



## DECORATIVE FANCOIL UNITS – TECHNICAL BOOK





## 1. Introduction

We thank you very much for your kind attention to Wolf International products.

Wolf International (Wolf International) is committed to provide high quality Air Condition and related products. The product range extends from as small as 0.5 Ton Window AC to 4000 Ton Centrifugal Chillers. This is possible in strategic alliances with many factories around the world, in addition to the WOLF GMBH setup in Germany.

In this Technical Data book we are introducing technical details for WFC range of WOLF CHW Decorative Fan Coil Units. WFC range units include many types and incorporate Five types such as Wall mounted, Ceiling & Floor, Cassette 4 & 1 way and Vertical Exposed.

It comes with various optimizes such as wired control digital thermostat or with remote control, 2 way valve, 3 way valve with actuator and various control devices interpolated Building Management System (BMS).

This type of units has wide range of application such as residential villas, Hotels, apartments, offices, Hospitals, Meeting Halls, schools and other high rise Buildings Due to its low height the installation is much easier. The lowest sound levels are key features of Wolf International units.

Kindly utilize the information for your Air Conditioning System design from this Technical Data Book (TDB).

We look forward to doing business with you regularly



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W FC - 34 - Ca

Ca - Cassette  
Ce - Ceiling & Floor  
VE - Vertical Exposed  
W - Wall Mounted

Air flow => 34 x 10 (M3/H)

Unit Type  
FC : Fan Coil

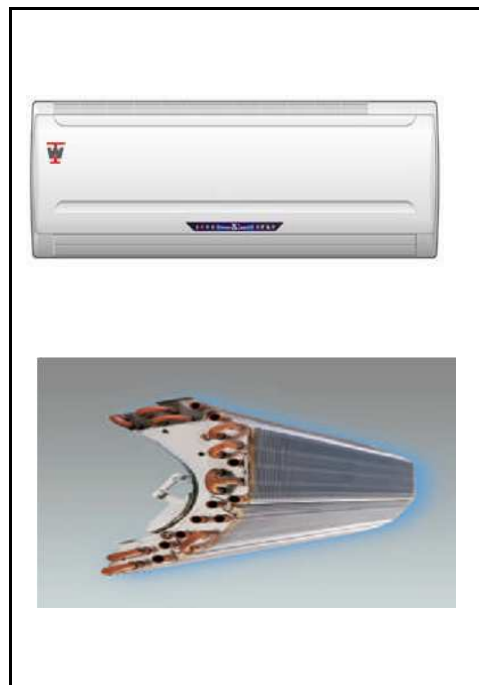
W : Wolf International



## WALL MOUNTED AND CEILING & FLOOR

### 1 CASING

The special features of the high wall and (Universal) Ceiling & Floor Fan coil allow a wide employment both in hotels, flats and offices. Ideal both for summer cooling, the fan-coil unit consists of the following parts: casing, high efficiency heat exchanger, finned coil has been specially designed and manufactured to make the unit as much as compact, fan, condensation drain pan, leads, infrared remote control, manual switch, air filter. The fan-coil is moreover fitted with adjustable fins to change the airflow direction and obtain the best distribution in the room. The air filters are easy removable and can be washed with water. All models are equipped with ionization: this function allows the air purification grouping the dust and neutralizing the microbes. The power flash over in high voltage transmitted to carbonic fibres produces ions which purify the air. option: Condensing pump. Available only 2-tubes coil (cooling) version.



### 2 FINNED COIL

Tubes are manufactured from 9,5 mm (3/8") OD copper and are staggered for greater heat Transfer. High efficiency louvered aluminum fins are bonded onto the tubes which terminate with high Quality brass headers. These have 3/4" Female ISOR7 connections.

### 3 FAN & FAN MOTOR

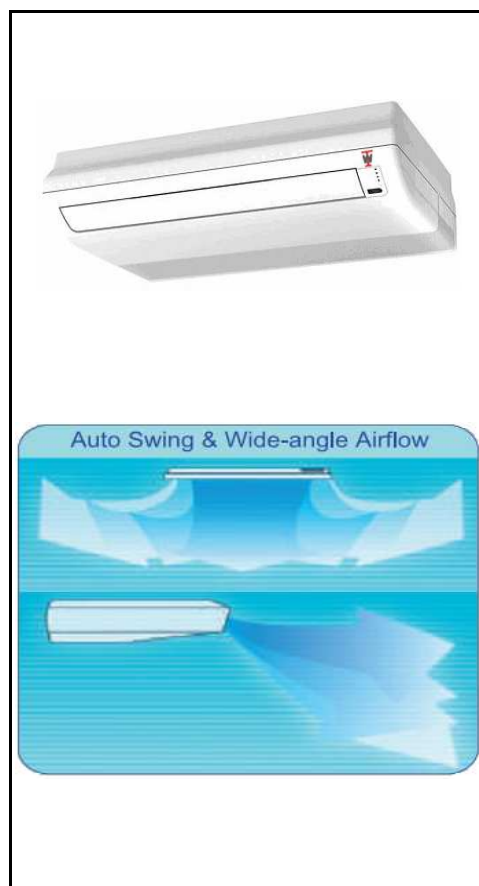
One or more centrifugal fans are fitted with galvanized scrolls and aluminum impellers which provide a spark free application in case of accidental contact between fan and scroll. Fans are statically and dynamically balanced. Fan decks can be easily removed.

### 4 FILTER

The synthetic media is cleanable and enclosed in galvanized frame with wire mesh support. It is easily removed for cleaning and maintenance and its efficiency is class G3-M1.

### 5 DRAIN TRAY

Provided to collect and drain away condensate they are manufactured from galvanized sheet steel with an epoxy paint finish on both sides. The drain tray is fully insulated with 5 mm closed cell Polytene foam which has a class "1" European standard fire proof. Alternative insulation types and stainless steel drain trays are also possible.





**(a).DECORATIVE FAN COIL UNITS  
WALL MOUNTED**



PERFORMANCE BASIC PARQMETERS					
WOLF MODEL			WFC-68W	WFC-85W	WFC-102W
Air flow	High	M <sup>3</sup> HR / CFM	680 / 400	850 / 500	1020 / 600
	Medium	M <sup>3</sup> HR / CFM	520 / 306	720 / 424	880 / 518
	Low	M <sup>3</sup> HR / CFM	400 / 235	605 / 356	700 / 412
Rated cooling capacity	High	KW / TMBH	3.78 / 12.90	4.37 / 14.92	5.57 / 18.99
	Medium	KW / TMBH	3.46 / 11.79	4.13 / 14.10	4.73 / 16.12
	Low	KW / TMBH	3.08 / 10.50	3.34 / 11.42	3.89 / 13.26
Power		V/PH/Hz	220-240,1~,50/60		
Noise level		dB(A)	≤40	≤45	≤48
Fan motor	Type	Direct drive, Cross flow fan			
	Input power	W	38	48	58
	Power supply	V/PH/Hz	220-240,1~,50/60		
Water flow		Gpm	2.87	3.32	4.22
Water resistance		Kpa	18.1	19.76	20.12
Unit demension		mm	890×290×180	1030×290×185	1080×330×215
Packing demension		mm	1000×380×250	1160×380×260	1200×400×280
Weight		kg	12.5	13	16
Inlet and outlet water pipe		mm	ZG1/2"	ZG1/2"	ZG1/2"
Draining pipe		mm	Rc3/4"		

Cooling condition: Air Inlet Temperature DBT / WBT 27°C / 19.5°C

Chilled water Inlet / Outlet Temperature: 7°C / 12°C



**(b).DECORATIVE FAN COIL UNITS  
CEILING & FLOOR**



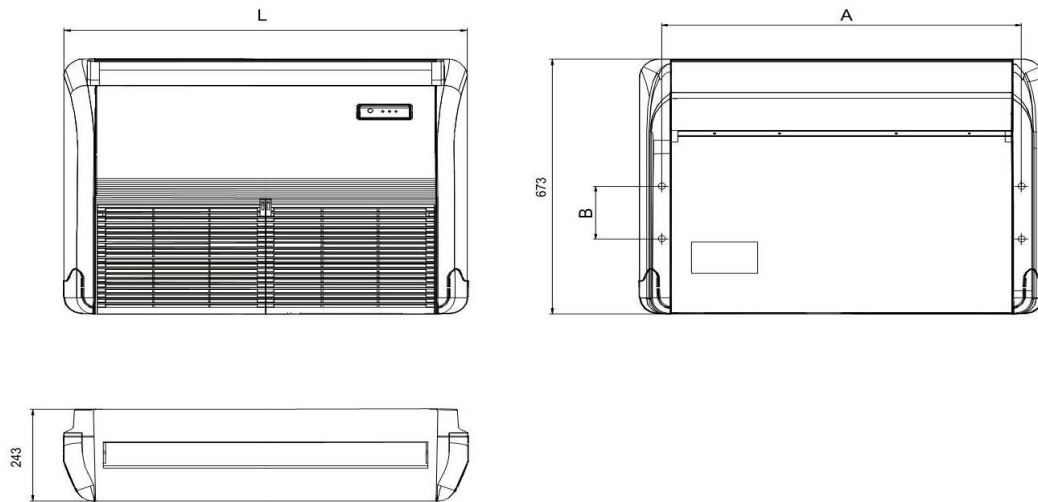
PERFORMANCE BASIC PARQMETERS									
WOLF MODEL			WFC-51Ce	WFC-68Ce	WFC-85Ce	WFC-102Ce	WFC-136Ce	WFC-170Ce	WFC-204Ce
Air flow	High	M <sup>3</sup> HR / CFM	510 / 300	680 / 400	850 / 500	1020 / 600	1360 / 800	1700 / 1001	2040 / 1201
	Medium	M <sup>3</sup> HR / CFM	380/220	510/300	638/375	765/500	1020/600	1275/750	1530/900
	Low	M <sup>3</sup> HR / CFM	255/150	340/200	425/250	510/300	680/400	850/500	1020/600
Rated cooling capacity	High	KW/ TMBH	2.50 / 8.53	3.50 / 11.94	5.00 / 17.06	6.50 / 22.18	7.00 / 23.88	12.00 / 40.94	14.00 / 47.77
	Medium	KW/ TMBH	1.86 / 6.26	2.63 / 8.96	3.75 / 12.80	4.88 / 18.48	5.25 / 17.91	9.00 / 30.67	10.50 / 35.80
	Low	KW/ TMBH	1.25 / 4.27	1.75 / 5.97	2.50 / 8.53	3.25 / 11.09	3.50 / 11.94	6.00 / 20.45	7.00 / 23.87
Power		V/PH/Hz	220-240,1~,50/60						
Noise level		dB(A)	≤42	≤42	≤45	≤48	≤48	≤50	≤50
Fan motor	Type		Direct drive, Cross flow fan						
	Input power	W	45	50	65	110	120	150	190
	Power supply	V/PH/Hz	220-240,1~,50/60						
Water flow		Gpm	1.90	2.65	3.79	4.93	5.31	9.10	10.62
Water resistance		kPa	14	16	18	22	25	39.5	44
Unit dimension		mm	905×673×240			1288×673×240		1673×673×240	
Packing dimension		mm	995×765×320			1375×765×320		1760×765×320	
Weight		kg	25	25	30	40	40	45	45
Inlet and outlet water pipe		mm	Rc3/4"						
Draining pipe		mm	Rc3/4"						

Cooling condition: Air Inlet Temperature DBT / WBT 27°C / 19.5°C

Chilled water Inlet / Outlet Temperature: 7°C / 12°C



## Ceiling & Floor Fan coil units



MODEL NO	L	A	B
WFC-51Ce	950	805	280
WFC-68Ce	950	805	280
WFC-85Ce	950	805	280
WFC-102Ce	1333	1188	280
WFC-136Ce	1333	1188	280
WFC-170Ce	1715	1570	280
WFC-204Ce	1715	1570	280

## CASSETTE 4 WAY & ONE WAY

### Hydronic ceiling cassette units offer:

- 8 - four way / 4 - one way chilled water cooling models to properly match job
- Wall-mounted thermostat
- Installation cost savings through use of existing piping and/or wiring
- Low noise level construction
- Optional microprocessor based controller with infrared transmitter

### 1 Features/Benefits

Ceiling cassette units make each served area an independent controlled temperature zone to suit diverse requirements.

### 2 Construction

Cases are constructed of lightweight galvanized sheet steel with integral fan mounting rails for added strength. Fire resistant foam insulation (rated to UL94 VO) is fitted internally to provide both thermal and acoustic insulation. The pearl-gray fascia is constructed of high-impact polystyrene.

### 3 Chilled water coil

Units utilize large surface area coils positioned to optimize heat transfer and airflow. Each coil is manufactured from copper tubes with mechanically bondheaders to ensure low water pressure drops.

### 4 Fan

The backward-curved, centrifugal, fans are statically and dynamically balanced for quiet operation. Fan impellers are made from either aluminum or fire-retardant plastic (UL94 VO) for lightweight and corrosion-resistant operation. Enclosed multi-speed external rotor fan motor allows good heat dissipation and increased motor efficiency. Fans come complete with thermal over load protection and sealed-for-life lubricated bearings.

### 5 Filtration

Reusable wire framed filters are fitted and may be vacuum cleaned.

### 6 Condensate pump

A condensate pump is fitted to carry water out of the unit. The pump is fixed to a mounting bracket which can be withdrawn from the side of the chassis and incorporates an inspection hole to allow a visual check of the pump during operation. A float switch is fitted to stop the cooling action should the pump become blocked or fail.

### 7 Air vanes

Air outlet vanes are manufactured from aluminum and covered with nylon flock to prevent condensation from forming. Vanes are manually adjustable on unit sizes 08,12 and driven by an electric motor on unit sizes 18-36. Motorized air vanes can be set to auto sweep or can be stopped in a fixed position. Polystyrene blanking pieces are supplied with cassette packing so that up to two fascia discharge slots can be blanked off.

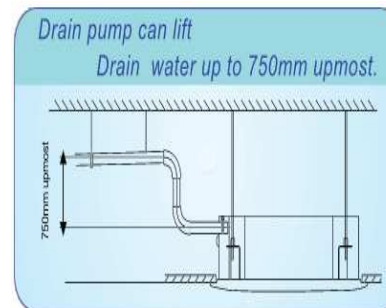
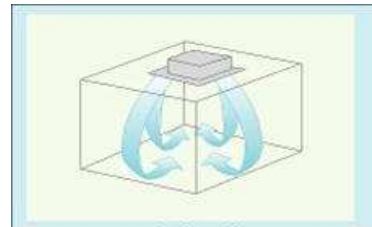
### 8 Options and Accessories

#### Factory-installed options:

- Electro-mechanical control
- Microprocessor control
- Disconnect switch
- Step-up transformer

#### Field - installed accessories

- Chilled water control valve
- Fresh air intake
- Duct collars
- Spare filters
- Thermostats





**(c).DECORATIVE FAN COIL UNITS  
CASSETTE (FOUR-WAY)**



PERFORMANCE BASIC PARQMETERS										
WOLF MODEL			WFC-51Ca	WFC-68Ca	WFC-85Ca	WFC-102Ca	WFC-136Ca	WFC-170Ca	WFC-204Ca	WFC-238Ca
Air flow	High	M <sup>3</sup> HR / CFM	510 / 300	680 / 400	850 / 500	1020 / 600	1360 / 800	1700 / 1001	2040 / 1201	2380 / 1401
	Medium	M <sup>3</sup> HR / CFM	382 / 225	510 / 300	638 / 376	765 / 450	1020 / 600	1275 / 750	1530 / 901	1785 / 1051
	Low	M <sup>3</sup> HR / CFM	255 / 150	340 / 200	425 / 250	510 / 300	680 / 400	850 / 500	1020 / 600	1190 / 700
Rated Cooling Capacity	High	KW/ TMBH	2.71 / 9.25	3.62 / 12.34	4.51 / 15.40	5.41 / 18.45	7.21 / 24.60	9.02 / 30.77	10.81 / 36.88	12.61 / 43.03
	Medium	KW/ TMBH	2.03 / 6.94	2.72 / 9.26	3.39 / 11.58	4.06 / 13.84	5.41 / 18.45	6.77 / 23.05	8.11 / 27.67	9.46 / 32.28
	Low	KW/ TMBH	1.36 / 4.63	1.81 / 6.17	2.26 / 7.70	2.71 / 9.23	3.61 / 12.30	4.51 / 15.37	5.41 / 18.42	6.31 / 21.50
Power	V/PH/Hz	220,1~50								
Noise level	dB(A)	39	40	42	44	45	48	50	51	
Fan motor	Type	Three speed capacitive motor								
	Input power	W	50	57	67	90	131	145	186	225
	Power supply	V/PH/Hz	220,1~50							
Water flow	Cfm	2.06	2.74	3.42	4.10	5.47	6.84	8.20	9.56	
Water resistance	kPa	26	27	29	31	34	36	39	42	
Panel weight	kg	2.2			7			7		
Unit weight	kg	20			25			28		
Panel dimension	mm	650×650×30			950×950×55			950×950×55		
Unit dimension	mm	570×570×255			835×835×240			835×835×280		
Inlet and outlet water pipe	mm	Rc3/4"(DN20)								
Draining pipe	mm	R3/4"(DN20)								

Cooling condition: Air Inlet Temperature DBT / WBT 27°C / 19.5°C

Chilled water Inlet / Outlet Temperature: 7°C / 12°C



**(d).DECORATIVE FAN COIL UNITS  
CASSETTE (ONE-WAY)**



PERFORMANCE BASIC PARQMETERS						
WOLF MODEL			WFC-34Ca/1W	WFC-51Ca/1W	WFC-68Ca/1W	WFC-85Ca/1W
Air flow	High	M <sup>3</sup> HR / CFM	340 / 200	510 / 300	680 / 400	850 / 500
	Medium	M <sup>3</sup> HR / CFM	255/150	382 / 225	510 / 300	638 / 376
	Low	M <sup>3</sup> HR / CFM	170/100	255 / 150	340 / 200	425 / 250
Cooling capacity	High	KW/ TMBH	2.05 / 6.99	2.80 / 9.55	3.65 / 12.45	4.62 / 15.76
	Medium	KW/ TMBH	1.54 / 5.24	2.10 / 7.16	2.74 / 9.34	3.47 / 11.85
	Low	KW/ TMBH	1.03 / 3.50	1.40 / 4.78	1.83 / 6.23	2.31 / 7.88
Power		V/PH/Hz	220,1~,50			
Noise level		dB(A)	37	38	39	40
Fan motor	Type					
	Input power	W	37	52	62	76
	Power supply	V/PH/Hz	220,1~,50			
Water flow		Gpm	1.55	2.12	2.77	3.50
Water resistance		kPa	10.8	10.8	20	20
Panel weight		kg	4	4	4	4
Unit weight		kg	22	22	23	23
Panel dimension		mm	1050×470×18	1050×470×18	1050×470×18	1050×470×18
Unit dimension		mm	850×400×235	850×400×235	850×400×235	850×400×235
Inlet and outlet water pipe		mm	ZG3/4"( ϕ 26)			
Draining pipe		mm	ϕ 26			

Cooling condition: Air Inlet Temperature DBT / WBT 27°C / 19.5°C

Chilled water Inlet / Outlet Temperature: 7°C / 12°C



## VERTICAL EXPOSED

### 1 CASING

Casing have a classic design and are constructed from 1,2 mm carbon steel. The Epoxy polyester powder finish is baked to 180°C and is applied with a minimum thickness of 80 Micron on both sides. The standard colour is pure white RAL 9010

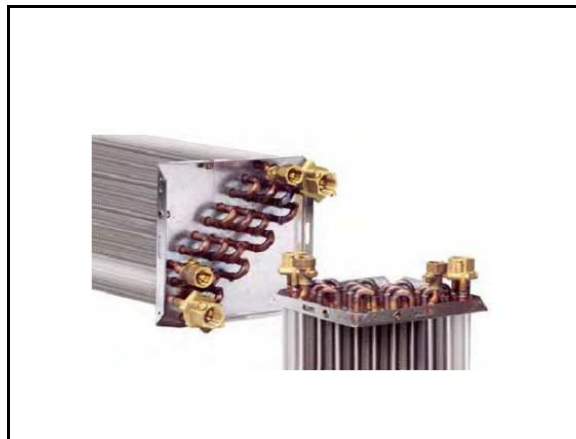
### 2 FINNED COIL

Tubes are manufactured from 9, 5 mm (3/8") OD copper and are staggered for greater heat transfer. High efficiency louvered aluminum fins are bonded onto the tubes which terminate with high Quality brass headers. These have 3/4" Female ISOR7 connections and



### 3 FAN & FAN MOTOR

One or more centrifugal fans are fitted with galvanized scrolls and aluminum impellers which provide a spark free application in case of accidental contact between fan and scroll. Fans are statically and dynamically balanced. Fan decks can be easily removed



### 4 FILTER

The synthetic media is cleanable and enclosed in galvanized frame with wire mesh support. It is easily removed for cleaning and maintenance and its efficiency is class G3-M1

### 5 DRAIN TRAY

Provided to collect and drain away condensate they are manufactured from galvanized sheet steel with an epoxy paint finish on both sides. The drain trays are fully insulated with 5 mm closed cell Polyurethane foam which has a class "1" European standard fire protection







**(e).DECORATIVE FAN COIL UNITS  
VERTICAL EXPOSED**



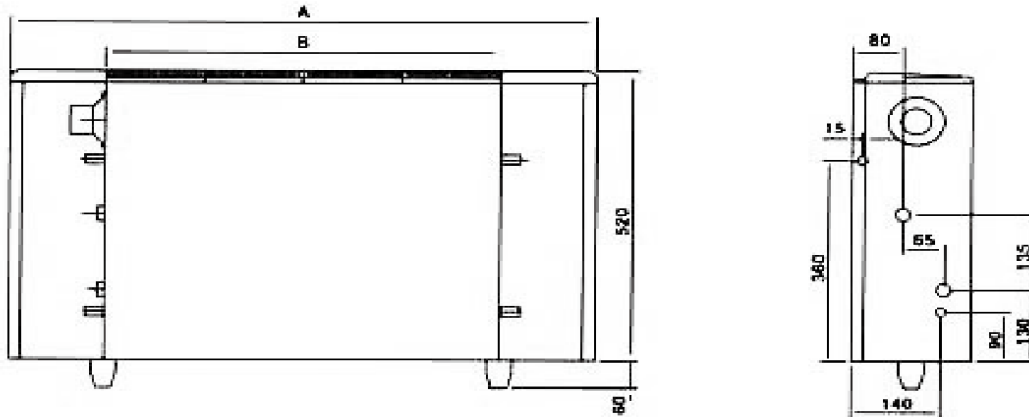
PERFORMANCE BASIC PARAMETERS										
WOLF MODEL			WFC-34VE	WFC-51VE	WFC-68VE	WFC-85VE	WFC-102VE	WFC-136VE	WFC-170VE	WFC-204VE
Air flow	High	M <sup>3</sup> HR / CFM	340/200	510/300	680/400	850/500	1020/600	1360/800	1700/1000	2040/1200
	Medium	M <sup>3</sup> HR / CFM	255/150	380/220	510/300	638/375	765/500	1020/600	1275/750	1530/900
	Low	M <sup>3</sup> HR / CFM	170/100	255/150	340/200	425/250	510/300	680/400	850/500	1020/600
Rated cooling capacity	High	KW/ TMBH	1.98/6.76	2.93/10.01	3.89/13.27	4.86/16.57	5.79/19.76	7.40/25.24	9.28/31.66	11.11/37.89
	Medium	KW/ TMBH	1.74/5.94	2.56/8.71	3.41/11.65	4.23/14.44	5.02/17.14	6.49/22.15	8.12/27.73	9.61/32.81
	Low	KW/ TMBH	1.39/4.73	2.03/6.93	2.70/9.20	3.34/11.40	3.97/13.54	5.14/17.55	6.44/21.98	7.64/26.08
Power		V/PH/Hz	220-240,1~,50/60							
Noise level		dB(A)	35≥	37≥	39≥	40≥	43≥	44≥	46≥	47≥
Fan motor	Type		Direct drive, Cross flow fan							
	Input power	W	37	52	62	76	96	134	152	189
	Power supply	V/PH/Hz	220-240,1~,50/60							
Water flow		Cfm	1.50	2.22	2.95	3.68	4.39	5.61	2.06	2.47
Water resistance		kPa	2.36	5.51	10.43	17.06	25.25	8.53	13.41	20.72
Unit dimension		mm	600×188×768	600×188×924	600×188×1080	600×188×1236	600×188×1236	600×188×1392	600×188×1548	600×188×1704
Weight		kg	23	26	30	34	34	38	46	58
Inlet and outlet water pipe		mm	Φ6.35/Φ12.7				Φ9.52/Φ15.88		Φ9.52/Φ19.05	
Draining pipe		mm	Rc3/4"(DN20)							

Cooling condition: Air Inlet Temperature DBT / WBT 27°C / 19.5°C

Chilled water Inlet / Outlet Temperature: 7°C / 12°C

## 5. DIMENSIONAL DATA

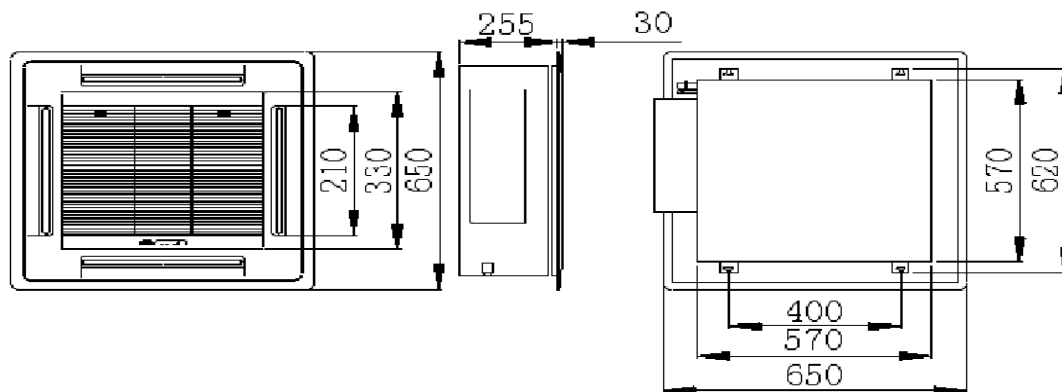
### Vertical Exposed Fan coil units:



MODEL	WFC-34VE	WFC-51VE	WFC-68VE	WFC-85VE	WFC-102VE	WFC-136VE	WFC-170VE	WFC-204VE
A	768	924	1080	1236	1236	1392	1548	1704
B	468	624	780	936	936	1092	1248	1420

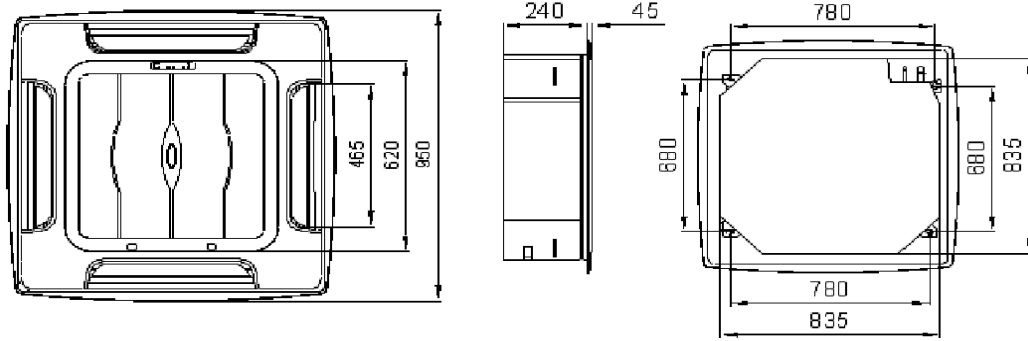
### Cassette Fan coil units:

#### WFC-51Ca, WFC-68Ca

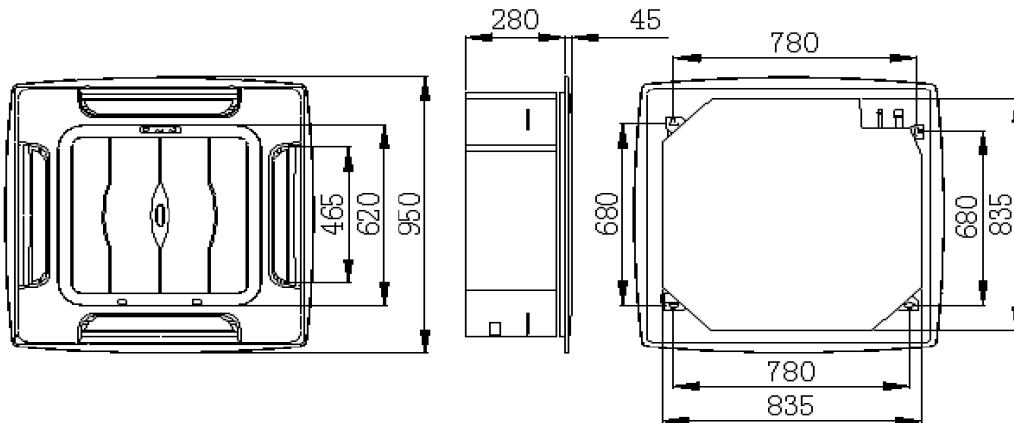




**WFC-85Ca, WFC-102Ca, WFC-136Ca**



**WFC-170Ca, WFC-204Ca, WFC-238Ca**





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