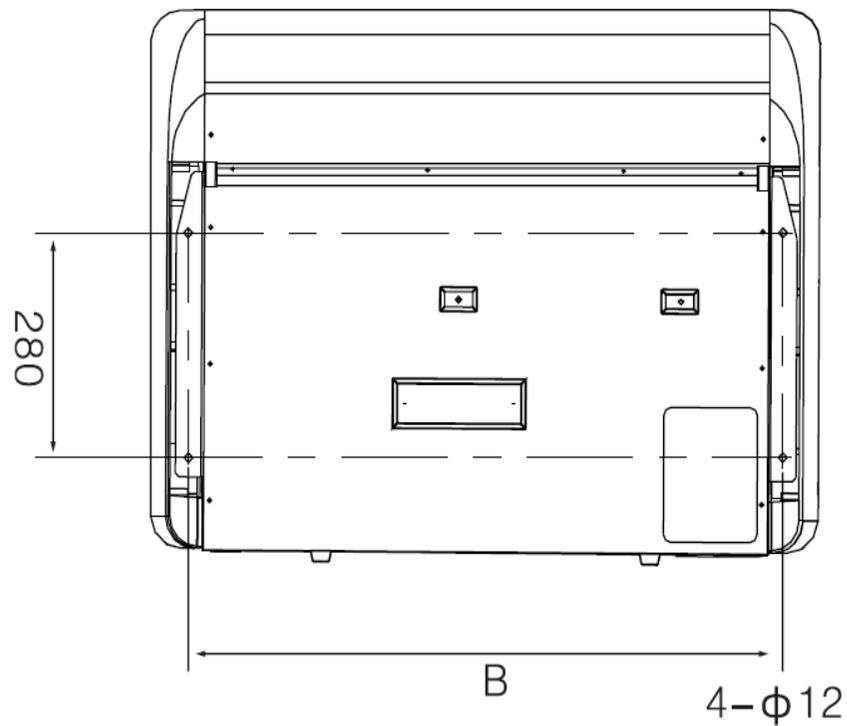
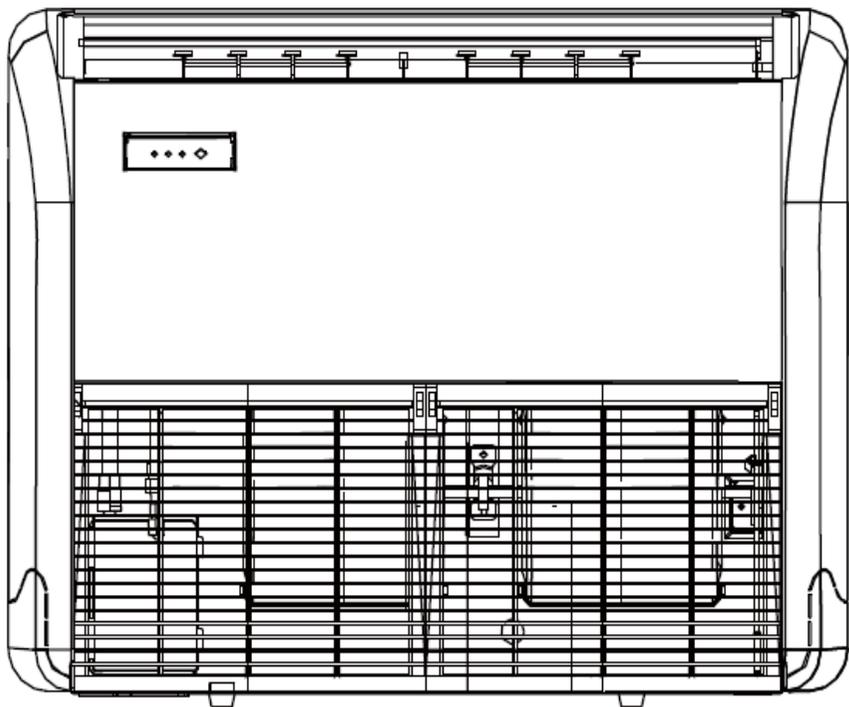
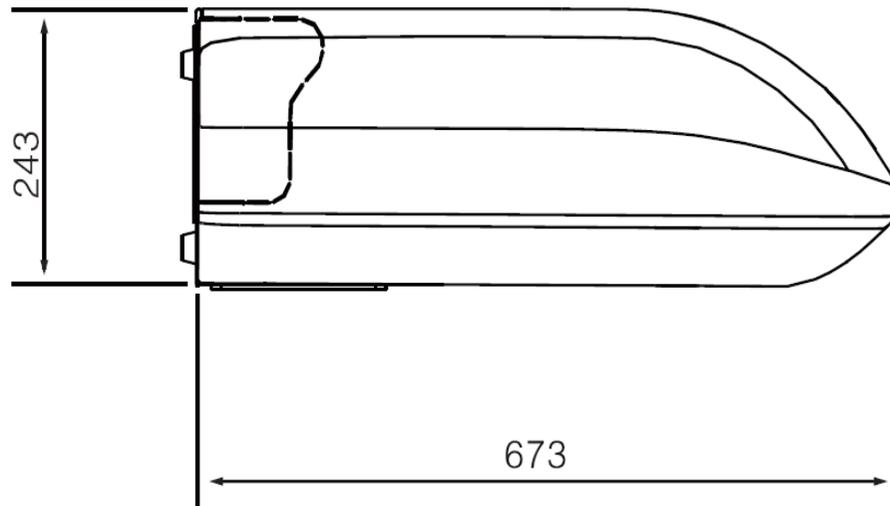
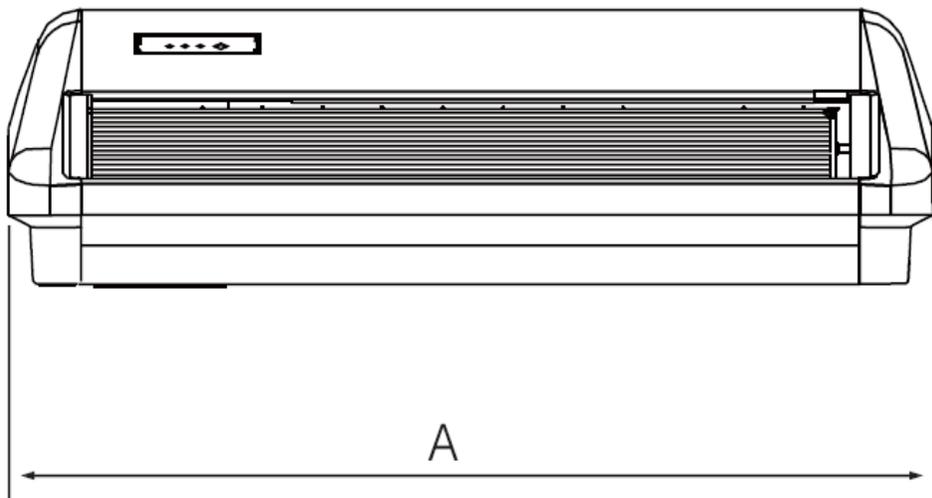
## Floor & Ceiling Type Fan Coil Unit (two-pipe system)

Model		W05F-	51ZDM	68ZDM	85ZDM	102ZDM	136ZDM	170ZDM	204ZDM	238ZDM	
Power supply		AC 208~230V/1Ph/50Hz (60Hz as option)									
Air flow	High speed	m <sup>3</sup> /h	510	680	850	1020	1360	1700	2040	2380	
	Middle speed	m <sup>3</sup> /h	390	510	640	770	1040	1280	1550	1800	
	Low speed	m <sup>3</sup> /h	260	340	430	530	710	860	1050	1280	
Static pressure		Pa	0	0	0	0	0	0	0	0	
Cooling capacity	TH	High speed	W	2700	3600	4500	5400	7200	9000	10800	12600
			SH	W	1990	2730	3174	4261	5385	6746	8109
	TH	Middle speed	W	2485	3030	3752	4467	6499	7926	9389	10605
			SH	W	1571	2015	2450	3071	4278	5447	6669
	TH	Low speed	W	2078	2504	2950	3831	5660	7295	9389	10605
			SH	W	1212	1545	1844	2397	3317	4460	5300
Heating capacity	High speed		W	4050	5400	6750	8100	10800	13500	16200	18900
	Middle speed		W	2792	3970	4941	5740	7987	10557	13101	14011
	Low speed		W	1788	2801	3533	3907	5464	7048	8714	9778
Noise level	High speed		dB(A)	39	41	43	45	46	48	50	51
Power input	High speed		W	52	62	76	96	134	152	189	228
Coil		High efficient copper pipe to wear Hydrophilic aluminum coil; Working pressure 1.6MPa									
Fan		Cross-flow									
Motor		AC motor; The motor insulation system shall be Class E									
Water flow rate		m <sup>3</sup> /h	0.46	0.62	0.77	0.93	1.23	1.54	1.85	2.16	
Pressure drop		kPa	11.8	13.6	21	23	25	32	33	38	
Coil connection & drain pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Unit dimension (L×W×H)		mm	905×673×243	905×673×243	905×673×243	1288×673×243	1288×673×243	1672×673×243	1672×673×243	1672×673×243	
Weight		kg	26	28	30	38	40	42	45	49	

### Notes:

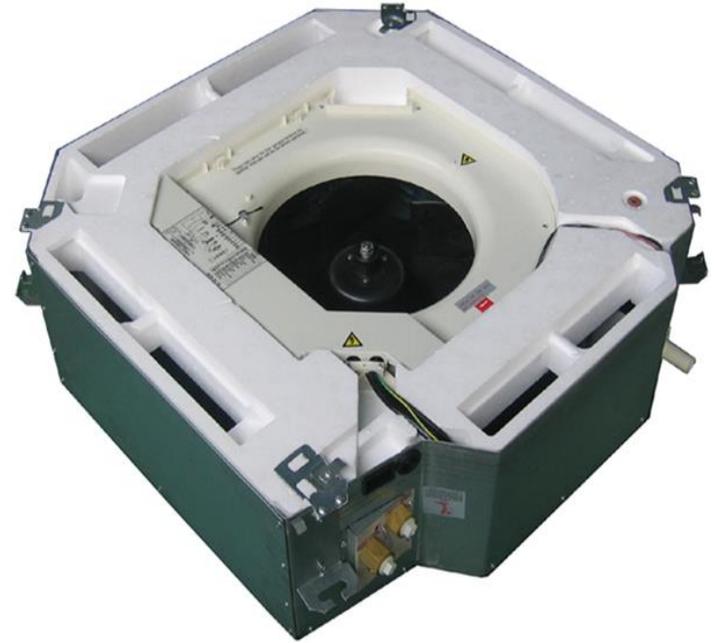
- 1.Cooling condition: indoor DB=27°C(80.6°F), WB=19.5°C(67.1°F), EWT 7°C(44.6°F), temperature difference between EWT and LWT:5°C(41°F).
- 2.Heating condition: Indoor DB=21°C(69.8°F), entering water temperature 60°C(140°F), the same amount of water flow as with cooling.
- 3.Noise level is tested base on GB/T 19232-2003.
- 4.Air flow rate is tested when FCU operates in a dry state and 20°C(68°F) air inlet dry bulb temperature.
- 5.All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

Installation Dimension



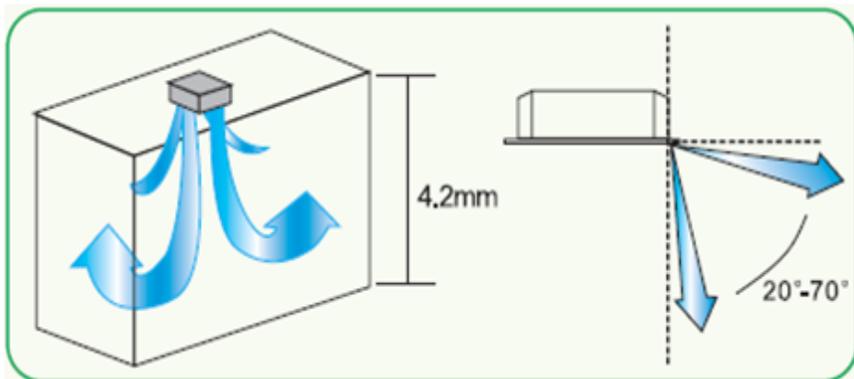
Model W05F-	51ZDM	68ZDM	85ZDM	102ZDM	136ZDM	170ZDM	204ZDM	238ZDM
A (mm)	905	905	905	1288	1288	1672	1672	1672
B (mm)	801	801	801	1184	1184	1568	1568	1568

# Four-way Cassette Type Fan Coil Unit

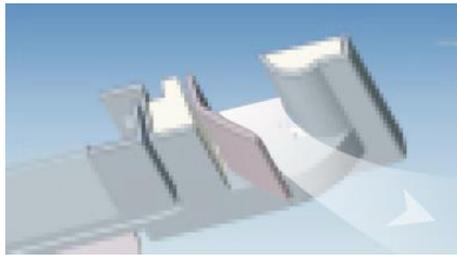


## Characteristic

1. Four-way air flowing, which can uniform temperature distribution in the room;



2. Specially design to avoid the air-short flowing;



3. Thin design unit which can be installed in a limit ceiling (Minmum thickness 240mm);

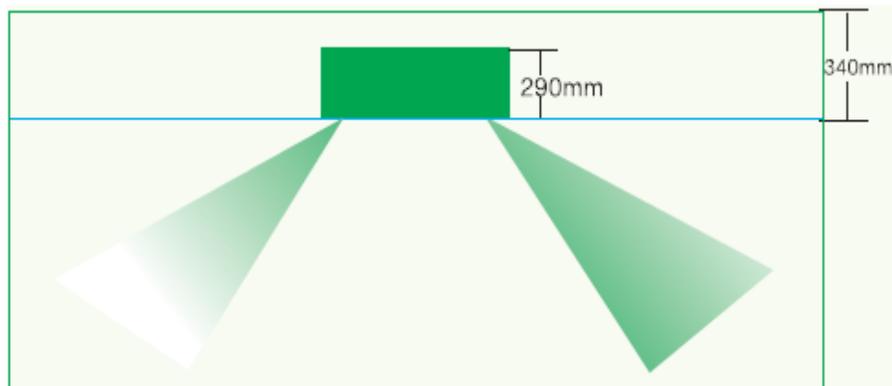
4. Easy to be installed, low installation cost;

5. Remote controller thermostat or wired remote control thermostat as option;



6. Auto swing

Using advanced 3D software to design the centrifugal fan with streamline and big diameter turbine;

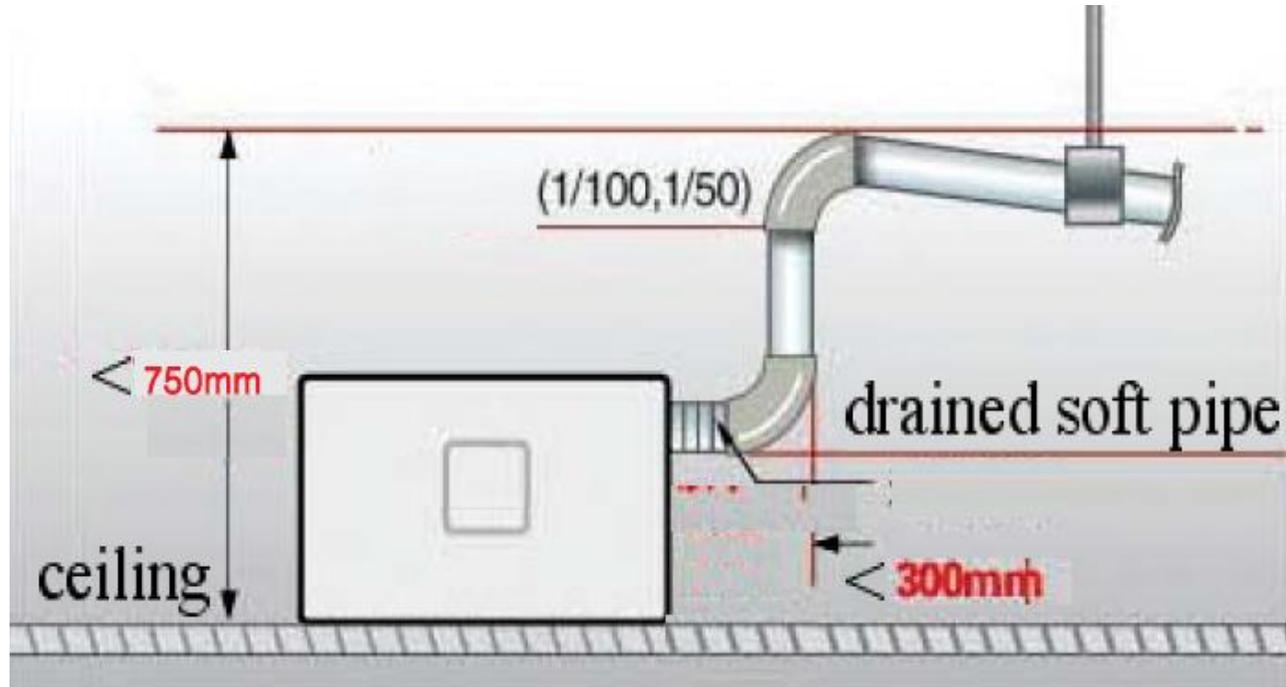


## 7. Quiet running

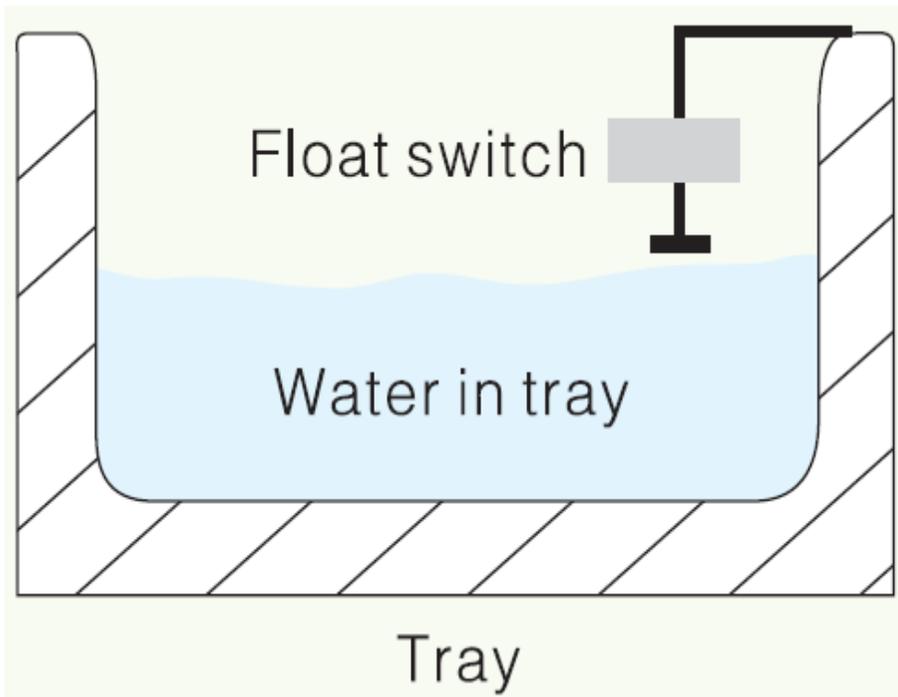


The efficiency of airflow rate, heavy air volume and low noise is excellent. Because the ventilator wheel is processed to sine strip seam, when enhances its flexibility, and drops the vibration of ventilator during revolving in large scale, simultaneously reduced the motor noise caused by ventilator swinging.

## 8. High lift water drained pump (750mm), easy to plan the condensate drained pipe



### 9. Float switch inside to prevent from leaking



After the water raising to a certainly position, the float switch will act and alarm, then the unit will cut off the water valve or stop the fan motor.

### 10. Fresh air can be inputed from outside

A diagram showing a house with a fresh air inlet on the roof. A red line indicates the path of fresh air from the outside into the house. The label 'Fresh air input' is next to the inlet.

- The unit offer a conenction to input fresh air from outside, will be improve the indoor environment

A diagram showing a cross-section of a duct system. A main duct is shown with an auxiliary duct branching off to the right. Blue arrows indicate the flow of air from the main duct into the auxiliary duct and then out of the room.

- Auxiliary duct  
To send part of air to other place

A 3D perspective view of a square-shaped unit. It has a central circular opening with a yellow grid. A blue pipe labeled 'Fresh air input' enters from the bottom right. A grey rectangular duct labeled 'Auxiliary\_Grid duct' is attached to the top. The unit is shown in a cutaway view to reveal internal components.

Fresh air inlet can import some fresh air from outside, and ensure the quality of indoor air. Thus, the consumer can share the fresh an clear air to lessen illness caused by air conditioner.

**11. Auxiliary duct is available to send parts of air to other place, in order to improve indoor temperature air quality;**

**12. "C" type heat exchanger;**



"C" type exchanger is helpful to improve the well-distributed of terminal air duct and refrigerant system, make the efficiency of multi flow more even and it reduced the probable of system leak. Blue fin extremely reduced the coagulate water detained in the aluminum flake, so it reduce the air resistance, improved the efficiency of heat exchanger.

**13. The water remain in the tray is easy to drain by manual;**

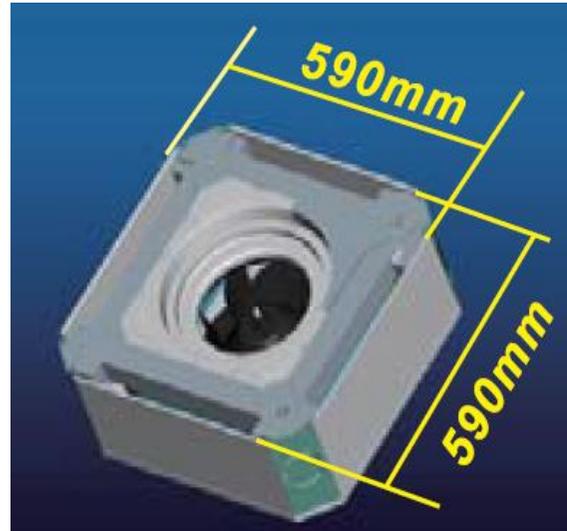
There are a rubber plug on the water collecting tray, we can drain out the dirty water by manual. Because the water remained inside the tray will keep for a long time, then there will be very dirty and there might be lots bacterial inside too, draining out the dirty water is benefit to the health and also reduce the possible of pump blocking.

**14. Square panels, which can choose the direction of inlet/outlet water connection freely;**

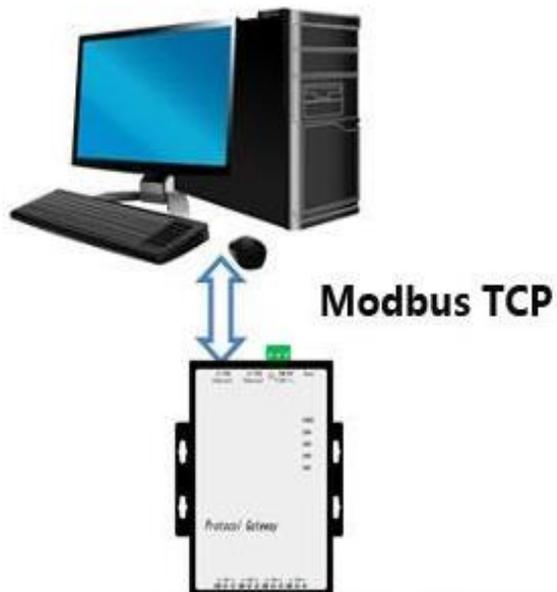
**15. Fan and fan motor are easy to maintain;**

After take out the air grid of the panel, we can easily take out the electric box, then the fan and fan motor can be easily taken out too.

16. The dimension of unit is only 590x590mm,which can be installed in a standard ceiling opening;

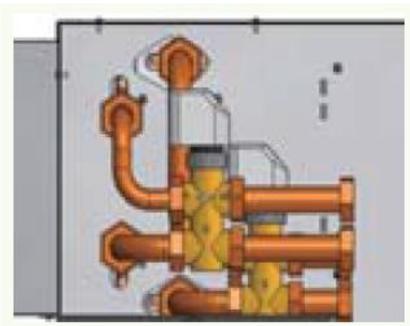


17. Easily interfaced with most widely used ModBus and proprietary supervisory system based on ModBus protocol(RS485);



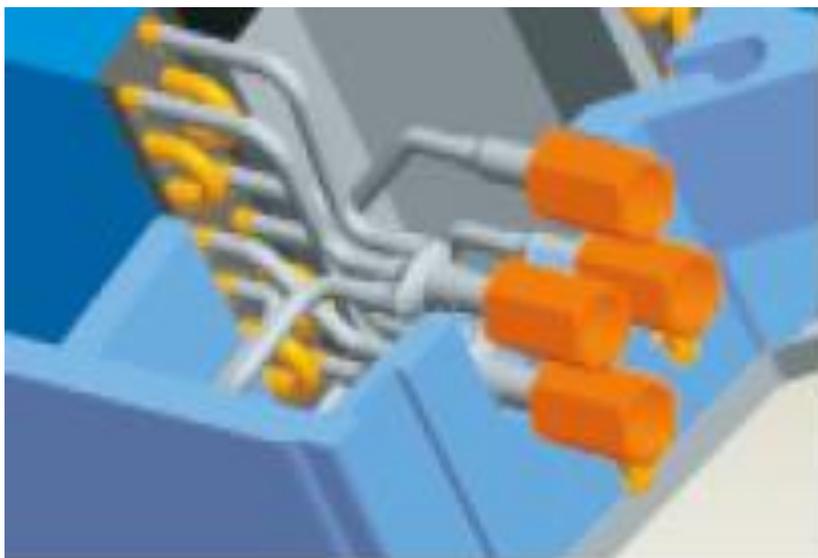
### 18. Water valve can be installed outside the unit(as option);

Water valve is used to control the on/off water flowing to the unit, we installed the valve outside the unit, so the user do not need to installed it by themselves.



### 19. 4-pipe system as option

There are both cooling and heating water circle coil inside the unit,so the unit can deal with cooling or heating at the same time, 4-pipe system is always used in the place where need to deal with heating and cooling by refrigeration system at the same time, for example, a room need heating and anther room need cooling, 5 star hotel always use this kind of fan coil unit.



### 20. More controllers for option

0~10V stepless thermostat can be connected.

3 speed thermostat can be connected.



0 ~10V thermostat



3-speed thermostat

## 21. DC motor as option;

### Excellent performance -- brushless DC motor, high efficiency and energy saving

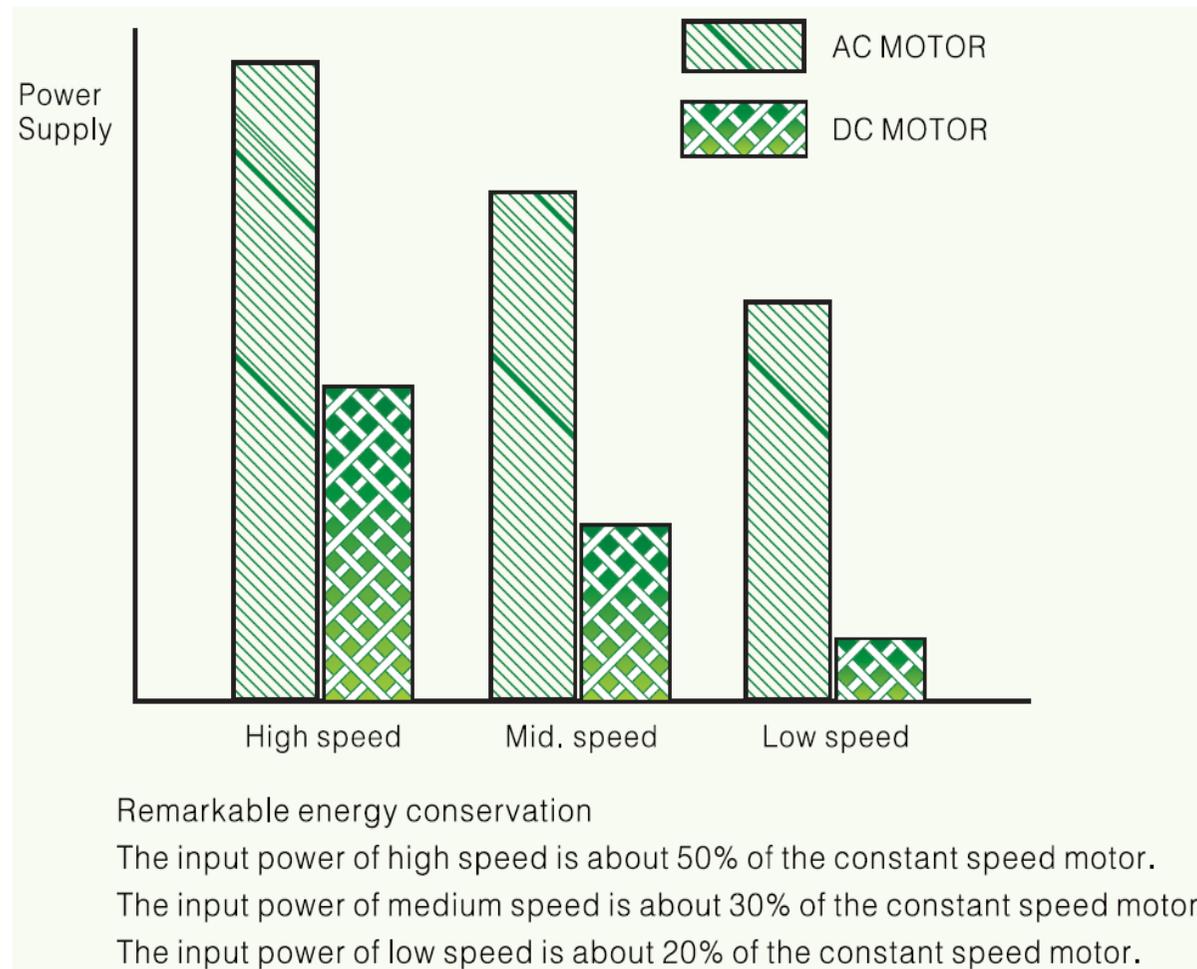
Panasonic brushless plastic package DC motor as option.

High working efficiency, but energy efficiency is over 50% lower than the average motor.

### Long working life

With plastic package, the humidity and dust will not easily access to the inner motor.

High electrical efficiency, low temperature rise and slow aging of internal components.



# Four-way Cassette Type Fan Coil Unit (two-pipe system)

Model		W05F-	51K4M2	68K4M2	85K4M2	102K4M2	136K4M2	170K4M2	204K4M2	238K4M2	272K4M2	
Power supply		AC 208~230V/1Ph/50Hz (60Hz as option)										
Air flow	High speed	m <sup>3</sup> /h	550	680	880	1050	1380	1750	2050	2200	2720	
	Middle speed	m <sup>3</sup> /h	440	540	700	840	1100	1400	1640	1760	2040	
	Low speed	m <sup>3</sup> /h	330	410	530	630	830	1050	1230	1320	1360	
Static pressure		Pa	0	0	0	0	0	0	0	0	0	
Cooling capacity	TH	High speed	W	3000	3800	4900	5800	7500	9800	11000	12000	15000
			SH	W	2200	2850	3500	4250	5500	7150	8250	9100
	TH	Middle speed	W	2550	3250	4150	4950	6400	8350	9350	10200	12450
			SH	W	1800	2350	2850	3500	4550	5950	6850	7650
	TH	Low speed	W	2050	2600	3400	4000	5200	6750	7600	8300	10300
			SH	W	1400	1850	2300	2800	3600	4700	5450	6000
Heating capacity	High speed		W	4700	5900	7600	9000	11600	15200	17100	18600	2400
	Middle speed		W	4000	5000	6450	7650	9850	12900	14550	15800	19900
	Low speed		W	3150	3950	5100	6050	7750	10200	11450	12450	15200
Noise level	High speed		dB(A)	40	42	42	44	46	47	50	51	53
Power input	High speed		W	50	58	70	95	130	160	190	210	230
Coil		High efficient copper pipe to wear Hydrophilic aluminum coil										
Fan		Cross-flow										
Motor		AC motor; The motor insulation system shall be Class E										
Water flow rate		m <sup>3</sup> /h	0.51	0.65	0.83	0.99	1.28	1.67	1.87	2.04	2.55	
Pressure drop		kPa	13	22	18	25	23	28	33	42	45	
Coil connection & drain pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Dimension	Unit	LxWxH	mm	590x590x242	590x590x242	590x590x242	750x750x242	750x750x242	840x840x242	840x840x292	840x840x292	946x946x292
	Panel		mm	650x650x40	650x650x40	650x650x40	850x850x40	850x850x40	950x950x40	950x950x40	950x950x40	1050x1050x40
Weight	Unit (drained by pump)		kg	22	23	26	27	29	30	31	33	36
	Panel		kg	5	5	7	7	8	8	9	9	11

Notes:

- 1.Cooling condition: indoor DB=27°C(80.6°F), WB=19.5°C(67.1°F), EWT 7°C(44.6°F), temperature difference between EWT and LWT:5°C(41°F).
- 2.Heating condition: Indoor DB=21°C(69.8°F), entering water temperature 60°C(140°F), the same amount of water flow as with cooling.
- 3.Noise level is tested base on GB/T 19232-2003.
- 4.Air flow rate is tested when FCU operates in a dry state and 20°C(68°F) air inlet dry bulb temperature.
- 5.All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

# Four-way Cassette Type Fan Coil Unit (four-pipe system)

Model		W05F-	51K4M4	68K4M4	85K4M4	102K4M4	136K4M4	170K4M4	204K4M4	238K4M4	272K4M4	
Power supply		AC 208~230V/1Ph/50Hz (60Hz as option)										
Air flow	High speed	m <sup>3</sup> /h	520	650	840	1000	1320	1660	1950	2090	2720	
	Middle speed	m <sup>3</sup> /h	420	510	670	800	1050	1330	1560	1670	2040	
	Low speed	m <sup>3</sup> /h	310	390	500	600	790	1000	1170	1250	1360	
Static pressure		Pa	0	0	0	0	0	0	0	0	0	
Cooling capacity	TH	High speed	W	2950	3700	4800	5700	7350	9600	10800	11750	13200
			SH	W	2150	2800	3450	4150	5400	7000	8100	8900
	TH	Middle speed	W	2500	3200	4050	4850	6250	8200	9150	10000	11000
			SH	W	1750	2300	2800	3450	4450	5850	6700	7500
	TH	Low speed	W	2000	2550	3350	3900	5100	6600	7450	8150	9100
			SH	W	1350	1800	2250	2750	3550	4600	5350	5900
Heating capacity	High speed		W	3000	3750	4850	5750	7400	9700	10900	11850	13500
	Middle speed		W	2550	3200	4100	4850	6250	8200	9250	10050	11200
	Low speed		W	2000	2500	3250	3850	4950	6500	7300	7950	8750
Noise level	High speed		dB(A)	40	42	42	44	46	47	50	51	53
Power input	High speed		W	50	58	70	95	130	160	190	210	230
Coil		High efficient copper pipe to wear Hydrophilic aluminum coil										
Fan		Cross-flow										
Motor		AC motor; The motor insulation system shall be Class E										
Water flow rate	Chilled pipe	m <sup>3</sup> /h	0.5	0.64	0.81	0.97	1.25	1.64	1.83	2	2.2	
	Hot water pipe	m <sup>3</sup> /h	0.33	0.42	0.54	0.64	0.82	1.08	1.21	1.32	1.5	
Pressure drop	Chilled pipe	kPa	13	22	18	25	23	28	33	42	42	
	Hot water pipe	kPa	8	13	11	15	15	19	23	26	30	
Coil connection & drain pipe		Inch	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
Dimension	Unit	LxWxH	mm	590x590x242	590x590x242	590x590x242	750x750x242	750x750x242	840x840x242	840x840x292	840x840x292	946x946x292
	Panel		mm	650x650x40	650x650x40	650x650x40	850x850x40	850x850x40	950x950x40	950x950x40	950x950x40	1050x1050x40
Weight	Unit (drained by pump)		kg	24	25	28	29	31	32	33	35	38
	Panel		kg	5	5	7	7	8	8	9	9	11

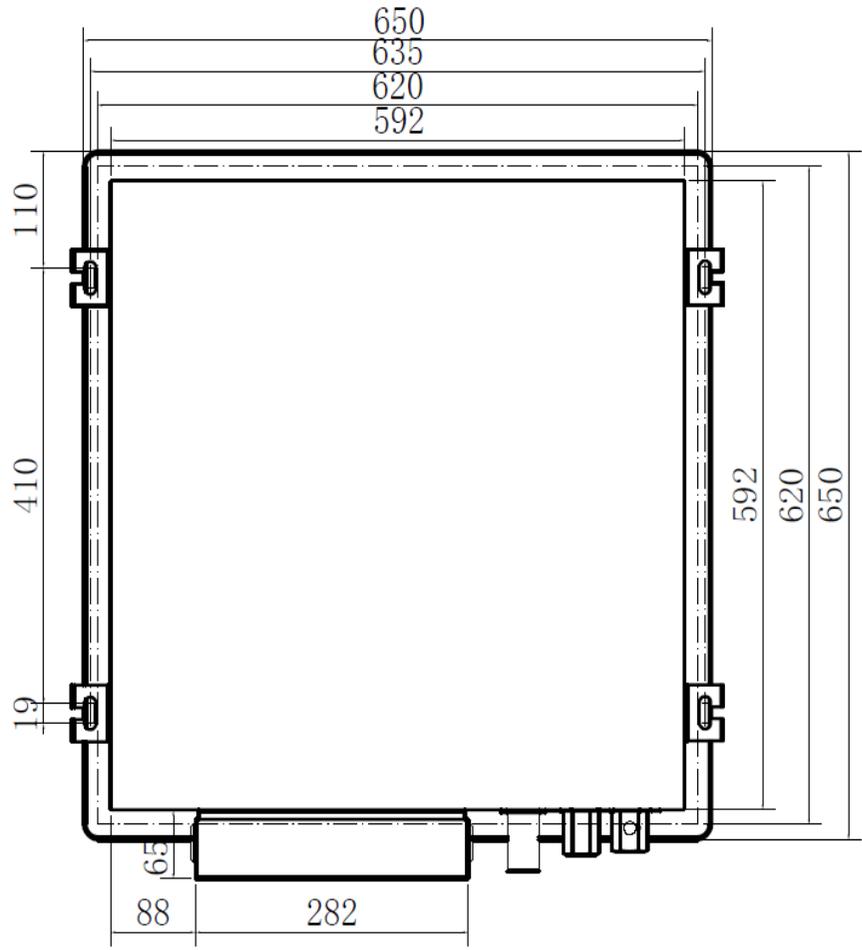
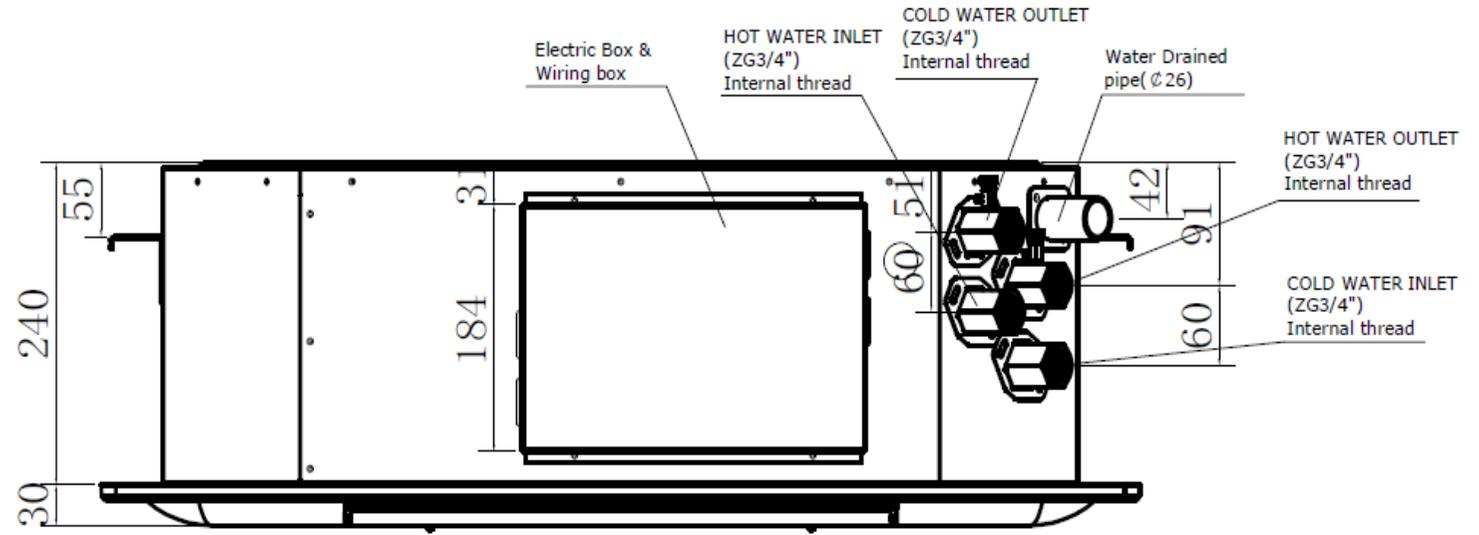
## Notes:

1. Cooling condition: indoor DB=27°C (80.6°F), WB=19.5°C (67.1°F), EWT 7°C (44.6°F), temperature difference between EWT and LWT: 5°C (41°F).
2. Heating condition: Indoor DB=21°C (69.8°F), entering water temperature 60°C (140°F), the same amount of water flow as with cooling.
3. Noise level is tested base on GB/T 19232-2003.
4. Air flow rate is tested when FCU operates in a dry state and 20°C (68°F) air inlet dry bulb temperature.
5. All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

# Installation Dimension

Model:

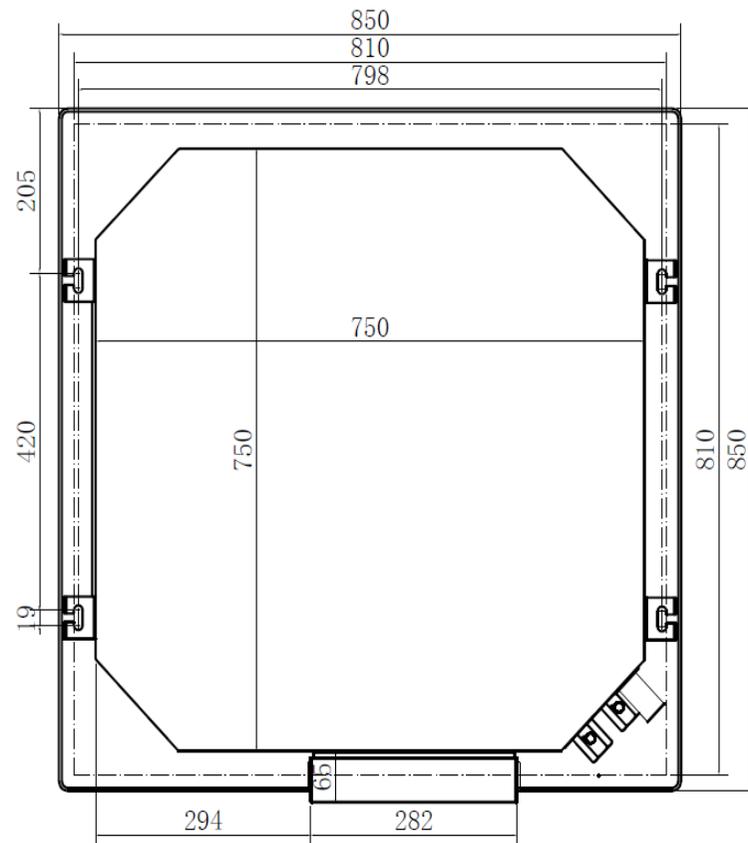
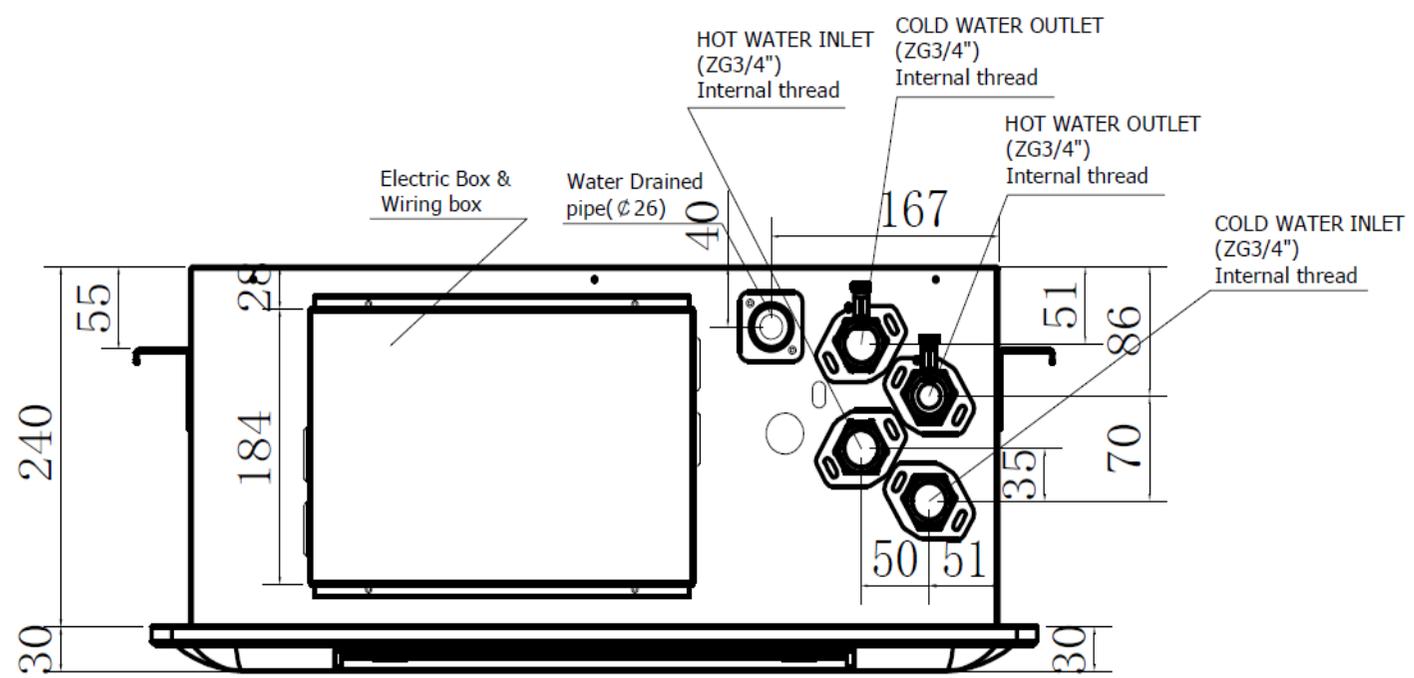
- W05F-51K4M
- W05F-68K4M
- W05F-85K4M



Model:

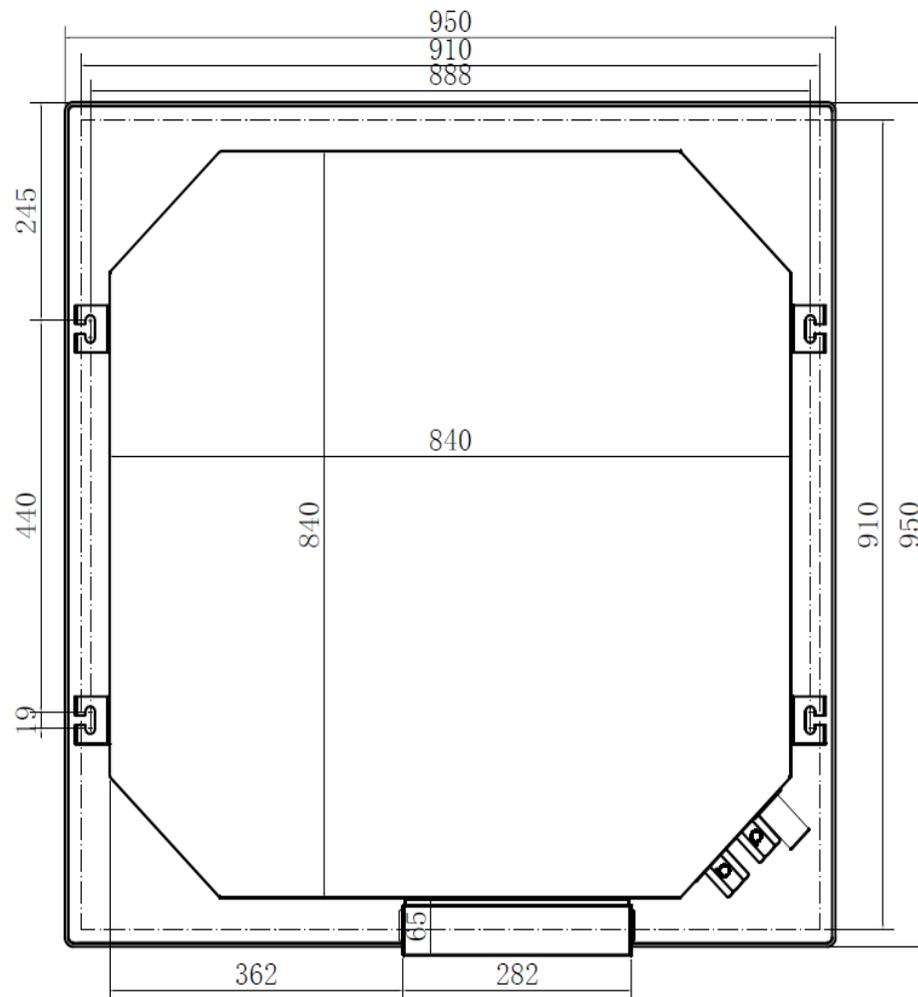
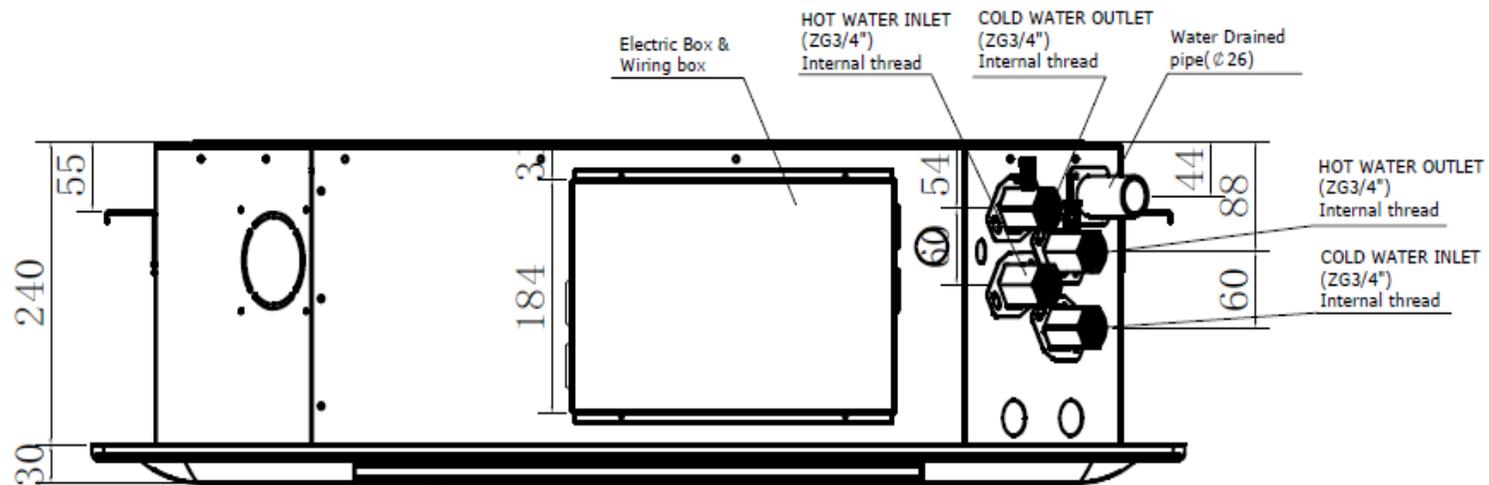
W05F-102K4M

W05F-136K4M

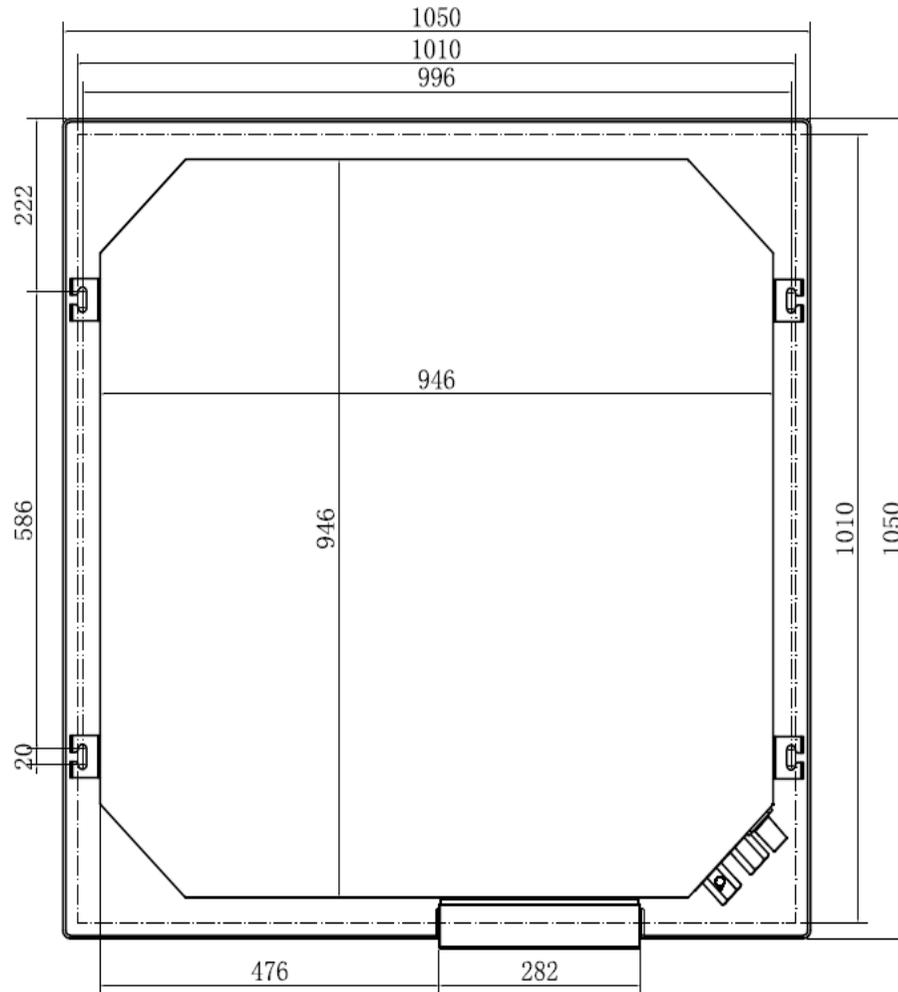
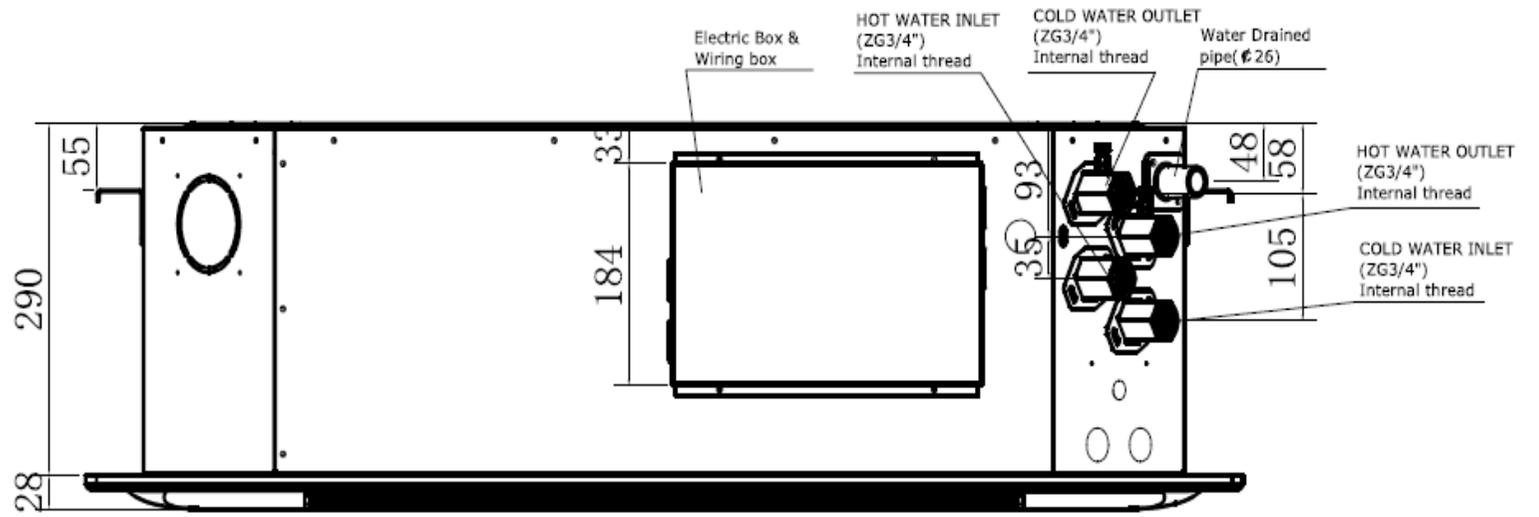


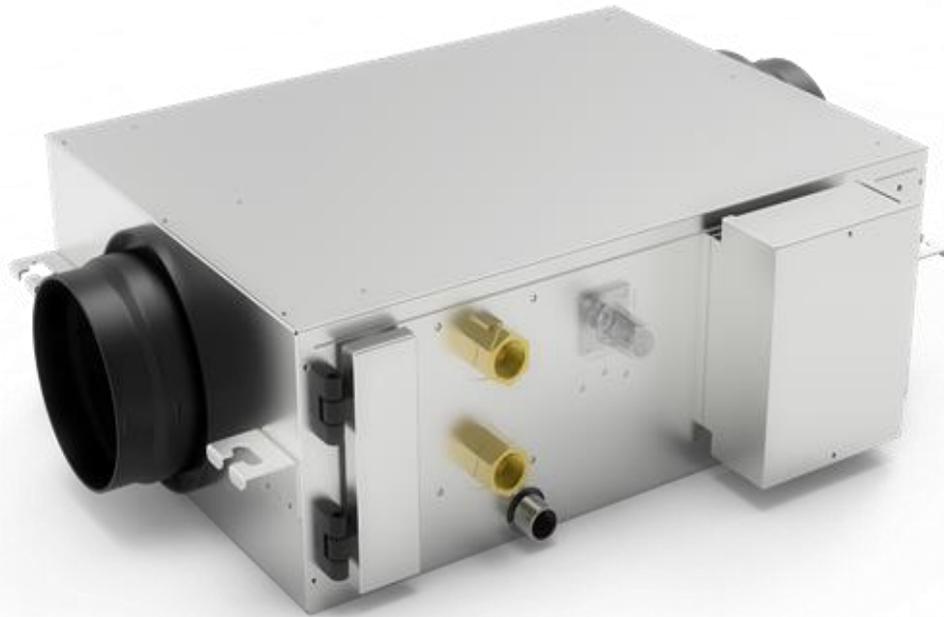
Model:

- W05F-170K4M
- W05F-204K4M
- W05F-238K4M



Model:  
W05F-272K4M





### —— Characteristic ——

1. Slim FCU body is specially designed for limited space;
2. The round air inlet and outlet, make the installation easily;
3. Equipped DC brushless motor to adjust the static pressure;
4. Reasonable structure design makes it more convenient to replace the filter and daily maintenance;
5. Condensated water drained pump as option to save the space ceiling;
6. The shell adopts aluminum zinc plate, which greatly improves the corrosion resistance;
7. Standard metal oil fume filter screen, with oil removal efficiency of 70%, especially suitable for kitchen;

# Kitchen and Bathroom Ducted & Concealed Fan Coil Unit (two-pipe system)

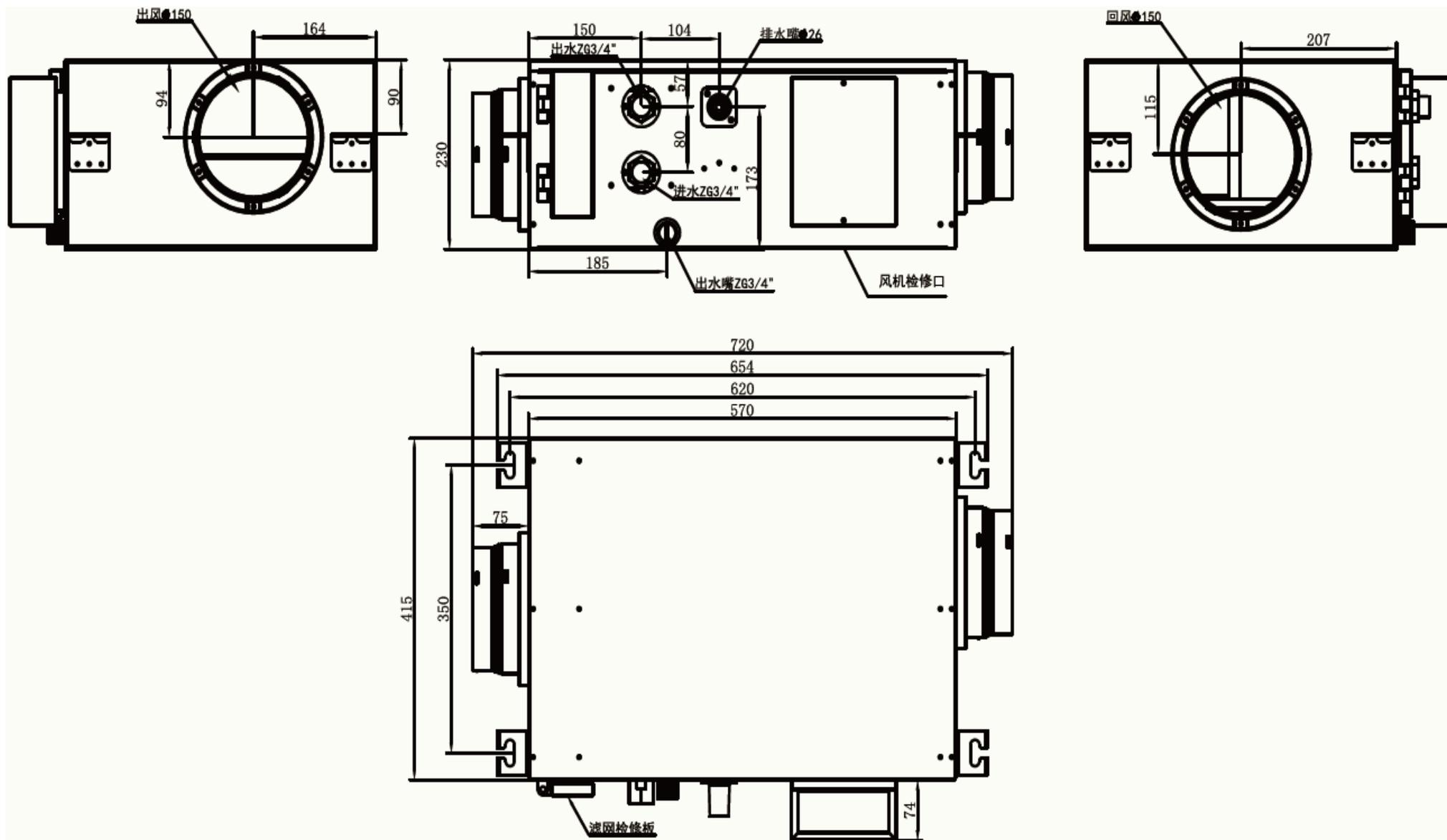
Model		W05F-	30KB	60KB	
Power supply			AC 208~230V/1Ph/50Hz (60Hz as option)		
Air flow	High speed	m <sup>3</sup> /h	300	600	
	Middle speed	m <sup>3</sup> /h	180	360	
	Low speed	m <sup>3</sup> /h	100	200	
Static pressure		Pa	12~30	12~30	
Cooling capacity	TH	High speed	W	1800	3600
	SH		W	1301	2600
	TH	Middle speed	W	1300	2630
	SH		W	950	1945
	TH	Low speed	W	765	1550
	SH		W	485	990
Heating capacity	High speed		W	2900	5800
	Middle speed		W	2080	4180
	Low speed		W	1235	3490
Noise level	High speed		dB(A)	34	36
Power input	High speed		W	20	40
Coil			High efficient copper pipe to wear Hydrophilic aluminum coil		
Fan			Cross-flow		
Motor			EC motor; The motor insulation system shall be Class E		
Water flow rate		m <sup>3</sup> /h	0.31	0.62	
Pressure drop		kPa	21	30	
Maximum working pressure		MPa	1.6	1.6	
Condensated water pipe		mm	26∅	26∅	
Coil connection & drain pipe		Inch	3/4"	3/4"	
Unit dimension	LxWxH	mm	570x415x200	570x650x200	
Net weight		kg	17	22	

Notes:

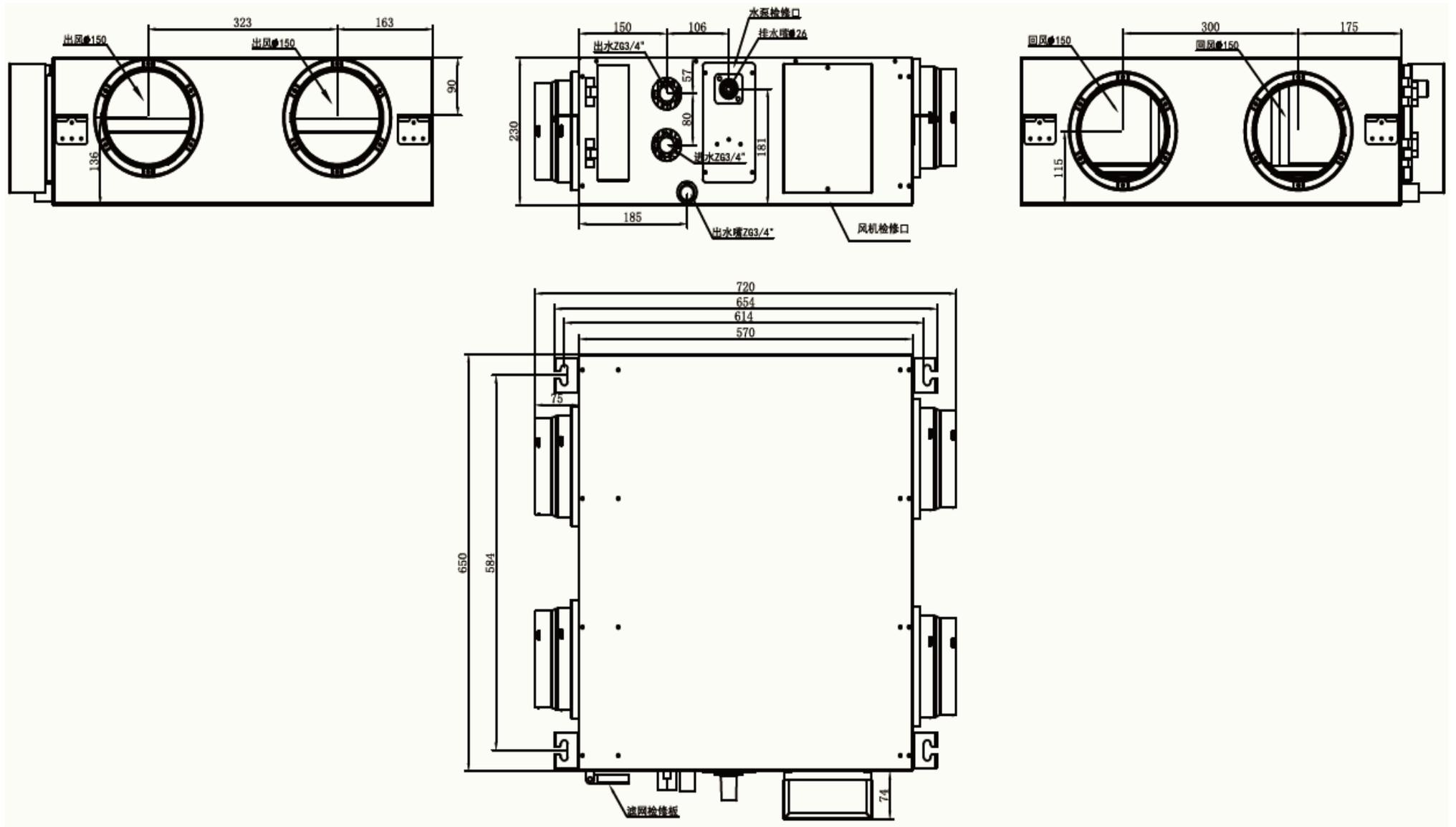
- 1.Cooling condition: indoor DB=27°C(80.6°F), WB=19.5°C(67.1°F), EWT 7°C(44.6°F), temperature difference between EWT and LWT:5°C(41°F).
- 2.Heating condition: Indoor DB=21°C(69.8°F), entering water temperature 60°C(140°F), the same amount of water flow as with cooling.
- 3.Noise level is tested base on GB/T 19232-2003.
- 4.Air flow rate is tested when FCU operates in a dry state and 20°C(68°F) air inlet dry bulb temperature.
- 5.All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

# Installation Dimension

Model: W05F-30KB



Model: W05F-60KB





**—— Characteristic ——**

- 1. Classocal elegant design;**
- 2. The standard static pressure is 60Pa, and unit can change static pressure from 30Pa to 100Pa;**
- 3. Equipped brushless DC motor to adjust the static pressure;**
- 4. Big diameter fan, large air volume, low noise;**
- 5. Brushless DC Motor;**
- 6. The fan kits and coils kit are easy to remover and maintain;**
- 7. Stop valve/ball valve can be built-in unit, which can reduce the job of installation;**
- 8. Auxiliary electric heating as option ;**

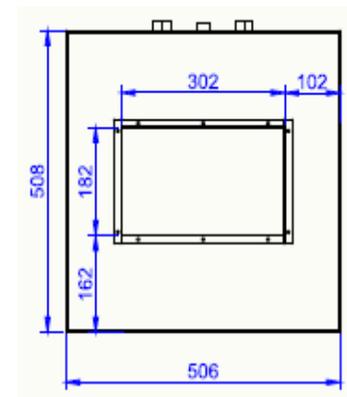
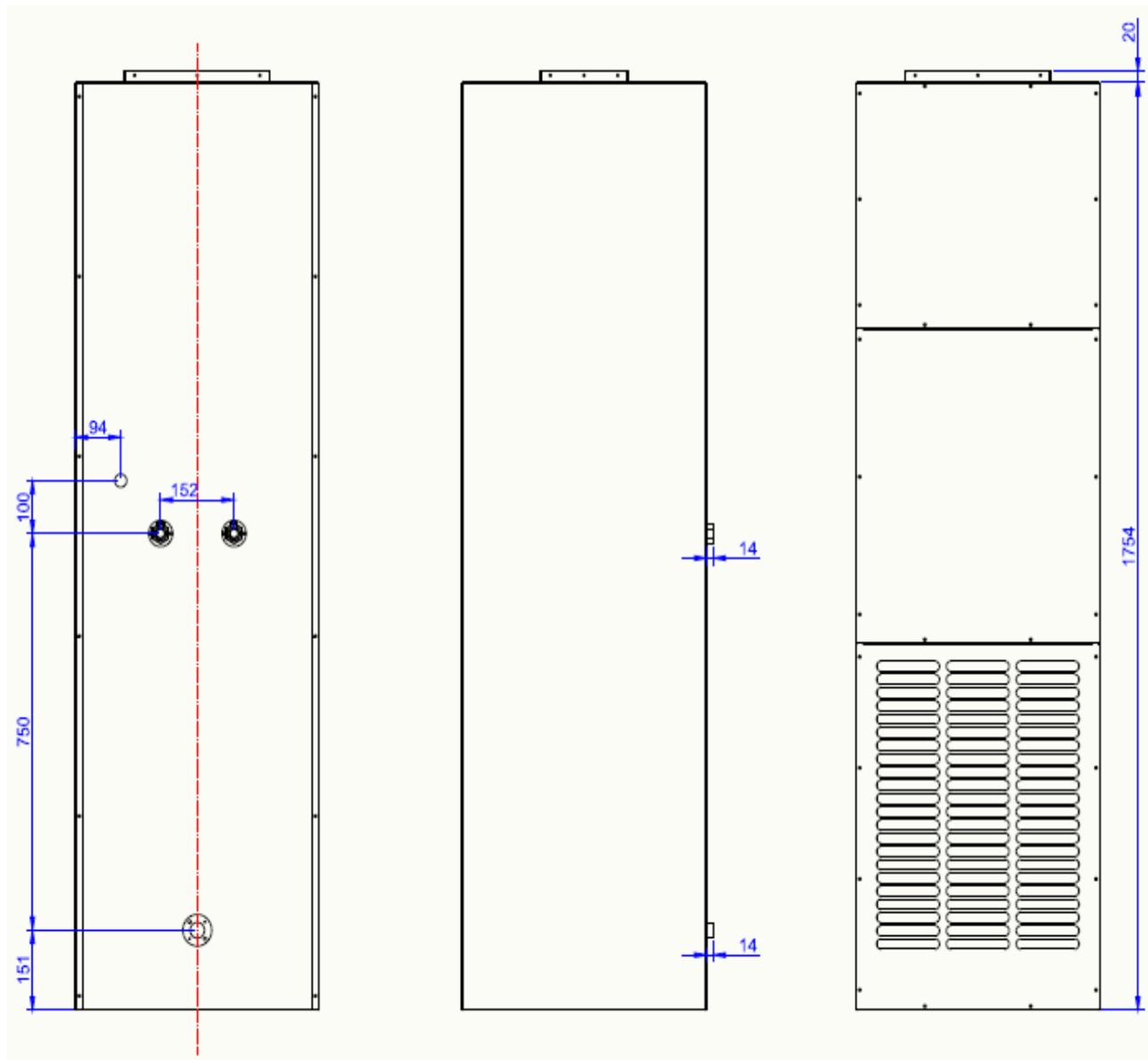
## Vertical High Rise Fan Coil Unit (2-PIPE SYSTEM)

Model		W05F-	102VD	136VD	170VD	204VD	
Power supply			AC 208~230V/1Ph/50Hz (60Hz as option)				
Air flow	High speed	m <sup>3</sup> /h	1020	1360	1700	2040	
	Middle speed	m <sup>3</sup> /h	612	816	1020	1224	
	Low speed	m <sup>3</sup> /h	340	453	567	680	
Static pressure		Pa	60	60	60	60	
Cooling capacity	TH	High speed	W	6300	8100	10000	11500
			SH	4490	5870	7100	8350
	TH	Middle speed	W	4500	5900	7200	8460
			SH	3328	4364	5325	6257
	TH	Low speed	W	2200	2850	3500	4050
			SH	1300	1650	2050	2350
Heating capacity	High speed		W	10100	13000	16000	18400
	Middle speed		W	7298	9393	11561	13295
	Low speed		W	3550	4550	5600	6450
Noise level	High speed		dB(A)	44	48	52	55
Power input	High speed		W	190	220	280	440
Coil			High efficient copper pipe to wear Hydrophilic aluminum coil				
Fan			Cross-flow				
Motor			EC motor; The motor insulation system shall be Class E				
Water flow rate		m <sup>3</sup> /h	1.07	1.38	1.71	1.96	
Pressure drop		kPa	27	30	35	40	
Maximum working pressure		MPa	1.6	1.6	1.6	1.6	
Condensated water pipe		mm	26ø	26ø	26ø	26ø	
Coil connection & drain pipe		Inch	3/4"	3/4"	3/4"	3/4"	
Unit dimension		LxWxH	506x508x1774			608x610x1774	
Net weight		kg	76	81	87	95	

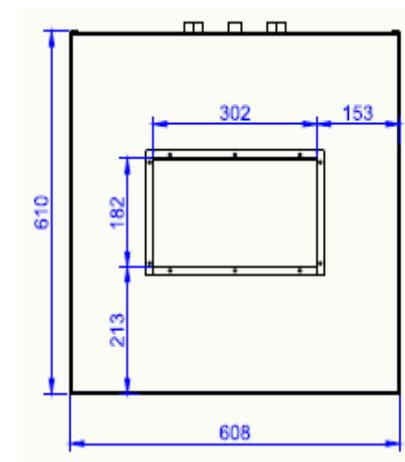
### Notes:

- 1.Cooling condition: indoor DB=27°C(80.6°F), WB=19.5°C(67.1°F), EWT 7°C(44.6°F), temperature difference between EWT and LWT:5°C(41°F).
- 2.Heating condition: Indoor DB=21°C(69.8°F), entering water temperature 60°C(140°F), the same amount of water flow as with cooling.
- 3.Noise level is tested base on GB/T 19232-2003.
- 4.Air flow rate is tested when FCU operates in a dry state and 20°C(68°F) air inlet dry bulb temperature.
- 5.All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

# Installation Dimension



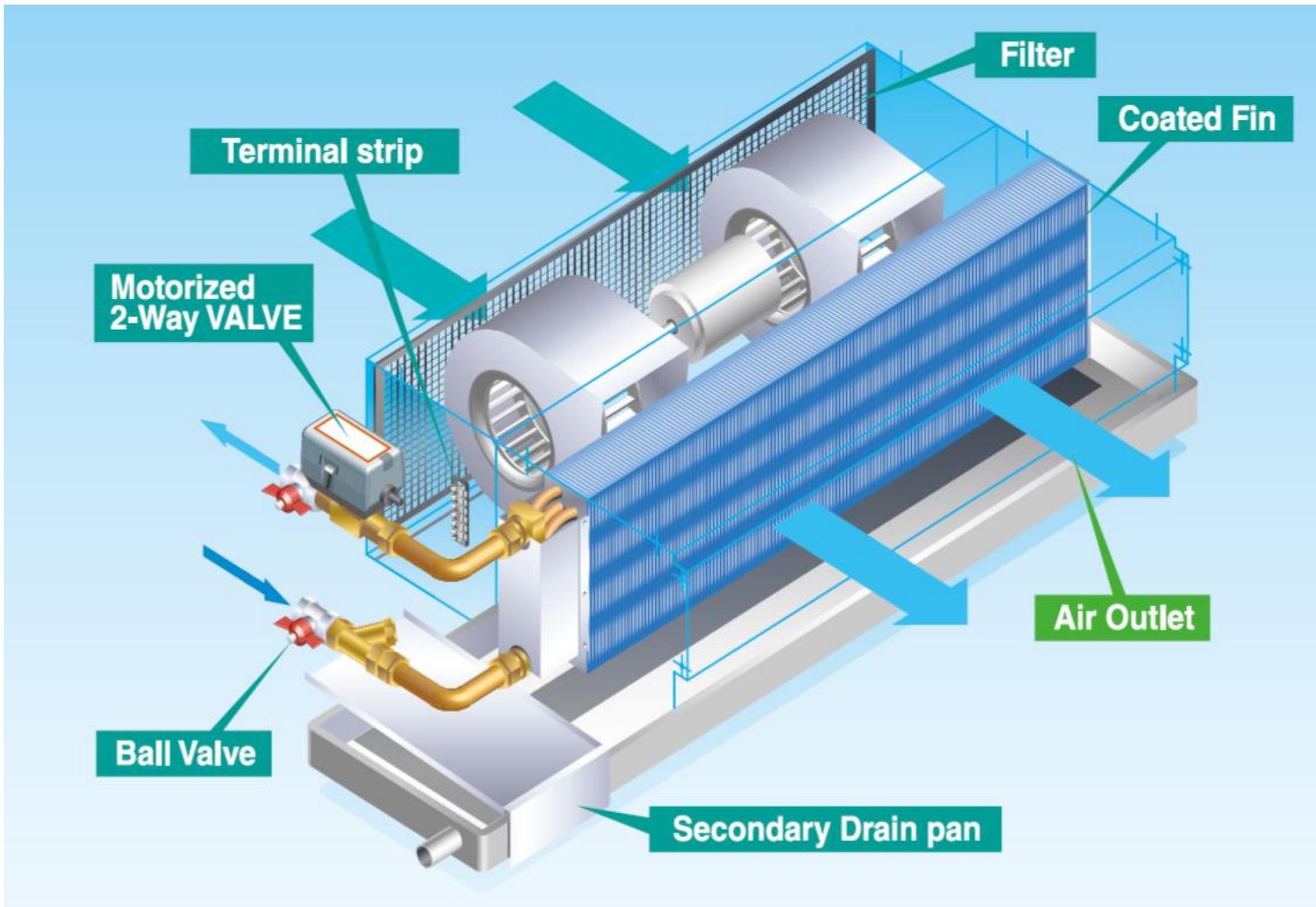
Model: W05F-102VD & 136VC



Model: W05F-170VD & 204VC

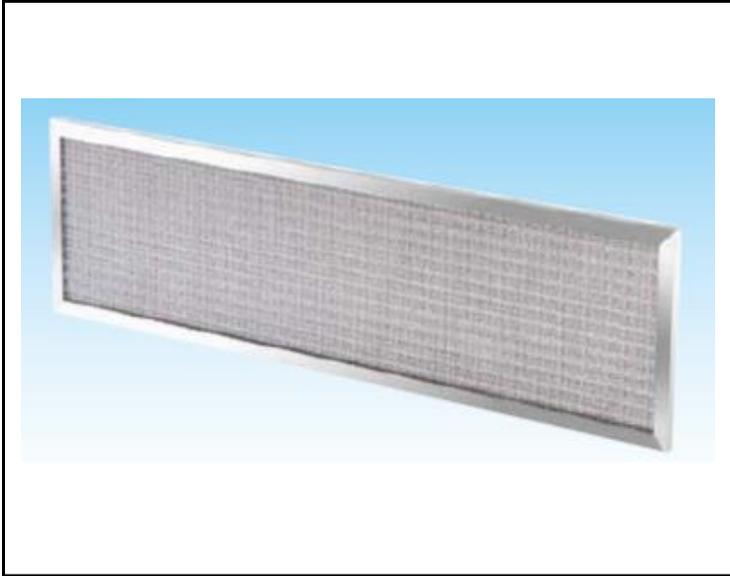
— Unit Configuration Table —

Part name	Brand name	Origin
Coils	Withair	China
Fan	Yilida/Nantai/langdi	China
Motor	Kangbao/sanxiang	China
Water pan	Cheye/yanzi	China
Metal plate	Bao steel	China



— Optional Components —

**Aluminum Filter**



**Fan Coil Unit Thermostat**



**Motorized 2-way Valve**



**Secondary Drain Pan**



**Strainer**



**Ball Valve**



**Air Vent**



**Coated Fin**



**Flow Switch**



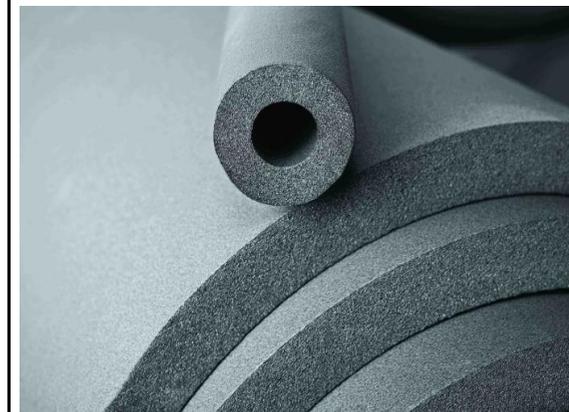
**Stainless Steel Hose**



**Pressure gague**



**Heat Insulation**



Special care must be taken to prevent paint, plaster, insulation or other foreign material from being deposited on the motor, blower wheels or coil. All warranty are void if foreign material is deposited on the motor or blower wheels of any unit.

## **1)Hanging**

Hang unit tightly with hanger bolts at accurately horizontal level at designated location, as shown by chart.

Adjust unit level by hanger-bolts so that drain will always run towards the drain connection.

Failure to this may cause overflow of drain and drip on ceiling tile at cooling operation.

Connect unit with supply and return air ducts after this level adjustment.

## **2)Water and Drain Pipe Connection**

Water and drain pipe connection should be made to the unit in accordance with local codes and ordinances.

First, screw water pipes or valves into water inlet/outlet sockets of coil and check them to make sure that they are in proper operating position (The coil water supply connection should be that connection on the bottom of the coil).

Note: Make sure that all water and drain pipings are insulated after the connection works to prevent condensation and heat loss, and valves are installed over the drain pan.

### Pre-Start Checklist

The following should be checked before the unit is ready for operation,

- All operating personnel read the manual carefully.
- Unit has been installed according to manufacturer's specifications.
- Condensate water drainage pipe is not blocked.
- Ensure no debris in drain pan, blower filters and casing.
- Unit's power supply and controls are properly connected and unit is properly grounded.
- Water piping is properly connected with no leakage.
- Blowers are free to turn, filters are properly installed.
- All the pipes are insulated, valves are opened and air vent is closed.
- Units are installed at appropriate level, draining successfully

### Start-Up Procedure

#### Starting the Fan Coil Unit

- i) Turn on the switch of water pump.
- ii) Start water chiller.
- iii) Operate the fan coil unit by turning on the fan and set the control switch to get the desired speed.
- iv) Inspect the duct and piping condition and rectify problem (e.g. vibration, noise, etc) if necessary.

#### Coil Venting

When water is first introduced into a coil, air is sometimes trapped in the coil tubing. This trapped air will reduce cooling capacity and create "bubbling" or "clanking" noise within the units. To release air trapped inside the coil, first remove the cover of the air vent and then press its head to release air from the air vent opening until a steady stream of water appears. Close the cover.

## — Servicing Methods —

### Fans

- A check on the fan/motor assembly is advisable to ascertain if any overheating of the motor is occurring and if the fan impeller is rotating freely and has not sustained any damages.
- If any overheating is occurring, check if the full load current of the motor is within the nameplate rated value, the impeller is rotating freely and that there is no obstruction upstream or downstream of the fan causing a high resistance with consequent lack of airflow.
- Check the security of the fan fixing bolts.

### Coils

- Coils should be inspected, meanwhile as cleaning the filter, to ascertain if any solids or foreign matter has accumulated in between fins and that the coil connections are free from leaks.
- Should the coil found to be blocked, the coil should be cleaned by using a soft brush and a mild solution of detergent. Great care must be taken not to damage the fins, not to introduce liquid into fan windings or to soak the insulation. Vacuum cleaner and compressed air can be used to remove dirt from heat exchanger.
- Should the fins become contaminated too frequently it is advisable to check the air filter to ensure it is functioning correctly.

### Air Filters

- The purpose of an air filter is to get rid of hazardous material such as dust, coal ash, pollen and other unwanted materials. Dirty filters will not only affect filtration, but also reduce the air volume and hence, affecting the cooling or heating capability.

- Filters should be checked and cleaned at 3-month cycle basis. However filters should be cleaned more often when system is running at high load or dirty environment.

The method of cleaning:

- Use a cleaner to clear dust from dirty filters
- Wash dirty filters with water
- The filter must be disinfected periodically, not less than 2 times a year to prevent forming of bacteria.
- It is prohibited to operate the unit without any filter to prevent rapid blockage of heat exchanger by dust and as a result, poor heat transfer. Thus, it is recommended to install filter at the return air duct to maintain cleanliness of aluminum fins for better and consistent heat exchange.

### Drain Pan

- Drain pan must be checked and cleaned before unit operation to ensure it drains water properly.
- The condensate tray may be removed for cleaning independent of the coil and should be inspected annually.
- Should any debris be found, the condensate tray should be thoroughly cleaned. Also ensure the drain connection is free from obstructions.

### Operating Range

- The highest working water pressure should not be greater than 2.0MPa, whereas the lowest working water pressure should be higher than the water pressure drop of the water system.
- Entering water temperature during summer should not be lower than 3°C and not higher than 65°C during winter.

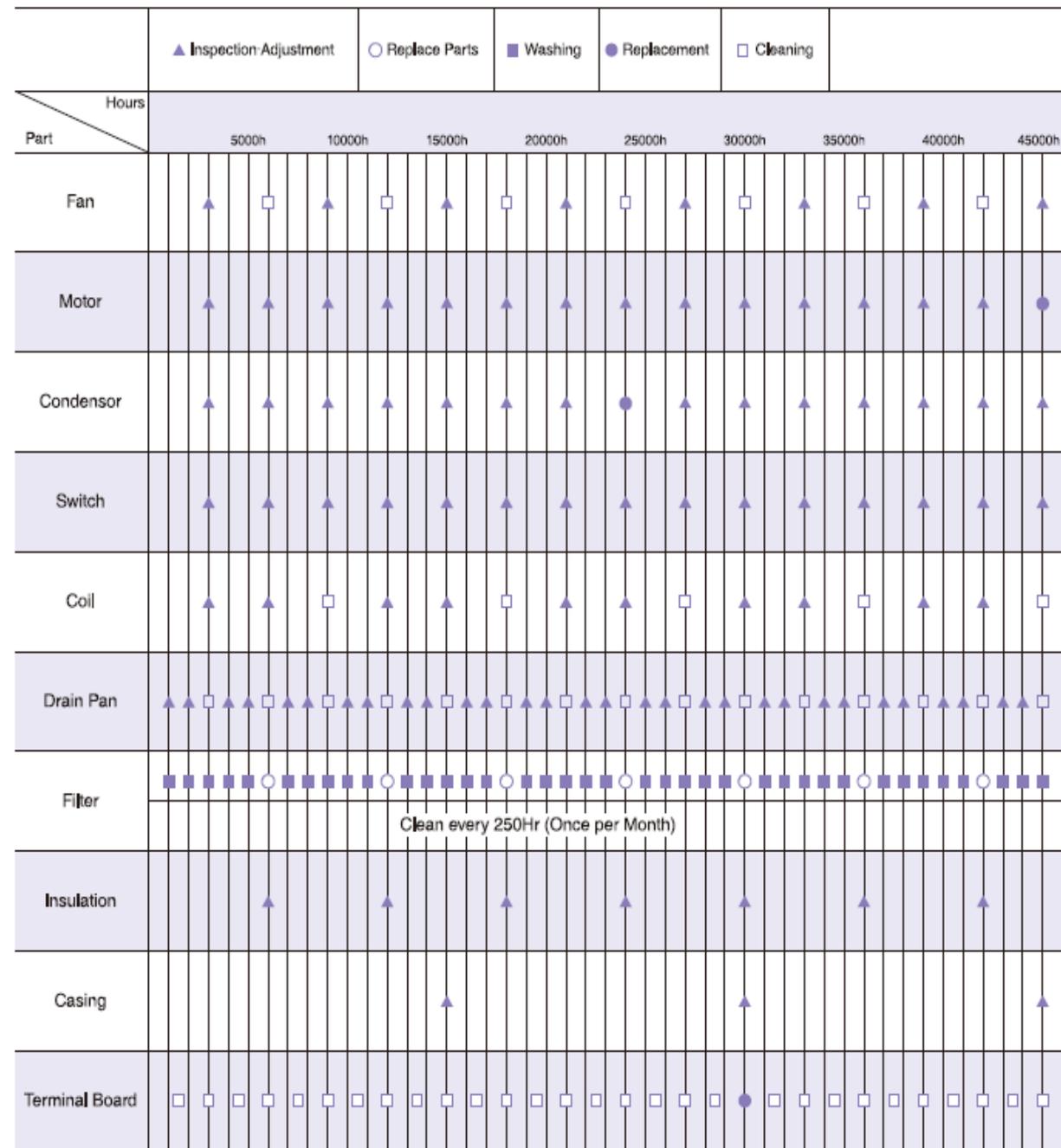
The water must be treated and ensure it is clean for optimum performance. Otherwise, it may lead to system malfunction, corrosion and breeding of bacteria.

- It is not recommended to adopt control that allows flowing of cool water through heat exchanger with fan motor idle. This will cause extensive condensation not only on the heat exchanger but on the surface of casing due to very low air temperature in the unit. If the control do not prevent chilled water flowing through heat exchanger during idling of fan motor, it is recommended to close the water circuit through manual hand valve.
- When the unit is not going to be used for long period, the water pipes and heat exchanger should be filled with water to reduce internal corrosion. If the unit is going to be idle throughout the winter, the water pipe should be drained completely and anti-freeze procedure should be implemented to prevent water pipe breakages.

# Standard Maintenance Guide

The maintenance guide below is the general guide line. The contents may change according to the running/installation conditions.

Item	Task Description
Air filter	Clean or renew. (Part of the three monthly (nominal) maintenance)
Unit cabinet and component	Vacuum and clean internally
	Condensate tray - clean and check drainage
	Inspect fan impeller(s) and bearings for wear and movement
	Check heater element electrical connections for tightness
	Check all wiring for insulation damage and tightness of connections
	Inspect unit suspension fittings for secureness and signs of failure
Earth wiring and connections	Check connections
Fan(s)	Check for noise or vibration
Condensate pump (if fitted)	Carry out maintenance and check operation
Electrical Heater (if fitted)	Overload setting
Control functions	Cooling ON/OFF temperature control
	Heating ON/OFF temperature control
	Temperature set point
Finalising preventive maintenance checks	Restore temperature control to its normal value
	Record return air temperature



- Note
1. Running time is based on 10hr/day, 300days/year, 3000hr/year.,
  2. In case of non-standard unit, the maintenance cycle will change.
  3. Maintenance cycle of filter will change according to the installation condition.
  4. Maintenance of motor shall be conducted by professionals.

## — Troubleshooting —

When any malfunction of the fan coil unit is noted, immediately switch off the supply to the unit.

Check for the following fault conditions and causes for some simple troubleshooting tips.

Faults	Possible Causes	Remedial Actions
No air flow	Fan and motor failure	Check supply and wiring continuity
		Check motor for fault and renew if necessary
		Check for fan free rotation, bearings for wear and adequate clearance
		Check fan resistance for stall conditions in ducts etc
		Check for capacitor faulty and renew if necessary
		Check for power supply transformer and renew if necessary
	Duct blockage	Clear blockage
Damper(s) partially closed	Reposition damper(s) to give correct air flow	
Fan impeller loose on its shaft	Renew fan	
Low air flow	Dirty air filter	Clean or renew the filter
	Blocked ducting	Clear blockage
	Doors and windows opened	Keep the conditioned area closed
	Regulated temperature is not high	Change the right temperature
	Air duct leakage	Repair leakage point
	Duct resistance exceeds design	Increase fan speed setting at the 3-speed switch
High air flow	Air duct leakage	Repair leakage point
	Missing air filter	Install air filter
	Duct resistance below design	Lower fan speed setting at the 3-speed switch
Discharge airflow has bad odour	Odour may be caused by cigarettes, smoke particles, perfume etc, which might have adhered onto coil surface	Coil Cleaning
Insufficient cooling capacity	Water chilling plant faulty	Repair or renew if necessary
	Temperature setting too high	Lower setting temperature
	Thermostat faulty	Replace if necessary
	Flow control valve fault	Replace new flow control valve
	Airlock present in system	Check system design - correct as necessary
	Water system blockage	Clear blockage
	Strainer choked	Replace new strainer
Condensate Leak	Blocked drain line	Clear blockage
	Pump (if fitted) inoperative or faulty	Repair or renew if faulty. Refer to manufacturer's instructions
	Dirty air filter	Clean or renew air filter
	High lateral resistance	Check system design - correct as necessary
	Leaking condensate tray	Repair or renew the condensate tray
Condensation on the front air grille	Caused by air humidity after an extended long period of time	
	Temperature setting too low	Increase setting temperature with high fan speed

## — Delivery & Packaging —

- 100% test before delivering products.
- Products catalogue, installation & operation manual will be sent together.
- Tracking number will be sent to customer as soon as we ship the products.
- Item shipped in 25 working days against payment depends on the quantity.
- Four steps of packages, plastic film, foam, carton and plywood for stable transportation.
- Ocean shipping, railway shipment and air transportation are acceptable according to customer demand.

## — You May Like —



Fan Coil Unit +



Air Vent +



Flow Switch +



Pressure gague +



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Thermostat



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