

# Chilled Water Fan Coil Unit Product Catalogue



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## Wall Mounted



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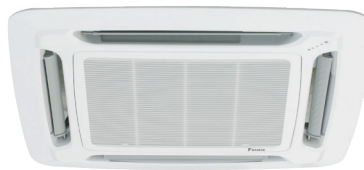
## Ceiling Cassette



06



09



\*with brushless DC motor

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## Ceiling Exposed



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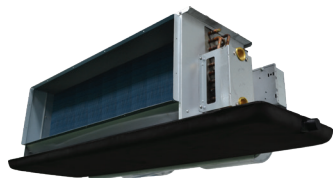
## Ceiling Concealed



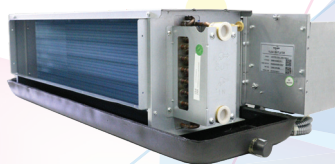
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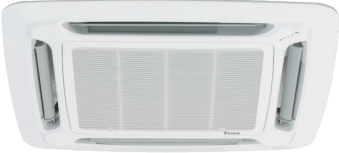



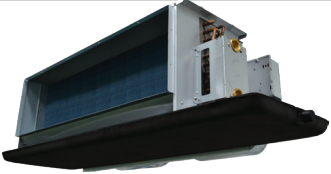


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## Ducted Blower



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# PRODUCTS OVERVIEW

Cooling Capacity (kW)		0	5	10	15	20	25	30	35	40	45
FWW-L		FWW 2/3/4/5/6 L									
FWF-C		FWF 2/4/5 C									
FWK-E/ FWK-EH/ FWKE-E/ FWKE-EH			FWK 5/6/8/9/11/13 E								
FWE-E			FWE 5/6/7/8/10/12 E								
Air Flow (CFM x 100)		0	5	10	15	20	25	30	35	40	45
FWC-C			FWC 3/4/6/7/9/11/ 12/14/16 C								
FWC-FD			FWC 2/3/4/5/6/8/10 FD								
FWC-G			FWC 2/3/4/6/8/10/12 /14/16/18/20 G								
FWC-EG			FWC 2/3/4/6/8/10/12 EG								
FUD-B							FUD 20/25/30/40 B				

## Wall Mounted (50Hz)



FWW-L



Wireless controller  
BRC52A



Wired controller  
BRC51A (optional)

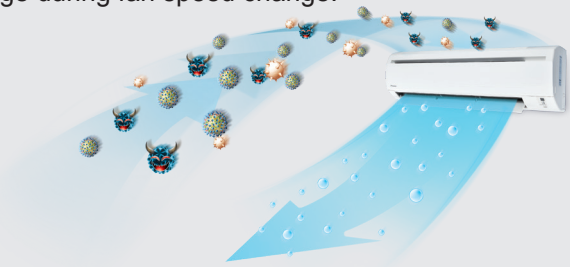
- Comfortable air flow and lower sound level
- Uniform air distribution
- Stylish flat-panel, easy maintenance
- Quiet mode, turbo mode
- Sleep function in cool and heat modes
- Auto restart with last-state-memory
- Valve or valveless control options
- Self-diagnosis features
- Compact and easy-to-use wireless controller
- NIM-abled
- BAG compatible



## Wall Mounted (50Hz)

### Comfortable air flow and lower sound level

User given more choice on preferable fan speed, quiet mode or automatic setting. With the introduction of SCR indoor fan motor, a step-less change of fan speed results in smooth airflow and unnoticeable sound level change during fan speed change.



### Stylish Flat-Panel

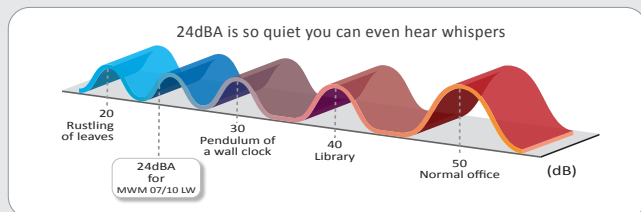
Ideal blend of style and functionality.

- The front panel is designed for contemporary style without compromising on function.
- Air intake area is designed to ensure smooth air flow profile for better sound quality and optimized volume.

### Indoor Quiet Mode

More quiet room environment.

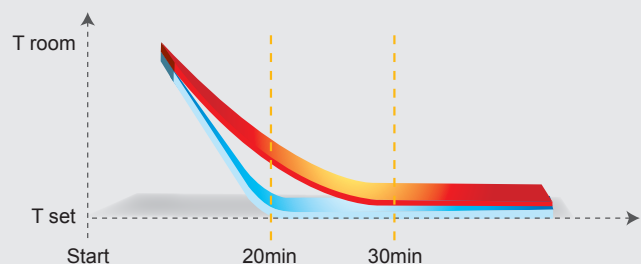
- With up to five selectable fan speeds, users are given more choices. By selecting Quiet mode, the sound pressure level is reduced down to an unobtrusive 24 dBA.
- To quickly cool down the room, Turbo mode can be selected for maximum cooling power and highest airflow.



	SL	L	M	H	Turbo
Fan Speed	Low			High	

### Turbo Mode

Turbo function is available in Cool and Heat modes only. Once it is activated, the air-conditioner will run on full power with indoor fan running at maximum speed for 20 minutes. This enables the set temperature to be achieved faster. If Turbo and Sleep are activated at the same time, the Sleep mode timer will be reset, it will resume after Turbo function is cleared.



### Self Diagnosis Features

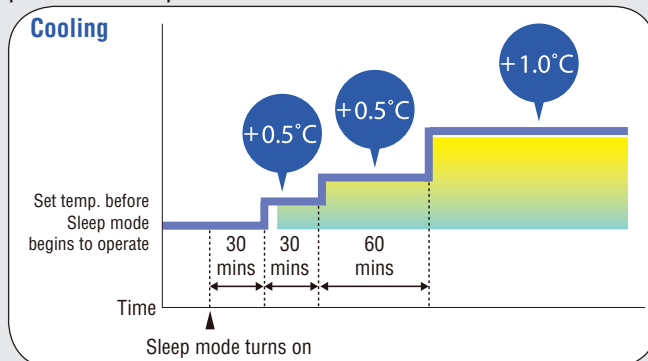
This feature helps to detect any faults or malfunctioning in the system and provide user a warning by blinking of the LED lights.

### Easy Maintenance

Air intake grill is easily detachable to be cleaned with water.

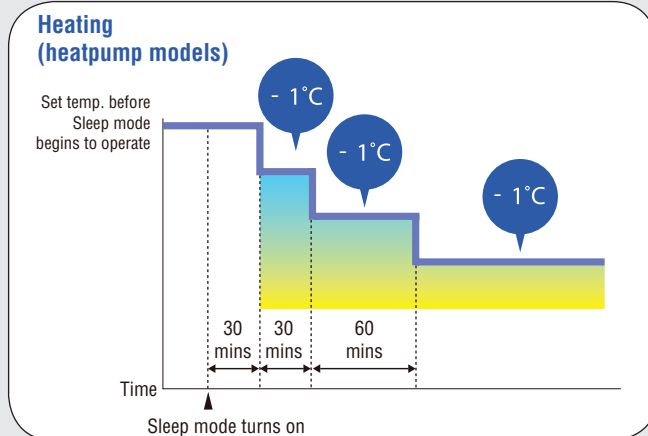
### Sleep Mode

Pressing the Sleep button activates the Sleep Mode. This function prevents excessive cooling/heating for a pleasant sleep.



Cooling operation:

- 1) After 30 minutes, room temperature is raised by 0.5°C.
- 2) After 60 minutes, room temperature is raised by 0.5°C.
- 3) After 120 minutes, room temperature is raised by 1°C.

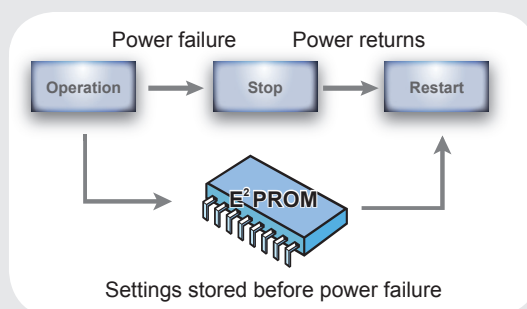


Heating operation:

- 1) After 30 minutes, room temperature is reduced by 1°C.
- 2) After 60 minutes, room temperature is reduced by 1°C.
- 3) After 120 minutes, room temperature is reduced by 1°C.

### Auto Restart with Last-State-Memory

In the event of a sudden power failure during operation, unit restarts automatically in 64 different recovery timing patterns (within 180 seconds to 244 seconds) and the unit will operate based on the previous setting (operating mode, temperature setting and fan speed).



### Uniform Air Distribution

Automated air swing ensures conditioned air distributed evenly.

### Compact and Easy-to-use Wireless Controller

Wireless controller BRC52A comes as standard.

## Wall Mounted (50Hz)

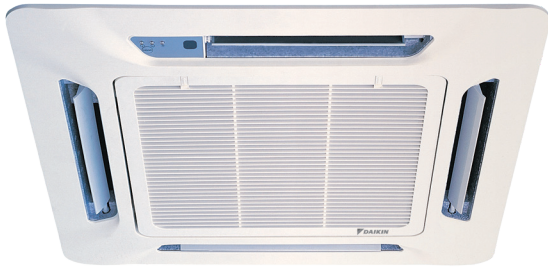
### Specification for wall mounted

Indoor model name				FWW02L	FWW03L	FWW04L	FWW05L	FWW06L		
Nominal cooling capacity			Btu/hr	8300	9200	11300	15500	18000		
			W	2430	2700	3310	4540	5280		
Nominal sensible cooling capacity			Btu/hr	6300	6900	9000	11700	14000		
			W	1850	2020	2640	3430	4100		
Nominal heating capacity (entering water temperature: 50°C)			Btu/hr	11000	12000	15000	20500	25000		
			W	3220	3520	4400	6010	7330		
Nominal total input power			W	31	32	42	53	72		
Nominal running current			A	0.19	0.20	0.21	0.29	0.34		
Power source			V/Ph/Hz	220-240 / 1 / 50						
Indoor	Control	Air discharge	Automatic louver (up & down)							
		Operation	LCD wireless micro-computer remote control							
	Airflow (H/M/L/Q)		CFM	260 / 230 / 200 / 180	280 / 250 / 220 / 190	370 / 320 / 260 / 240	510 / 450 / 390 / 360	620 / 520 / 460 / 440		
	Nominal water flow rate		USGPM	1.85	2.03	2.51	3.43	4.01		
			liters/min	7.00	7.68	9.50	13.00	15.18		
	Head loss (Cooling)		kPa	34	24	31	30	36		
	Head loss (Heating): 50°C		kPa	29	20	25	27	33		
	Max. working pressure		kPa	1608						
	Surface air velocity		m/s	0.68	0.74	0.97	0.83	1.01		
	Sound pressure level (H/M/L/Q)		dBA	34 / 29 / 25 / 24	35 / 30 / 25 / 24	42 / 39 / 32 / 29	42 / 38 / 34 / 32	46 / 42 / 39 / 37		
	Unit dimension (HxWxD)		mm	288 x 800 x 206				310 x 1065 x 224		
	Packing dimension (HxWxD)		mm	344 x 874 x 274				386 x 1136 x 314		
	Unit weight		kg	9				14		
	Condensate drain size		mm	19.05						
	Pipe connection		mm	12.70 BSP female thread adaptor						
	Fan	Type	Cross flow fan							
			Drive	Direct						
			Fan speed (H/M/L)	RPM	1030 / 890 / 760	1050 / 910 / 780	1310 / 1150 / 955	1035 / 920 / 825	1250 / 1070 / 970	
		Fan motor	Type	Single phase SCR						
			Index of Protection (IP)	IP20					IP44	
Insulation grade			E							
Rated input power			W	31 /29 / 25	32 / 31 / 29	42 / 37 / 33	53 / 47 / 42	72 / 68 / 60		
Rated running current			A	0.19 / 0.18 / 0.17	0.20 / 0.20 / 0.19	0.21 / 0.20 / 0.19	0.29 / 0.26 / 0.25	0.34 / 0.32 / 0.31		
Starting current			A	0.40	0.40	0.40	0.30	0.43		
Motor output			W	18	18	18	26	30		
Poles	4									
Coil	Tube	Material	Copper							
		Diameter (mm)	7.00							
	Fin	Material	Aluminium							
		Face area (m²)	0.18				0.29			
		Row	2							
	Water volume	liter	0.52	0.58	0.58	0.95	0.95			
Air quality	Filter type	Washable saranet filter								
	Filter quantity	pc	2							
Casing		Colour	White							

Mode	Cooling	Heating
Entering air temperature	27°C DB / 19°C WB	20°C DB
Entering water temperature	7°C	50°C (2-pipe system)
Leaving water temperature	12°C	-

All specifications are subjected to change by the manufacturer without prior notice.

## Ceiling Cassette Compact 2x2 (50Hz)



FWF-C



Wireless controller  
BRC52A



Wired controller  
BRC51A

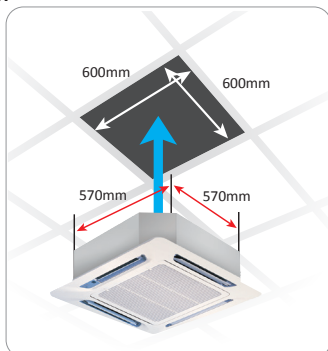
- Compact design
- Fresh air intake
- Stylish and slim panel
- Built-in high head drain pump and water flow switch
- 4-way air discharge and air swing
- Sleep function in cool and heat modes
- Branch duct connection
- Auto restart with last-state-memory
- Valve or valveless control options
- Self-diagnosis features
- Choices of wired or wireless controller
- NIM-abled
- BAG compatible



## Ceiling Cassette Compact 2x2 (50Hz)

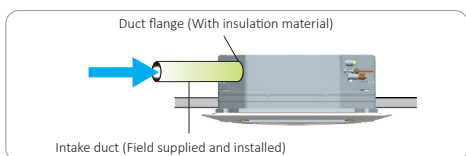
### Compact Design

Ceiling Cassette C Series body dimension is only 570 mm x 570 mm which can easily fit into a 600 mm ceiling grid.



### Fresh Air Intake

- Knock out hole is available at the unit.
- Installation and accessories such as booster fan is field supplied and installed.
- Fresh air intake is within 20% of the total air flow.

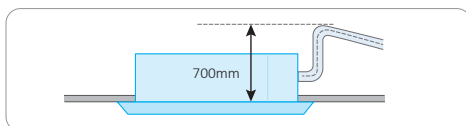


### Stylish & Slim Panel

The slim panel can be blended easily into decoration and interior design.

### Built In High Head Drain Pump & Water Flow Switch

The unit comes with a 700 mm built-in high head drain pump. A safety float is incorporated in the drain pump to monitor its water level.



### 4-Way Air Discharge and Air Swing

It comes with 4-way air discharge and air swing function to ensure better air distribution and circulation in the room.

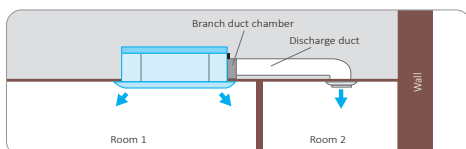


### Self Diagnosis Features

This feature helps to detect any faults or malfunctioning in the system and provide user a warning by blinking of the LED lights.

### Branch Duct Connection

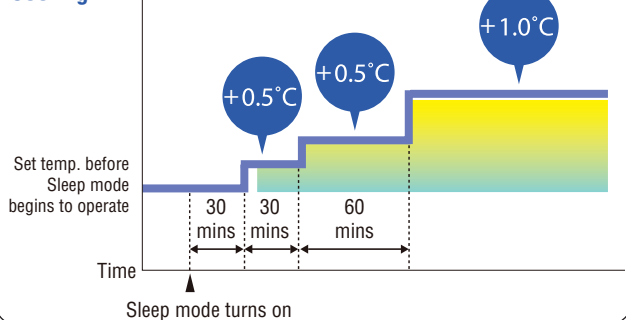
Improves air flow distribution when there is an obstruction. It allows for air conditioning of two rooms simultaneously.



### Sleep Mode

Pressing the Sleep button activates the Sleep Mode. This function prevents excessive cooling/heating for a pleasant sleep.

#### Cooling

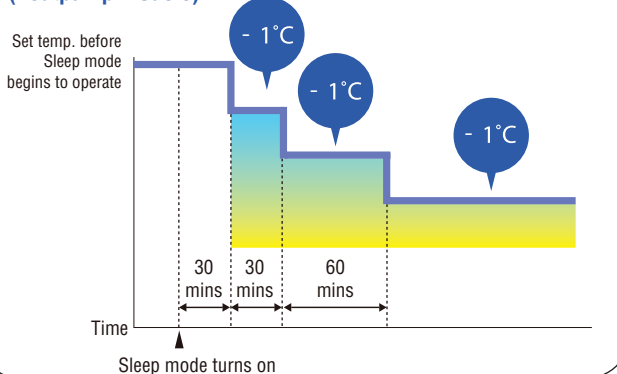


Cooling operation:

- 1) After 30 minutes, room temperature is raised by 0.5°C.
- 2) After 60 minutes, room temperature is raised by 0.5°C.
- 3) After 120 minutes, room temperature is raised by 1°C.

#### Heating

(heatpump models)

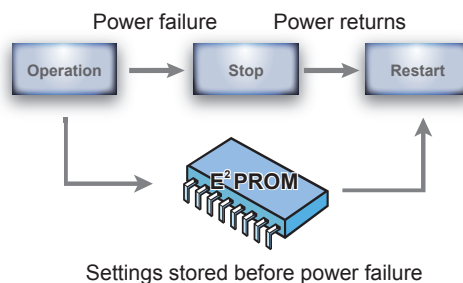


Heating operation:

- 1) After 30 minutes, room temperature is reduced by 1°C.
- 2) After 60 minutes, room temperature is reduced by 1°C.
- 3) After 120 minutes, room temperature is reduced by 1°C.

### Auto Restart with Last-State-Memory

In the event of a sudden power failure during operation, unit restarts automatically in 64 different recovery timing patterns (within 180 seconds to 244 seconds) and the unit will operate based on the previous setting (operating mode, temperature setting and fan speed).



### Valve or Valveless Control Options

The design is flexible enough to allow for either valve or valveless control installation.

### Choices of Wired or Wireless Controller

Choices of wired BRC51A or wireless BRC52A.

## Ceiling Cassette Compact 2x2 (50Hz)

### Specification for ceiling cassette compact

Indoor model name			FWF02C	FWF04C	FWF05C	
Nominal cooling capacity			Btu/hr	8500	14000	15500
			W	2490	4100	4540
Nominal sensible cooling capacity			Btu/hr	6500	10000	11500
			W	1910	2930	3370
Nominal heating capacity (entering water temperature: 50°C)			Btu/hr	12000	16000	18000
			W	3520	4690	5280
Nominal total input power			W	63	64	79
Nominal running current			A	0.28	0.28	0.35
Power source			V/Ph/Hz	220-240 / 1 / 50		
Indoor	Control		Air discharge	4-way automatic louver (up & down)		
			Operation	LCD wireless micro-computer remote control		
	Airflow (H/M/L)		CFM	380 / 290 / 230	400 / 310 / 220	440 / 330 / 280
	Nominal water flow rate		USGPM	2.03	3.43	3.57
			liters/min	7.68	12.98	13.51
	Head loss (Cooling)		kPa	19.3	26.9	28.8
	Head loss (Heating): 50°C		kPa	16.8	23.9	26.5
	Max. working pressure		kPa	1608		
	Surface air velocity		m/s	0.74	0.74	0.82
	Sound pressure level (H/M/L)		dBA	42 / 35 / 29	45 / 38 / 30	48 / 40 / 36
	Unit dimension (Unit dimension with panel) (HxWxD)		mm	250 X 570 X 570 (295 X 640 X 640)		
	Packing dimension (Panel dimension) (HxWxD)		mm	316 X 630 X 630 (126 X 700 X 726)		
	Unit weight + panel weight		kg	15 + 3	17 + 3	
	Condensate drain size		mm	19.05		
	Pipe connection		mm	19.05 BSP female thread adaptor		
	Fan		Type	Turbo fan		
			Drive	Direct		
	Fan speed (H/M/L)		RPM	725 / 565 / 460	810 / 630 / 480	900 / 700 / 610
	Fan motor		Type	Permanent split capacitor (Induction)		
			Index of Protection (IP)	IP20		
Insulation grade			B			
Rated input power (H/M/L)			W	63 / 51 / 46	64 / 58 / 52	79 / 73 / 69
Rated running current (H/M/L)			A	0.28 / 0.23 / 0.21	0.28 / 0.25 / 0.24	0.35 / 0.32 / 0.31
Starting current			A	0.32	0.3	0.47
Motor output			W	17	23	28
Poles			6			
Coil		Tube	Material	Copper		
			Diameter (mm)	7.00		
		Fin	Material	Aluminium		
			Face area (m²)	0.24	0.25	
			Row	1	2	
		Water volume	liter	0.43	0.83	
Air quality		Filter type	Washable saranet filter			
		Filter quantity	pc	1		
Casing		Colour	White			

Mode	Cooling	Heating
Entering air temperature	27°C DB / 19°C WB	20°C DB
Entering water temperature	7°C	50°C (2-pipe system)
Leaving water temperature	12°C	-

All specifications are subjected to change by the manufacturer without prior notice.

## Ceiling Cassette 3x3 (50Hz)



FWK-E

- Multi comfort - 3 air swing pattern control
- Fresh air intake
- Optimum air discharge
- Superior sound level
- Branch duct connection
- Low height design
- Built-in high head drain pump and water flow switch
- Modern and elegant panel
- Low water pressure drop
- Sleep function in cool and heat modes
- Auto restart with last-state-memory
- Valve or valveless control options
- Self-diagnosis features
- Choices of wired or wireless controller
- NIM-abled
- 4-pipe system availability\*
- BAG compatible



Wireless controller  
BRC52A



Wired controller  
BRC51A



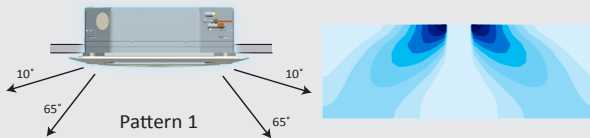
### Multi Comfort - 3 Air Swing Pattern Control

To increase the comfort level of the air conditioned area of FWK-E series, the system had been built in with three different types of air flow pattern to suit different requirements.

\* The default setting is pattern 1. The air swing pattern can be selected via wireless controller.

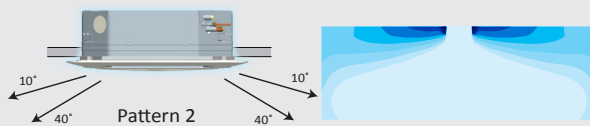
#### Standard Setting

Louver is set to swing at the maximum angle for gentle drafts.



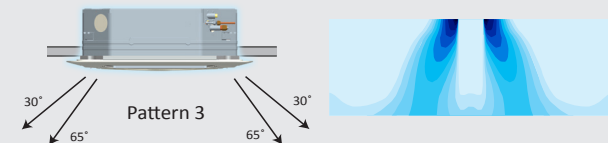
#### Draft Prevention Setting

With the aid of Coanda effect, direct draft which may lead to discomfort can be avoided.



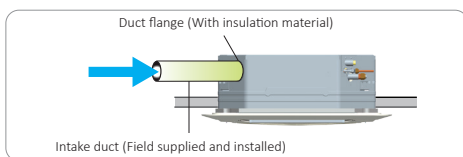
#### Soil Prevention Setting

Even distribution of cooling whilst ensuring ceiling to be kept spotless.



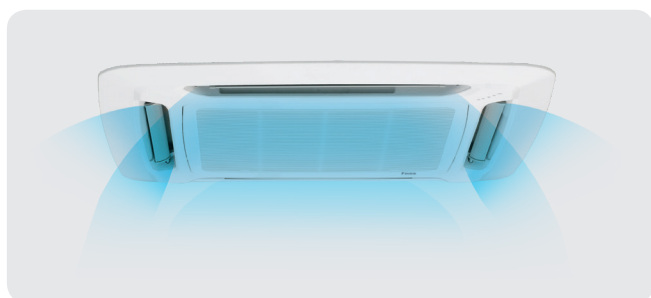
### Fresh Air Intake

- Knock out hole is available at the unit.
- Installation and accessories such as booster fan is field supplied and installed.
- Fresh air intake is within 20% of the total air flow.



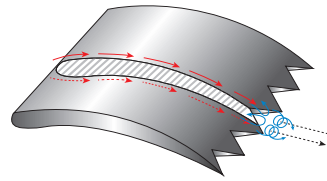
### Optimum Air Discharge and Air Swing

Combining 4-way air discharge and large discharge area on each side, the ceiling cassette promotes uniform air distribution. The additional feature of automatic air swing helps to distribute the conditioned air evenly to every corners of the room.



### Superior Sound Level

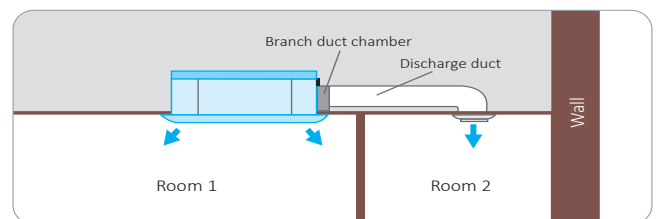
The ceiling cassette series is able to achieve exceptional low noise by adaption of Daikin's turbo fan technology. With 4 selectable fan speeds, users are given more choices. In Quiet mode, the sound pressure level can be as low as 23dBA.



Longitudinal vortices generated along serration edges accelerate mixing turbulence which reduces vortex shedding noise.

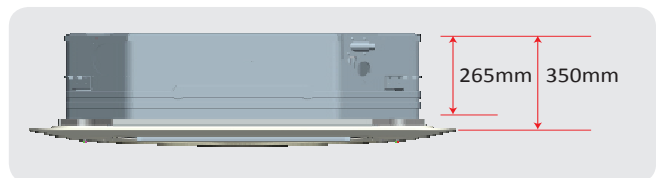
### Branch Duct Connection

Improves air flow distribution when there is an obstruction. It allows for air conditioning of two rooms simultaneously.



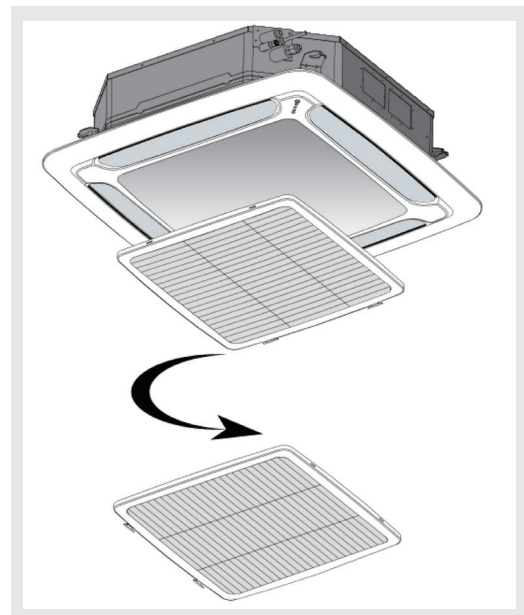
### Low Height Design

Unit height as low as 265mm for installation convenience.



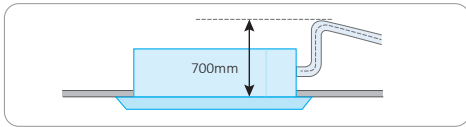
### Modern & Elegant Panel

It is designed with unique "round" side contour and new LED light location. The rotatable intake grill promotes uniform installation as well.



### Built In High Head Drain Pump & Water Flow Switch

The unit comes with a 700 mm built-in high head drain pump. A safety float is incorporated in the drain pump to monitor its water level.



### Low Water Pressure Drop

Also commonly known as low head loss actually helps to increase the system efficiency.

### Self Diagnosis Features

This feature helps to detect any faults or malfunctioning in the system and provide user a warning by blinking of the LED lights.

### Valve or Valveless Control Options

The design is flexible enough to allow for either valve or valveless control installation.

### NIM-Able

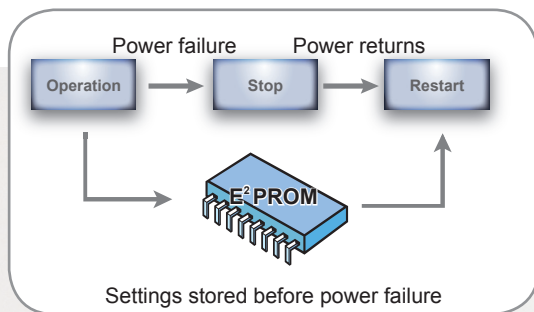
Able to communicate with the versatile NIM networking control module and offers the opportunity of one centralized control for a system of multiple indoor units in a building.

### Choices of Wired or Wireless Controller

Choices of wired BRC51A or wireless BRC52A .

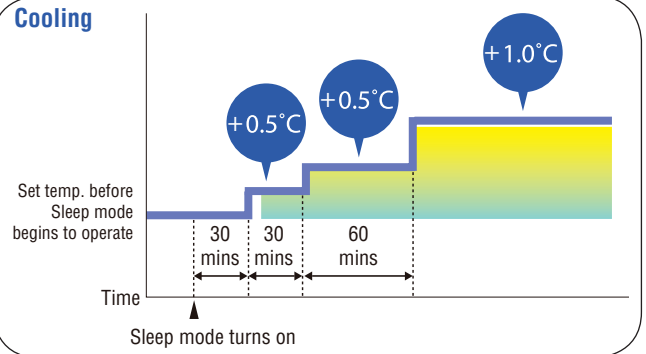
### Auto Restart with Last-State-Memory

In the event of a sudden power failure during operation, unit restarts automatically in 64 different recovery timing patterns (within 180 seconds to 244 seconds) and the unit will operate based on the previous setting (operating mode, temperature setting and fan speed).



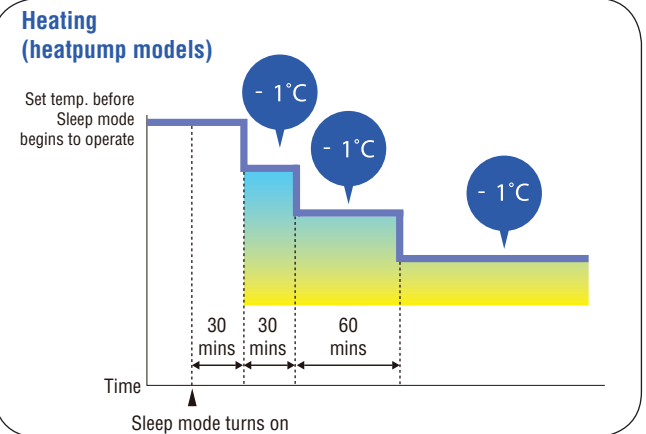
### Sleep Mode

Pressing the Sleep button activates the Sleep Mode. This function prevents excessive cooling/heating for a pleasant sleep.



Cooling operation:

- 1) After 30 minutes, room temperature is raised by 0.5°C.
- 2) After 60 minutes, room temperature is raised by 0.5°C.
- 3) After 120 minutes, room temperature is raised by 1°C.



Heating operation:

- 1) After 30 minutes, room temperature is reduced by 1°C.
- 2) After 60 minutes, room temperature is reduced by 1°C.
- 3) After 120 minutes, room temperature is reduced by 1°C.

### 4-Pipe System Availability\*

The 4-pipe system features a distribution system that contains both hot water supply (with return lines) and chilled water supply (with return lines).

\* FWK-EH model

## Ceiling Cassette 3x3 (50Hz)

### Specification for ceiling cassette (2-pipe system)

Indoor model name				FWK06E	FWK08E	FWK09E	FWK11E	FWK13E		
Nominal cooling capacity			Btu/hr	21000	25000	30000	38000	43000		
			W	6150	7330	8790	11140	12600		
Nominal sensible cooling capacity			Btu/hr	16700	19200	22300	27400	31000		
			W	4890	5630	6540	8030	9090		
Nominal heating capacity (entering water temperature: 50°C)			Btu/hr	28000	33600	38300	45500	52000		
			W	8210	9850	11230	13340	15240		
Nominal total input power			W	95	126	167	186	227		
Nominal running current			A	0.44	0.55	0.74	0.85	1.03		
Power source			V/Ph/Hz	220-240 / 1 / 50						
Indoor	Control		Air discharge		4-way automatic louver (up & down)					
			Operation		LCD wireless micro-computer remote control					
	Airflow (H/M/L/Q)		CFM	750 / 620 / 480 / 320	860 / 700 / 540 / 380	890 / 720 / 570 / 420	1000 / 840 / 680 / 540	1140 / 1000 / 840 / 700		
	Nominal water flow rate		USGPM	4.71	5.59	6.69	8.45	9.60		
			liters/min	17.83	21.17	25.29	31.94	36.29		
	Head loss (Cooling)		kPa	20	37	22	44	53		
	Head loss (Heating): 50°C		kPa	19	33	19	38	47		
	Max. working pressure		kPa	1608						
	Surface air velocity		m/s	0.92	1.05	1.13	1.02	1.17		
	Sound pressure level (H/M/L/Q)		dBA	42 / 38 / 32 / 23	46 / 42 / 35 / 27	48 / 43 / 38 / 30	50 / 47 / 43 / 33	52 / 49 / 45 / 39		
	Unit dimension (Unit dimension with panel) (HxWxD)		mm	265 X 820 X 820 (340 X 990 X 990)				300 X 820 X 820 (375 X 990 X 990)		
	Packing dimension (Panel dimension) (HxWxD)		mm	341 X 916 X 916 (125 X 1020 X 1020)				376 X 916 X 916 (125 X 1020 X 1020)		
	Unit weight + panel weight		kg	26 + 4		28 + 4		32 + 4		
	Condensate drain size		mm	19.05						
	Pipe connection		mm	19.05 BSP female thread adaptor						
	Fan	Type		Turbo fan						
				Direct						
				Fan speed (H/M/L)		RPM	530 / 450 / 360	600 / 500 / 400	660 / 550 / 450	710 / 610 / 510
		Fan motor		Type		Permanent split capacitor (Induction)				
				Index of Protection (IP)		IP20				
Insulation grade				B						
Rated input power (H/M/L)				W	95 / 79 / 67	126 / 103 / 89	167 / 109 / 86	186 / 151 / 118	227 / 176 / 144	
Rated running current (H/M/L)				A	0.44 / 0.40 / 0.36	0.55 / 0.45 / 0.39	0.74 / 0.49 / 0.39	0.85 / 0.71 / 0.57	1.03 / 0.82 / 0.69	
Starting current				A	0.44	0.71	0.89	1.02	1.28	
Motor output				W	30	45	65	80	110	
Poles		8				6				
Coil		Tube		Material		Copper				
				Diameter (mm)		7.00				
		Fin		Material		Aluminium				
				Face area (m²)		0.39		0.37	0.46	
				Row		2		3		
		Water volume		liter	1.36	1.34	1.97	2.35		
Air quality		Filter type		Washable saranet filter						
		Filter quantity		pc	1					
Casing			Colour	White						

Mode	Cooling	Heating
Entering air temperature	27°C DB / 19°C WB	20°C DB
Entering water temperature	7°C	50°C (2-pipe system)
Leaving water temperature	12°C	-

All specifications are subjected to change by the manufacturer without prior notice.

## Ceiling Cassette 3x3 (50Hz)

### Specification for ceiling cassette (4-pipe system)

Indoor model name				FWK06EH	FWK08EH	FWK09EH	FWK11EH	FWK13EH	
Nominal cooling capacity			Btu/hr	16400	18500	24600	29600	31300	
			W	4800	5430	7210	8670	9160	
Nominal sensible cooling capacity			Btu/hr	14487	16108	19922	23991	25790	
			W	4250	4720	5840	7030	7560	
Nominal heating capacity (entering water temperature: 70°C)			Btu/hr	30300	33400	40500	51100	54900	
			W	8870	9800	11880	14990	16100	
Nominal total input power			W	95	126	167	186	227	
Nominal running current			A	0.44	0.55	0.74	0.85	1.03	
Power source			V/Ph/Hz	220-240 / 1 / 50					
Indoor	Control		Air discharge		4-way automatic louver (up & down)				
			Operation		LCD wireless micro-computer remote control				
	Airflow (H/M/L/Q)		CFM	750 / 620 / 480 / 320	860 / 700 / 540 / 380	890 / 720 / 570 / 420	1000 / 840 / 680 / 540	1140 / 1000 / 840 / 700	
	Nominal water flow rate (Cooling)		USGPM	3.65	4.14	5.46	6.56	6.96	
			liters/min	13.83	15.67	20.67	24.83	26.33	
	Nominal water flow rate (Heating)		USGPM	3.35	3.70	4.49	5.68	6.12	
			liters/min	12.67	14.00	17.00	21.50	23.17	
	Head loss (Cooling)		kPa	25	31	27	31	35	
	Head loss (Heating): 70°C		kPa	30	37	38	45	51	
	Max. working pressure		kPa	1608					
	Surface air velocity		m/s	0.92	1.05	1.13	1.02	1.17	
	Sound pressure level (H/M/L/Q)		dBA	42 / 38 / 32 / 23	46 / 42 / 35 / 27	48 / 43 / 38 / 30	50 / 47 / 43 / 33	52 / 49 / 45 / 39	
	Unit dimension (Unit dimension with panel) (HxWxD)		mm	265 X 820 X 820 (340 X 990 X 990)				300 X 820 X 820 (375 X 990 X 990)	
	Packing dimension (Panel dimension) (HxWxD)		mm	341 X 916 X 916 (125 X 1020 X 1020)				376 X 916 X 916 (125 X 1020 X 1020)	
	Unit weight + panel weight		kg	26 + 4		28 + 4		32 + 4	
	Condensate drain size		mm	19.05					
	Pipe connection		mm	19.05 BSP female thread adaptor					
	Fan		Type		Turbo fan				
			Drive		Direct				
	Fan speed (H/M/L)		RPM	530 / 450 / 360	600 / 500 / 400	660 / 550 / 450	710 / 610 / 510	800 / 710 / 610	
Fan motor		Type		Permanent split capacitor (Induction)					
		Index of Protection (IP)		IP20					
		Insulation grade		B					
		Rated input power (H/M/L)	W	95 / 79 / 67	126 / 103 / 89	167 / 109 / 86	186 / 151 / 118	227 / 176 / 144	
		Rated running current (H/M/L)	A	0.44 / 0.40 / 0.36	0.55 / 0.45 / 0.39	0.74 / 0.49 / 0.39	0.85 / 0.71 / 0.57	1.03 / 0.82 / 0.69	
		Starting current	A	0.44	0.71	0.89	1.02	1.28	
		Motor output	W	30	45	65	80	110	
		Poles		8			6		
Coil		Tube		Material		Copper			
				Diameter (mm)		7.00			
		Fin		Material		Aluminium			
				Face area (m²)		0.39	0.37	0.46	
				Row		2	3		
		Water volume		liter	1.36	1.97	2.35		
Air quality		Filter type		Washable saranet filter					
		Filter quantity		pc	1				
Casing		Colour		White					

Mode	Cooling	Heating
Entering air temperature	27°C DB / 19°C WB	20°C DB
Entering water temperature	7°C	70°C (4-pipe system)
Leaving water temperature	12°C	60°C (4-pipe system)

All specifications are subjected to change by the manufacturer without prior notice.

## Ceiling Cassette 3x3 with Brushless DC Motor (50Hz)



FWKE-E

- Comfortable, low noise and energy saving
- Multi comfort - 3 air swing pattern control
- Modulating fan speed control
- Fresh air intake
- Optimum air discharge
- Superior sound level
- Branch duct connection
- Low height design
- Built-in high head drain pump and water flow switch
- Low water pressure drop
- Sleep function in cool and heat modes
- Auto restart with last-state-memory
- Self-diagnosis features
- Choices of wired or wireless controller
- 4-pipe system availability\*
- BAG compatible



Wireless controller  
BRC52A



Wired controller  
BRC51A

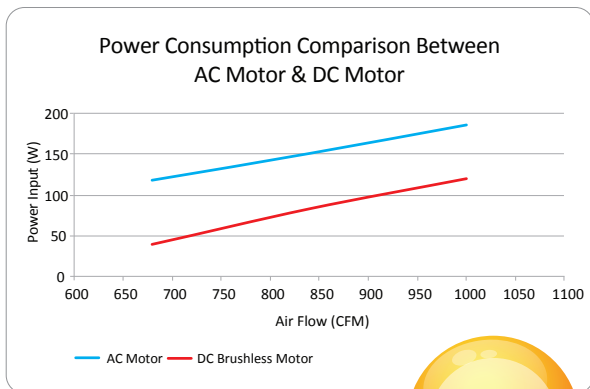


## Ceiling Cassette 3x3 with Brushless DC Motor (50Hz)

### Energy Saving

Comparing to the traditional AC motor, DC motor offers the advantages of lower power input, higher efficiency and more energy savings.

- Brushless DC motor has less internal resistance and better heat dissipation in the stator coils. As a result, it has higher operating efficiencies since more heat can be dissipated via the stationary motor housing.
- This line up is an excellent option for green building projects contributing to higher energy efficiency.



Energy Saving Maximum

67%

### Choices of Wired or Wireless Controller

Choices of wired BRC51A or wireless BRC52A .

### Recommended Applications

Ceiling cassette type fan coil with Brushless DC motor provides a green and pleasant environment.

### Low Noise

The brushless DC motor does not have a carbon brush/mechanical commutator. Therefore, it has minimum shaft friction that contributes to a lower sound level (as low as 16dBA). Other than that, the low RPM also produces low sound level.



### Low Maintenance & No Brush Sparks

Without a carbon brush/mechanical commutator, the motor is low in maintenance and does not spark.

### 4-Pipe System Availability\*

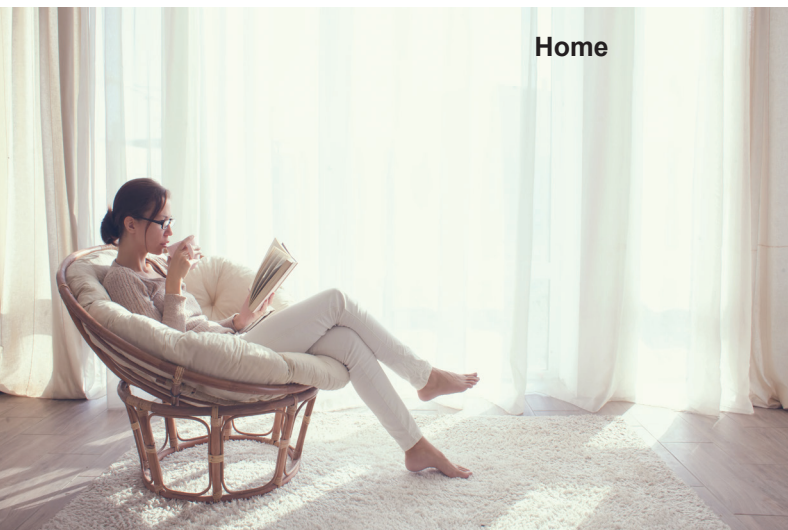
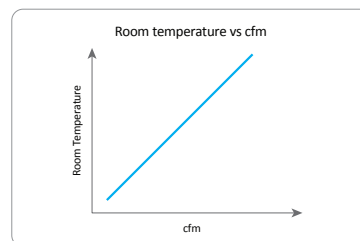
The 4-pipe system features a distribution system that contains both hot water supply (with return lines) and chilled water supply (with return lines).

\* FWKE-EH model

### Modulating Fan Speed Control

The fan speed modulates steplessly based on room temperature to reduce the difference between room temperature and set temperature, providing maximum comfort and reduction in energy consumption.

\* Available in auto fan mode



Home



Restaurants



Offices

# Ceiling Cassette 3x3 with Brushless DC Motor (50Hz)

## Specification for ceiling cassette (2-pipe system)

Indoor model name			FWKE05E				FWKE08E				FWKE11E				
			Quiet	Low	Medium	High	Quiet	Low	Medium	High	Quiet	Low	Medium	High	
Nominal cooling capacity	Btu/hr	8200	11900	15900	20100	15200	19800	24700	30000	21000	26800	33100	40100		
	W	2400	3500	4650	5900	4550	5800	7250	8800	6150	7850	9700	11750		
Nominal sensible cooling capacity	Btu/hr	5800	8700	11700	15400	11000	14500	18500	21900	14600	18900	23800	28600		
	W	1710	2540	3440	4510	3220	4260	5410	6430	4270	5540	6970	8370		
Nominal heating capacity (entering water temperature: 50°C)	Btu/hr	11300	15200	19800	24200	18400	23900	30400	38200	24100	31600	39100	46700		
	W	3300	4450	5800	7100	5400	7000	8900	11200	7050	9250	11450	13700		
Fan input power	W	7	12	19	37	17	26	50	90	23	39	83	120		
Nominal running current	A	0.11	0.13	0.19	0.26	0.19	0.28	0.43	0.74	0.21	0.35	0.55	0.95		
Power source		V/Ph/Hz	220-240 / 1 / 50												
Indoor	Control	Air discharge	4-way automatic louver (up & down)												
		Operation	LCD wireless micro-computer remote control												
	Airflow	CFM	220	350	470	620	420	560	720	890	510	680	870	1060	
	Nominal water flow rate	USGPM	1.84	2.68	3.56	4.52	3.41	4.44	5.55	6.74	4.71	6.01	7.43	9.00	
		liters/min	6.96	10.15	13.48	17.10	12.90	16.81	21.02	25.51	17.83	22.76	28.12	34.06	
	Head loss (Cooling)	kPa	5	10	15	24	7	9	14	20	15	22	30	41	
	Head loss (Heating): 50°C	kPa	4	8	13	21	5	8	12	18	12	20	26	37	
	Max. working pressure	kPa	1608												
	Surface air velocity	m/s	0.27	0.43	0.57	0.76	0.54	0.71	0.92	1.13	0.52	0.70	0.89	1.08	
	Sound pressure level	dBA	16	23	31	37	31	37	42	47	34	41	46	51	
	Unit dimension (Unit dimension with panel) (HxWxD)	mm	265 X 820 X 820 (340 X 990 X 990)								300 X 820 X 820 (375 X 990 X 990)				
	Packing dimension (Panel dimension) (HxWxD)	mm	341 X 916 X 916 (125 X 1020 X 1020)								376 X 916 X 916 (125 X 1020 X 1020)				
	Unit weight + panel weight	kg	26 + 4				28 + 4				32 + 4				
	Condensate drain size	mm	19.05												
	Pipe connection	mm	19.05 BSP female thread adaptor												
	Fan	Type	Turbo fan												
		Drive	Direct												
		Fan speed	RPM	200	280	360	450	350	440	550	660	400	510	630	750
	Fan motor	Type	BLDC												
		Index of Protection (IP)	IP20												
		Insulation grade	E												
		Rated running current	A	0.11	0.13	0.19	0.26	0.19	0.28	0.43	0.74	0.21	0.35	0.55	0.95
		Starting current	A	N/A											
		Motor output	W	70								100			
		Poles	8												
	Coil	Tube	Material	Copper											
Diameter (mm)			7.00												
Fin		Material	Aluminium												
		Face area (m²)	0.39				0.37				0.46				
		Row	2								3				
		Water volume	liter	1.36				1.97				2.35			
Air quality		Filter type	Washable saranet filter												
	Filter quantity	pc	1												
Casing	Colour	White													

### Note:

A) Based on Eurovent conditions.

B) Additional 10W is required for condensate water drain pump.

C) Sound pressure level is tested as per JIS standard as below:

FWKE05E - 1.4m below the face centre of air return of the unit

FWKE08/11E - 1.5m below the face centre of air return of the unit

Mode	Cooling	Heating
Entering air temperature	27°C DB / 19°C WB	20°C DB
Entering water temperature	7°C	50°C (2-pipe system)
Leaving water temperature	12°C	-

All specifications are subjected to change by the manufacturer without prior notice.

# Ceiling Cassette 3x3 with Brushless DC Motor (50Hz)

## Specification for ceiling cassette (4-pipe system)

Indoor model name			FWKE05EH				FWKE08EH				FWKE11EH			
			Quiet	Low	Medium	High	Quiet	Low	Medium	High	Quiet	Low	Medium	High
Nominal cooling capacity	Btu/hr	6800	9600	12300	15000	13300	17100	20800	24600	17700	22200	26400	30700	
	W	2000	2800	3600	4400	3900	5000	6100	7200	5200	6500	7750	9000	
Nominal sensible cooling capacity	Btu/hr	5300	7600	10200	13100	9900	13000	16600	19600	13300	16700	20700	24500	
	W	1560	2240	2990	3850	2910	3810	4850	5750	3890	4900	6060	7170	
Nominal heating capacity (entering water temperature: 70°C)	Btu/hr	12800	17200	21700	26100	21800	27300	32800	38200	31900	39100	46200	53400	
	W	3750	5050	6350	7650	6400	8000	9600	11200	9350	11450	13550	15650	
Fan input power	W	7	12	19	37	17	26	50	90	23	39	83	120	
Nominal running current	A	0.11	0.13	0.19	0.26	0.19	0.28	0.43	0.74	0.21	0.35	0.55	0.95	
Power source	V/Ph/Hz	220-240 / 1 / 50												
Control	Air discharge	4-way automatic louver (up & down)												
	Operation	LCD wireless micro-computer remote control												
Airflow	CFM	220	350	470	620	420	560	720	890	510	680	870	1060	
Nominal water flow rate (Cooling)	USGPM	1.53	2.14	2.76	3.37	2.99	3.83	4.67	5.51	3.98	4.98	5.93	6.91	
	liters/min	5.80	8.12	10.44	12.75	11.31	14.49	17.68	20.87	15.07	18.84	22.47	26.09	
Nominal water flow rate (Heating)	USGPM	1.44	1.93	2.43	2.93	2.45	3.06	3.68	4.29	3.58	4.38	5.19	5.99	
	liters/min	5.44	7.31	9.20	11.09	9.28	11.58	13.91	16.23	13.55	16.60	19.64	22.68	
Head loss (Cooling)	kPa	5	9	13	18	6	10	15	19	12	19	24	32	
Head loss (Heating): 70°C	kPa	7	10	17	22	13	18	25	32	21	30	39	52	
Max. working pressure	kPa	1608												
Surface air velocity	m/s	0.27	0.43	0.57	0.76	0.54	0.71	0.92	1.13	0.52	0.70	0.89	1.08	
Sound pressure level	dBA	16	23	31	37	31	37	42	47	34	41	46	51	
Unit dimension (Unit dimension with panel) (HxWxD)	mm	265 X 820 X 820 (340 X 990 X 990)								300 X 820 X 820 (375 X 990 X 990)				
Packing dimension (Panel dimension) (HxWxD)	mm	341 X 916 X 916 (125 X 1020 X 1020)								376 X 916 X 916 (125 X 1020 X 1020)				
Unit weight + panel weight	kg	26 + 4				28 + 4				32 + 4				
Condensate drain size	mm	19.05												
Pipe connection	mm	19.05 BSP female thread adaptor												
Fan	Type	Turbo fan												
	Drive	Direct												
	Fan speed	RPM	200	280	360	450	350	440	550	660	400	510	630	750
Fan motor	Type	BLDC												
	Index of Protection (IP)	IP20												
	Insulation grade	E												
	Rated running current	A	0.11	0.13	0.19	0.26	0.19	0.28	0.43	0.74	0.21	0.35	0.55	0.95
	Starting current	A	N/A											
	Motor output	W	70								100			
	Poles	8												
Coil	Tube	Material	Copper											
		Diameter (mm)	7.00											
	Fin	Material	Aluminium											
		Face area (m²)	0.39				0.37				0.46			
		Row	2				3							
	Water volume	liter	1.36				1.97				2.35			
	Air quality	Filter type	Washable saranet filter											
Filter quantity		pc	1											
Casing	Colour	White												

### Note:

A) Based on Eurovent conditions.

B) Additional 10W is required for condensate water drain pump.

C) Sound pressure level is tested as per JIS standard as below:

FWKE05EH - 1.4m below the face centre of air return of the unit

FWKE08/11EH - 1.5m below the face centre of air return of the unit

Mode	Cooling	Heating
Entering air temperature	27°C DB / 19°C WB	20°C DB
Entering water temperature	7°C	70°C (4-pipe system)
Leaving water temperature	12°C	60°C (4-pipe system)

All specifications are subjected to change by the manufacturer without prior notice.

## Ceiling Exposed (50Hz)



FWE-E

- Compact design
- Far air throw
- Auto air swing
- Easy serviceability and maintenance
- Versatile installation - high pressure head drain pump option
- Room temperature sensing
- Sleep function in cool and heat modes
- Auto restart with last-state-memory
- Valve or valveless control options
- Self-diagnosis features
- Choices of wired or wireless controller
- NIM-abled
- BAG compatible



Wireless controller  
BRC52A



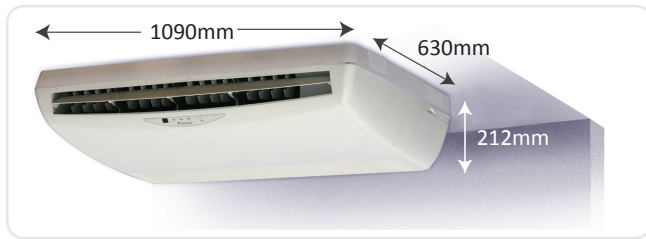
Wired controller  
BRC51A



## Ceiling Exposed (50Hz)

### Compact Design

Unit height as low as 212mm for installation at low ceiling space.



### Far Air Throw

Maximum air throw distance up to 16.5m.



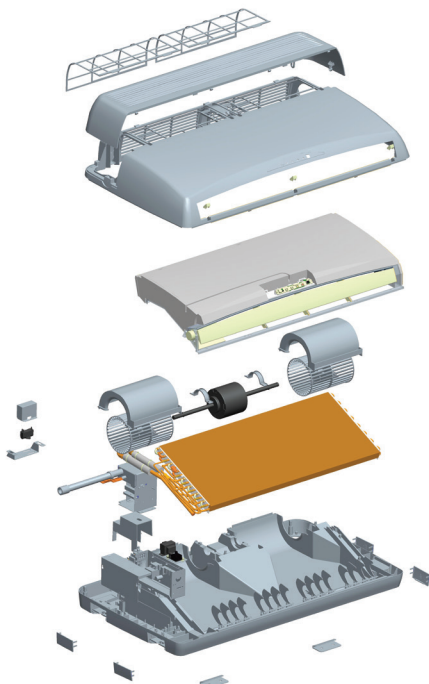
### Auto Air Swing

The motorized louver enables the air flow to be evenly distributed.



### Service & Maintenance at Ease

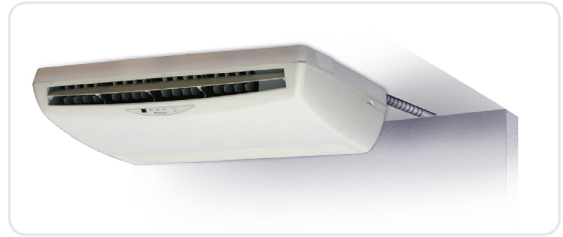
The washable filter can be easily accessed by just pulling down the intake grill. During servicing or repairing, only the bottom panel needs to be removed in order to access the parts like fan motor, blower, wiring connection, control box, piping connection and so on.



### Ceiling Installation

The unit is uniquely designed with the possibility to be installed on the ceiling to suit any interior design requirements.

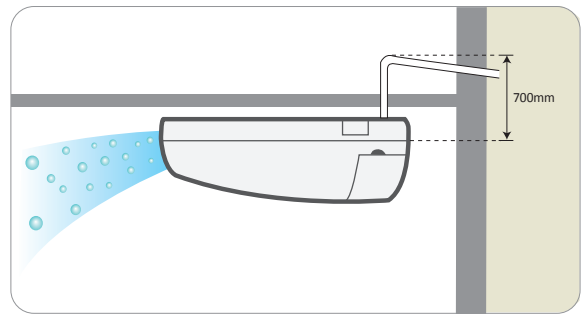
\*Wall bracket is supplied as optional item.



### Versatile Installation

The unit is designed to work with high pressure head drain pump (optional), offering greater flexibility for installation of condensate drain pipe. The optional drain pump comes with a high head and is incorporated with a float switch as safety protection.

\* Drain pump kit supplied as optional item

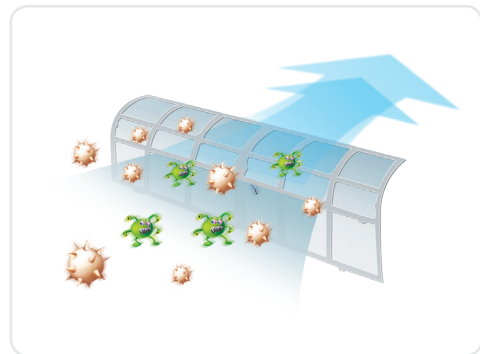


### Room Temperature Sensing

Ability of unit to sense the room temperature for greater room comfort.

### Saranet Air Filter

The anti-fungus air filter removes air-borne particles from the air.



## Ceiling Exposed (50Hz)

### Self Diagnosis Features

This feature helps to detect any faults or malfunctioning in the system and provide user a warning by blinking of the LED lights.

### Valve or Valveless Control Options

The design is flexible enough to allow for either valve or valveless control installation.

### NIM-Able

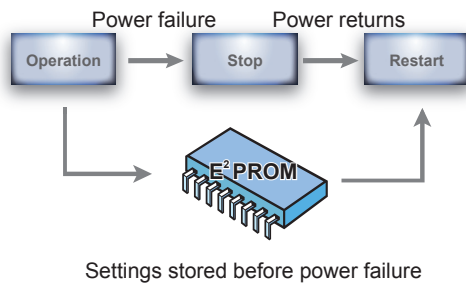
Able to communicate with the versatile NIM networking control module and offers the opportunity of one centralized control for a system of multiple indoor units in a building.

### Choices of Wired or Wireless Controller

Choices of wired BRC51A or wireless BRC52A .

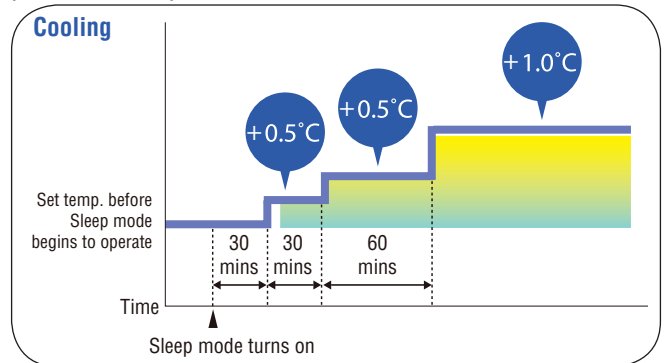
### Auto Restart with Last-State-Memory

In the event of a sudden power failure during operation, unit restarts automatically in 64 different recovery timing patterns (within 180 seconds to 244 seconds) and the unit will operate based on the previous setting (operating mode, temperature setting and fan speed).



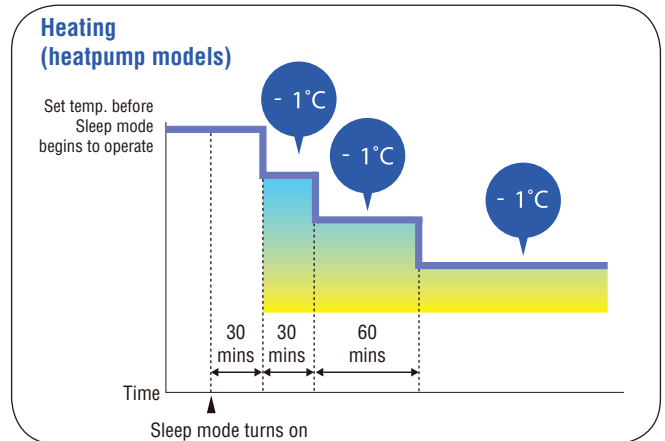
### Sleep Mode

Pressing the Sleep button activates the Sleep Mode. This function prevents excessive cooling/heating for a pleasant sleep.



Cooling operation:

- 1) After 30 minutes, room temperature is raised by 0.5°C.
- 2) After 60 minutes, room temperature is raised by 0.5°C.
- 3) After 120 minutes, room temperature is raised by 1.0°C.



Heating operation:

- 1) After 30 minutes, room temperature is reduced by 1°C.
- 2) After 60 minutes, room temperature is reduced by 1°C.
- 3) After 120 minutes, room temperature is reduced by 1°C.



## Ceiling Exposed (50Hz)

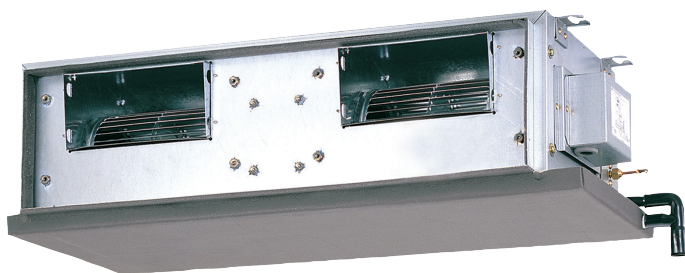
### Specification for ceiling exposed

Indoor model name				FWE05E	FWE06E	FWE07E	FWE08E	FWE10E	FWE12E
Nominal cooling capacity			Btu/hr	15500	20300	21000	25000	34000	47000
			W	4540	5950	6150	7330	9960	13770
Nominal sensible cooling capacity			Btu/hr	12700	15400	16150	19250	25500	32900
			W	3720	4510	4730	5640	7470	9640
Nominal heating capacity (entering water temperature: 50°C)			Btu/hr	19500	25000	28000	35000	47000	59000
			W	5720	7330	8210	10260	13770	17290
Nominal total input power			W	86	135	160	148	197	225
Nominal running current			A	0.38	0.67	0.79	0.65	0.87	0.99
Power source			V/Ph/Hz	220-240 / 1 / 50					
Control	Air discharge		Automatic louver (up & down)						
	Operation		LCD wireless micro-computer remote control						
Airflow (H/M/L)			CFM	520 / 460 / 406	580 / 530 / 490	640 / 560 / 460	840 / 750 / 660	1120 / 980 / 860	1230 / 1090 / 990
Nominal water flow rate			USGPM	3.43	4.49	4.67	5.77	7.71	10.17
			liters/min	13	17	17.68	21.85	29.19	38.53
Head loss (Cooling)			kPa	27	48	57	36	50	67
Head loss (Heating): 50°C			kPa	24	42	50	32	45	58
Max. working pressure			kPa	1608					
Surface air velocity			m/s	0.91	1.02	1.12	1.50	1.63	1.50
Sound pressure level (H/M/L)			dBA	45 / 38 / 36	48 / 43 / 39	49 / 46 / 41	48 / 47 / 44	52 / 47 / 46	52 / 50 / 49
Unit dimension (HxWxD)			mm	212 X 1090 X 630			259 X 1320 X 635	259 X 1538 X 635	259 X 1786 X 635
Packing dimension (HxWxD)			mm	297 X 1197 X 740			348 X 1393 X 734	348 X 1612 X 734	348 X 1860 X 734
Unit weight			kg	27			41	46	53
Condensate drain size			mm	19.05					
Pipe connection			mm	12.70 BSP female thread adaptor			19.05 BSP female thread adaptor		
Indoor	Fan	Type		Blower					
		Drive		Direct					
		Fan speed (H/M/L)	RPM	1120 / 990 / 890	1300 / 1100 / 930	1400 / 1200 / 1000	1235 / 1120 / 1010	1300 / 1170 / 1090	1310 / 1170 / 1050
	Fan motor	Type		Permanent split capacitor (Induction)					
		Index of Protection (IP)		IP20					
		Insulation grade		B					
		Rated input power (H/M/L)	W	86 / 58 / 51	135 / 97 / 83	160 / 113 / 91	148 / 138 / 126	197 / 169 / 153	225 / 190 / 173
		Rated running current (H/M/L)	A	0.38 / 0.26 / 0.23	0.67 / 0.45 / 0.39	0.79 / 0.52 / 0.44	0.65 / 0.61 / 0.55	0.87 / 0.74 / 0.67	0.99 / 0.84 / 0.76
		Starting current	A	1.10	1.20	1.30	1.15	1.54	1.88
		Motor output	W	50	65	70	92	118	149
		Poles		4					
	Coil	Tube	Material	Copper					
			Diameter (mm)	7.00					
		Fin	Material	Aluminium					
			Face area (m²)	0.27			0.26	0.32	0.38
Row			3				4		
Water volume		liter	1.41			1.23	1.48	2.37	
Air quality	Filter type		Washable saranet filter						
	Filter quantity	pc	2			3		4	
Casing			Colour	White			Light grey		

Mode	Cooling	Heating
Entering air temperature	27°C DB / 19°C WB	20°C DB
Entering water temperature	7°C	50°C (2-pipe system)
Leaving water temperature	12°C	-

All specifications are subjected to change by the manufacturer without prior notice.

## Ceiling Concealed (50Hz)



FWC-C

- Excellent air distribution
- Compact design
- High capacity range
- High external static pressure (ESP) range
- Double drainage protection
- Easy serviceability
- Option of left or right piping
- 4 available fan speed
- Auto restart with last-state-memory
- Valve or valveless control options
- Self-diagnosis features
- Wired controller
- NIM-abled
- BAG compatible



Wired controller  
BRC51A



## Ceiling Concealed (50Hz)

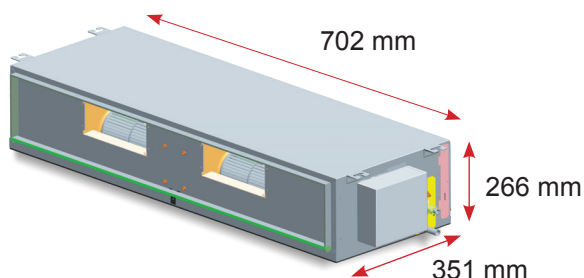
### Excellent Air Distribution

The air can be distributed evenly to every corner of the room through ducting, enabling cooling/heating of multiple areas with one fan coil unit.



### Compact Design

Unit height as low as 266mm for installation at limited ceiling space area.



### High Capacity Range

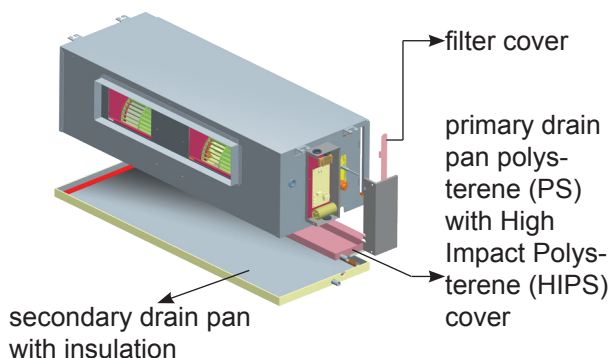
Wide capacity range from 3kW to 16kW.

### Double Drain Pan Protection \*

The primary drain pan is designed with high thermal insulation material and moulded in gradient for better condensate water drainage.

The extra secondary drain pan built into the standard unit offers extra protection against possible water leaking problems.

\* Only applicable from FWC09C - FWC16C



### High External Static Pressure (ESP) Range

Availability of up to 167Pa ESP for high static application.

### Left / Right Piping Option

For flexible installation and application at site.

### Easy Serviceability

Both control box and filter is accessible from the side panel.

### 4 Available Fan Speed

Each speed offers different external static pressure and air flow which enhances flexibility.

### Self Diagnosis Features

This feature helps to detect any faults or malfunctioning in the system and provide user a warning by blinking of the LED lights.

### Valve or Valveless Control Options

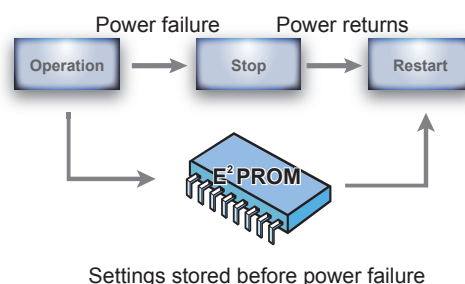
The design is flexible enough to allow for either valve or valveless control installation.

### NIM-Able

Able to communicate with the versatile NIM networking control module and offers the opportunity of one centralized control for a system of multiple indoor units in a building.

### Auto Restart with Last-State-Memory

In the event of a sudden power failure during operation, unit restarts automatically in 64 different recovery timing patterns (within 180 seconds to 244 seconds) and the unit will operate based on the previous setting (operating mode, temperature setting and fan speed).



## Ceiling Concealed (50Hz)

### Specification for ceiling concealed

Indoor model name				FWC03C	FWC04C	FWC06C	FWC07C	
Nominal cooling capacity			Btu/hr	9900	11600	18000	22500	
			W	2900	3400	5280	6590	
Nominal sensible cooling capacity			Btu/hr	7000	8120	12600	15750	
			W	2050	2380	3690	4620	
Nominal heating capacity (entering water temperature: 50°C)			Btu/hr	11500	15000	23000	29000	
			W	3370	4400	6740	8500	
Nominal total input power			W	89	140	168	182	
Nominal running current			A	0.40	0.65	0.77	0.86	
Power source			V/Ph/Hz	220-240 / 1 / 50				
Indoor	Control		Air discharge		Ducted			
			Operation		Wired micro-computer remote control			
	Airflow (H/M/L)		CFM	300 / 285 / 260	510 / 490 / 400	700 / 675 / 640	730 / 660 / 580	
	External Static Pressure (H/M/L)		Pa	49 / 44 / 36	49 / 42 / 28	49 / 45 / 41	49 / 43 / 30	
	Nominal water flow rate		USGPM	2.20	2.60	4.05	5.06	
			liters/min	8.33	9.84	15.33	19.15	
	Head loss (Cooling)		kPa	10.5	24	20.1	32.4	
	Head loss (Heating): 50°C		kPa	8.8	20.3	17.0	27.6	
	Max. working pressure		kPa	1608				
	Surface air velocity		m/s	1.23	1.68	1.88	1.70	
	Sound pressure level (H/M/L)		dBA	36 / 35 / 33	40 / 38 / 33	42 / 41 / 40	41 / 40 / 36	
	Unit dimension (HxWxD)		mm	267 x 702 x 351	267 x 842 x 351	267 x 1002 x 351	267 x 1137 x 351	
	Packing dimension (HxWxD)		mm	376 x 951 x 541	376 x 1091 x 541	376 x 1251 x 541	376 x 1386 x 541	
	Unit weight		kg	18	22	24	26	
	Condensate drain size		mm	19.05				
	Pipe connection		mm	19.05 BSP female thread adaptor				
	Fan		Type		Blower			
			Drive		Direct			
	Fan speed (H/M/L)		RPM	1282 / 1221 / 1117	1385 / 1279 / 1078	1369 / 1331 / 1263	1348 / 1270 / 1072	
	Fan motor		Type		Permanent split capacitor (Induction)			
			Index of Protection (IP)		IP20			
			Insulation grade		B			
			Rated input power (H/M/L)	W	89 / 86 / 78	140 / 128 / 127	168 / 165 / 163	182 / 175 / 163
			Rated running current (H/M/L)	A	0.40 / 0.39 / 0.35	0.65 / 0.59 / 0.59	0.77 / 0.76 / 0.75	0.86 / 0.83 / 0.77
			Starting current	A	0.73	1.66	1.22	1.86
			Motor output	W	38	72	80	90
Poles			4					
Coil		Tube	Material	Copper				
			Diameter (mm)	9.52				
		Fin	Material	Aluminium				
			Face area (m²)	0.11	0.14	0.18	0.20	
			Row	3				
		Water volume	liter	0.90	1.20	1.40	1.60	
Air quality		Filter type		Washable saranet filter				
		Filter quantity	pc	1				
Casing		Colour	Without paint					

Mode	Cooling	Heating
Entering air temperature	27°C DB / 19°C WB	20°C DB
Entering water temperature	7°C	50°C (2-pipe system)
Leaving water temperature	12°C	-

All specifications are subjected to change by the manufacturer without prior notice.

## Ceiling Concealed (50Hz)

### Specification for ceiling concealed

Indoor model name				FWC09C	FWC11C	FWC12C	FWC14C	FWC16C	
Nominal cooling capacity			Btu/hr	24800	38000	37000	44700	51800	
			W	7270	11140	10840	13100	15180	
Nominal sensible cooling capacity			Btu/hr	19700	29800	29300	35100	40900	
			W	5770	8730	8590	10290	11990	
Nominal heating capacity (entering water temperature: 50°C)			Btu/hr	32800	49200	48000	54900	65300	
			W	9610	14420	14070	16090	19140	
Nominal total input power			W	345	504	442	427	531	
Nominal running current			A	1.50	2.28	1.93	1.86	2.32	
Power source			V/Ph/Hz	220-240 / 1 / 50					
Indoor	Control		Air discharge		Ducted				
			Operation		Wired micro-computer remote control				
	Airflow (H/M/L)		CFM	830 / 760 / 710	1250 / 1130 / 1040	1240 / 1100 / 1020	1340 / 1220 / 1190	1550 / 1400 / 1300	
	External Static Pressure (H/M/L)		Pa	167 / 128 / 88	118 / 108 / 88	128 / 88 / 39	157 / 137 / 108	157 / 137 / 98	
	Nominal water flow rate		USGPM	5.55	8.59	8.28	10.04	11.62	
			liters/min	21.01	32.51	31.34	38.00	43.98	
	Head loss (Cooling)		kPa	14	39	23	38	51	
	Head loss (Heating): 50°C		kPa	11	37	19	33	48	
	Max. working pressure		kPa	1608					
	Surface air velocity		m/s	1.41	1.75	1.83	1.54	1.52	
	Sound pressure level (H/M/L)		dBA	46 / 42 / 38	51 / 48 / 45	49 / 45 / 41	52 / 50 / 47	53 / 50 / 47	
	Unit dimension (HxWxD)		mm	384 x 917 x 462	316 x 1225 x 559	384 x 1003 x 462	384 x 1287 x 462	384 x 1487 x 462	
	Packing dimension (HxWxD)		mm	415 x 1126 x 631	355 x 1461 x 727	415 x 1245 x 631	415 x 1497 x 631	415 x 1701 x 631	
	Unit weight		kg	42	47	44	50	56	
	Condensate drain size		mm	19.05					
	Pipe connection		mm	19.05 BSP female thread adaptor					
	Fan		Type		Blower				
			Drive		Direct				
			Fan speed (H/M/L)	RPM	1230 / 1093 / 937	1381 / 1268 / 1169	1260 / 1097 / 913	1284 / 1203 / 1108	1303 / 1215 / 1067
	Fan motor		Type		Permanent split capacitor (Induction)				
			Index of Protection (IP)		IP20	IP21	IP22	IP20	
			Insulation grade		B				
			Rated input power (H/M/L)	W	345 / 304 / 270	504 / 380 / 338	442 / 384 / 342	427 / 388 / 373	531 / 466 / 413
			Rated running current (H/M/L)	A	1.50 / 1.34 / 1.21	2.28 / 1.72 / 1.53	1.93 / 1.69 / 1.54	1.86 / 1.69 / 1.63	2.32 / 2.02 / 1.81
			Starting current	A	2.43	2.77	3.18	3.50	4.90
			Motor output	W	310	470	355	373	500
			Poles		4				
	Coil		Tube	Material	Copper				
				Diameter (mm)	9.52				
			Fin	Material	Aluminium				
				Face area (m²)	0.28	0.34	0.32	0.41	0.48
				Row	3				
			Water volume	liter	2.20	2.70	2.60	3.30	3.80
	Air quality		Filter type		Washable saranet filter				
			Filter quantity		pc	2			
	Casing		Colour	Without paint					

Mode	Cooling	Heating
Entering air temperature	27°C DB / 19°C WB	20°C DB
Entering water temperature	7°C	50°C (2-pipe system)
Leaving water temperature	12°C	-

All specifications are subjected to change by the manufacturer without prior notice.

## Ceiling Concealed High Delta-T (50Hz)



FWC-FD

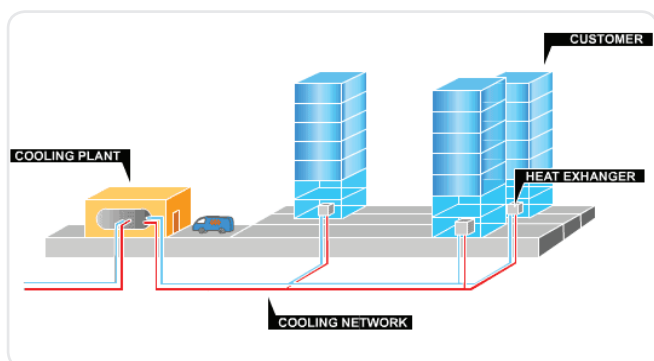
- High delta-T and district cooling application
- Excellent air distribution
- Compact design
- Medium external static pressure (ESP) range
- 3 selectable fan speed
- Easy installation and serviceability
- Option of left or right piping
- Various options to meet project requirements
- Metal construction
- FCU selection software
- Eurovent certified and listed
- BAG compatible



## Ceiling Concealed High Delta-T (50Hz)

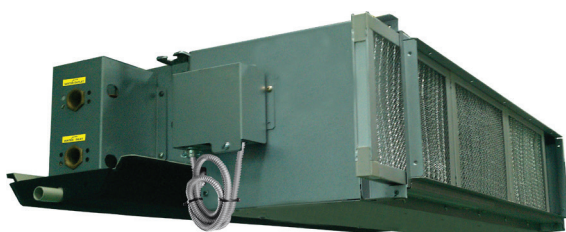
### Customised for high delta-T application

FWC-FD series caters for applications requiring high water temperature difference (up to 9°C) such as district cooling. At such conditions, FWC-FD performance and capacity can be well maintained.

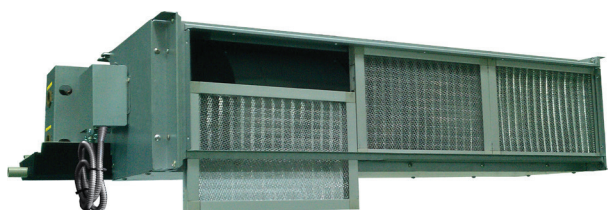


### Ease of installation and serviceability

The FWC-FD series are flexible, easy to install and service.



Side removal (both left and right)



Bottom removal

**Interconnected air filters:** All air filters are interconnected and can easily be removed during servicing.

**Bottom accessibility:** Removable access panel at bottom for inspection without removing the entire unit from the ceiling.



### Metal construction

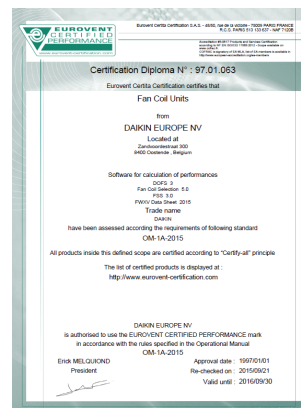
Components and parts of the FWC-FD series such as casing, drain pan and blower are made of metal for its solidness and compliance to fire regulation.

### FCU Selection Software

In support of FCU sales, the FCU Selection Software is available for the ease of unit selection for projects.

### Eurovent certified and listed

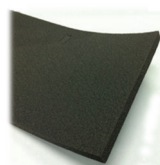
The FWC-FD series are Eurovent certified. Its performance are tested according to the European and International standards.



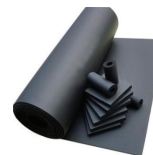
### Various options to meet project requirements

The FWC-FD series have several options that are readily available from the factory without modification:

- Pipe connecting direction: Right piping and left piping (facing FCU air discharge).
- Insulation type: Standard with PE insulation, option with NBR insulation (Class 0 Fire Retardant).

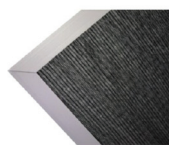


PE insulation

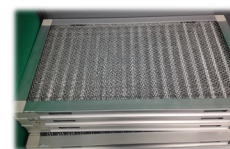


NBR insulation

- Filter type: Standard with 8mm saranet filter, option of 1 inch (nominal) aluminium mesh filter.



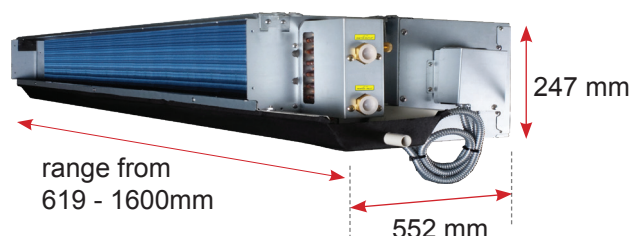
8mm saranet filter



Aluminium mesh filter

### Compact design

Considering the installation space, the FWC-FD series features low height for low ceiling space. Throughout the entire series, unit height remains at 247 mm while its unit depth maintains at 552 mm.



## Ceiling Concealed High Delta-T (50Hz)

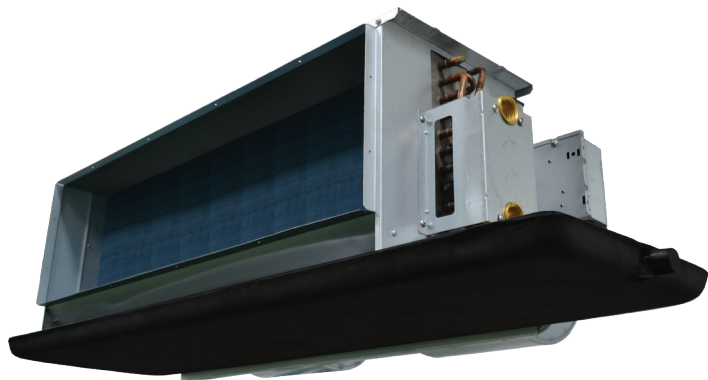
### Specification for ceiling concealed high delta-T

Indoor model name				FWC02FD	FWC03FD	FWC04FD	FWC05FD	FWC06FD	FWC08FD	FWC10FD	
Nominal cooling capacity			Btu/hr	6600	8700	12100	14000	17000	24500	28500	
			W	1930	2550	3550	4100	4980	7180	8350	
Nominal sensible cooling capacity			Btu/hr	5400	6300	9500	9600	11800	17000	20200	
			W	1580	1850	2780	2810	3460	4980	5920	
Nominal total input power			W	92	108	131	151	192	265	321	
Nominal running current			A	0.42	0.5	0.58	0.66	0.95	1.28	1.57	
Power source			V/Ph/Hz	220-240 / 1 / 50							
Indoor	Control		Air discharge	Ducted							
			Operation	Without controller							
	Airflow (H/M/L)		CFM	280/270/220	310/300/280	450/430/360	460/450/400	570/560/500	820/800/750	940/920/840	
	External Static Pressure (H/M/L)		Pa	53/50/34	53/50/44	55/50/40	78/75/60	77/75/61	78/75/66	78/75/67	
	Nominal water flow rate		USGPM	0.84	1.06	1.5	1.72	2.11	3.04	3.52	
			liters/min	3.17	4.00	5.67	6.50	8.00	11.50	13.33	
	Head loss (Cooling)		kPa	24.9	20.8	17.2	31.2	18.7	25.0	19.4	
	Max. working pressure		kPa	1608							
	Surface air velocity		m/s	1.20	1.33	1.25	1.28	1.24	1.29	1.22	
	Sound pressure level (H/M/L)		dBA	40/39/36	40/39/37	41/40/37	42/41/39	45/44/41	47/46/45	48/47/45	
	Unit dimension (HxWxD)		mm	247x552x619		247x552x870		247x552x1060	247x552x1390	247x552x1600	
	Packing dimension (HxWxD)		mm	320x630x737		320x630x987		320x630x1177	320x630x1507	320x630x1717	
	Unit weight		kg	16	17	23	24	28	38	45	
	Condensate drain size		mm	19.05							
	Pipe connection		mm	19.05 BSPT female thread adaptor							
	Fan	Type	Centrifugal								
			Direct								
			Quantity		1		2			3	4
			Fan speed (H/M/L)		RPM	1265/1232/1107	1379/1356/1290	1290/1245/1115	1389/1369/1290	1415/1395/1283	1430/1415/1336 1403/1388/1337
		Fan motor	Type	Permanent split capacitor (Induction)							
Index of Protection (IP)			IP20								
Insulation grade			B								
Quantity			1						2		
Rated input power (H/M/L)			W	92/86/68	108/100/84	131/124/105	151/131/102	192/178/149	265/242/201	321/297/253	
Rated running current (H/M/L)			A	0.42/0.38/ 0.30	0.50/0.44/0.37	0.58/0.54/0.46	0.66/0.58/0.49	0.95/0.79/0.65	1.28/1.06/0.88	1.57/1.31/1.11	
Starting current	A		0.68	1.08	1.08	1.41	2.65	2.65/1.08	2.65		
Motor output	W		36	71	71	100	150	150/71	150		
Poles		4									
Coil	Tube	Material	Copper								
		Diameter (mm)	7.0								
	Fin	Material	Aluminium								
		Face area (m²)	0.11	0.11	0.17	0.17	0.22	0.3	0.36		
		Row	3	4	3	4					
	Water volume	liter	0.38	0.63	0.72	0.96	1.22	1.67	1.95		
Air quality		Filter type	Washable saranet filter								
		Filter quantity	pc	2					3		
Casing			Colour	Without paint							

Mode	Cooling
Entering air temperature	24°C DB / 18°C WB
Entering water temperature	5.5°C
Leaving water temperature	14.5°C

All specifications are subjected to change by the manufacturer without prior notice.

## Ceiling Concealed (50Hz)



FWC-G

- Standard Delta T=5°C Application
- Excellent Air Distribution
- Wide Range (200- 2000CFM)
- 3 Fan Speed (High, Medium, Low)
- Easy Installation & Serviceability
- Low External Static Pressure (30Pa)
- Medium External Static Pressure (50-75Pa) (50Hz, 60Hz)
- Interchangeable Coil Direction
- Compact Design
  - Low Height
  - Short Length
- FCU Selection Software
- Flexibility & Options
- BAG compatible



## Ceiling Concealed (50Hz)

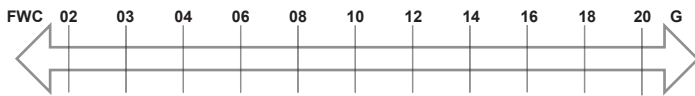
### Excellent Air Distribution

The air can be distributed evenly to every corner of the room through ducting, enabling cooling/heating of multiple areas with one fan coil unit.



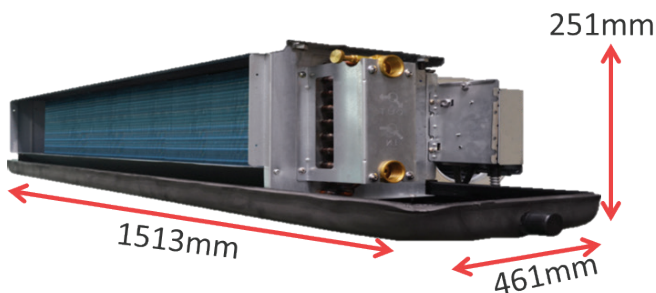
### Wide Range (200-2000CFM)

A wide range of sizes provides versatility for FWC-G to spec in different project requirements



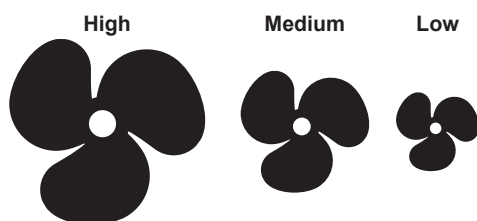
### Compact Design 250mm

It provides flexibility for low ceiling height installations.



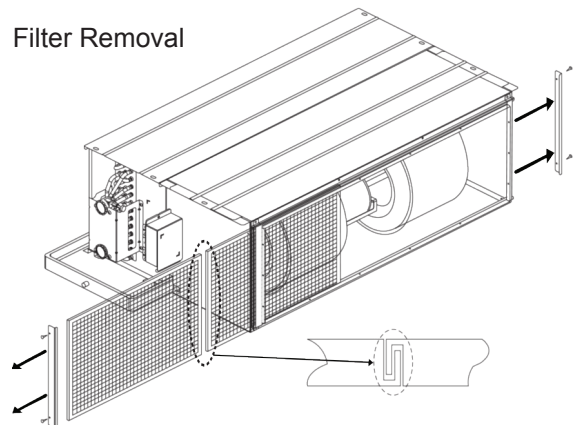
### 3 Fan Speeds (High, Medium, Low)

Three different fan speeds can be selected from FWC-G according to the external static pressure, airflow and sound level requirements.



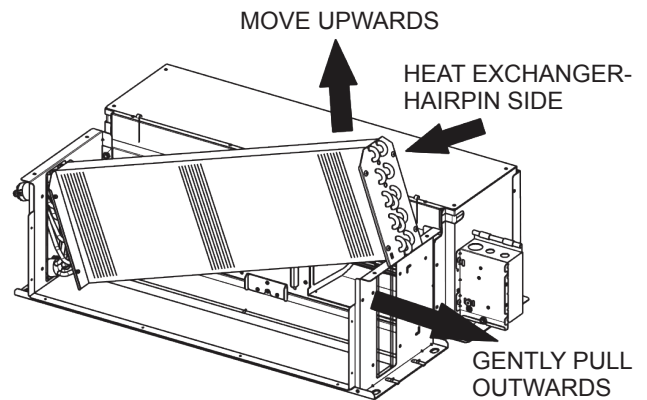
### Easy Serviceability

Filter can be removed from sides easily.



### Interchangeable Coil Direction

To match water connections on the field.



### FCU Selection Software

Selection software allows convenience in obtaining FCU rating at specific design condition.

### Flexibility & Options

- Piping: Left, Right
- Filter: Saranet, 8mm AI, 1" AI, No filter
- Plenum: Without Rear Return Plenum, With Rear Return Plenum
- Insulation: PE, NBR
- Drain Pan Material: Galvanised Steel, Stainless Steel
- Drain Pan Length: Standard, Extended 100mm

## Ceiling Concealed (50Hz)

### Specification for ceiling concealed standard delta-T (Low ESP)

Model				FWC02G	FWC03G	FWC04G	FWC06G	FWC08G	FWC10G	FWC12G	
Nominal cooling capacity			Btu/hr	6000	9000	12000	18000	24000	30000	36000	
			W	1760	2640	3520	5280	7030	8790	10550	
Nominal sensible cooling capacity			Btu/hr	5000	7000	9700	14400	19100	23400	27900	
			W	1470	2050	2840	4220	5600	6860	8.18	
Nominal total input power			W	53	61	81	116	159	202	241	
Nominal running current			A	0.23	0.27	0.36	0.50	0.72	0.90	1.05	
Power source			V/Ph/Hz	220-240/1/50							
INDOOR UNIT	Control	Air discharge		Ducted							
		Operation		Without controller							
	Air flow (H/M/L)		CFM	200/160/130	300/220/150	400/305/200	600/500/385	800/650/465	1000/805/600	1200/975/810	
	External static pressure (H/M/L)		Pa	30/19/12	30/16/7	30/18/7	30/21/13	30/19/10	30/18/11	30/20/13	
	Nominal water flow rate		USGPM	1.32	2.00	2.66	3.99	5.33	6.66	7.99	
			litres/min	5.00	7.57	10.09	15.13	20.18	25.22	30.26	
	Head loss (Cooling)		kPa	7	20	25	34	38	42	38	
	Max. working pressure		kPa	1608							
	Surface air velocity		m/s	1.26	1.17	1.56	1.99	1.69	2.11	2.05	
	Sound pressure level (H/M/L)		dBA	31/26/20	32/25/20	35/29/21	38/35/30	39/34/26	41/37/31	42/39/35	
	Unit dimension		H x W x D	mm	251x630x461	251x774x461	251x774x461	251x874x461	251x1264x461	251x1264x461	251x1514x461
	Packing dimension		H x W x D	mm	595x836x284	595x984x284	595x984x284	595x1084x284	595x1473x284	595x1473x284	595x1724x284
	Unit weight		kg	11	14.5	15	17.5	26	26	30	
	Condensate drain size		mm	19.05							
	Pipe connection		mm	19.05 BSPT FEMALE THREAD ADAPTOR							
	Fan	Type		Blower							
		Drive		Direct							
		Quantity		1	2	2	2	3	3	4	
		Fan speed (H/M/L)		RPM	985/800/655	970/740/540	1070/870/610	1300/1120/940	1140/950/710	1275/1035/805	1220/1010/835
		Fan Efficiency (H/M/L)		%	34.2/36.7/40.4	34.8/36.1/39.6	32.5/34.6/39.0	33.4/34.1/35.5	52.9/53.6/57.6	43.9/51.2/57.3	37.7/33.9/46.7
	Fan motor	Type		PERMANENT SPLIT CAPACITOR (INDUCTION)							
		Index of protection (IP)		IP20							
		Insulation grade		B							
		Quantity		1	1	1	1	2	2	2	
		Rated input power (H/M/L)		W	53/30/19	61/39/21	81/57/30	116/91/67	159/126/81	202/161/115	241/187/148
		Rated running current (H/M/L)		A	0.23/0.13/0.08	0.27/0.17/0.09	0.36/0.25/0.13	0.50/0.39/0.29	0.72/0.54/0.35	0.90/0.70/0.50	1.05/0.82/0.65
Starting current		A	0.27	0.37	0.47	0.97	0.93	1.31	1.51		
Motor output		W	15	21	32	70	74	109	122		
Motor Efficiency (H/M/L)		%	28.2/24.4/19.0	28.6/19.0/11.9	38.7/27.2/15.8	54.8/40.7/29.1	44.0/32.7/20.8	54.2/34.8/21.4	51.9/35.9/25.2		
Coil	Poles		4								
	Tube	Material	Copper								
		Diameter (mm)	7.00								
	Fin	Material	Aluminium								
		Face area (m²)	0.08	0.12	0.12	0.14	0.22	0.22	0.28		
		Row	3								
Water volume		litre	0.28	0.45	0.45	0.62	0.90	1.04	1.29		
Air quality	Filter	Type	OPTION (WASHABLE SARANET FILTER OR ALUMINIUM MESH FILTER)								
		Quantity	pc	2	2	2	2	3	3	4	
Casing			Colour	Without paint							

Mode	Cooling (2 Pipe)
Entering air temperature	27°C DB / 19°C WB
Entering water temperature	7°C
Leaving water temperature	12°C

All specifications are subjected to change by the manufacturer without prior notice.

## Ceiling Concealed (50Hz)

### Specification for ceiling concealed standard delta-T (Medium ESP)

Model			FWC03G	FWC04G	FWC06G	FWC08G	FWC10G		
Nominal cooling capacity			Btu/hr	9000	12000	18000	24000	30000	
			W	2640	3520	5280	7030	8790	
Nominal sensible cooling capacity			Btu/hr	7000	9700	14400	19100	23400	
			W	2050	2840	4220	5600	6860	
Nominal total input power			W	61	87	130	184	235	
Nominal running current			A	0.27	0.38	0.58	0.81	1.03	
Power source			V/Ph/Hz	220-240/1/50					
INDOOR UNIT	Control	Air discharge		Ducted					
		Operation		Without controller					
	Air flow (H/M/L)		CFM	300/220/150	400/305/200	600/500/385	800/650/465	1000/805/600	
	External static pressure (H/M/L)		Pa	50/32/15	50/32/15	50/35/20	50/33/17	50/33/18	
	Nominal water flow rate		USGPM	2.00	2.66	3.99	5.33	6.66	
			litres/min	7.57	10.09	15.13	20.18	25.22	
	Head loss (Cooling)		kPa	20	25	34	38	42	
	Max. working pressure		kPa	1608					
	Surface air velocity		m/s	1.17	1.56	1.99	1.69	2.11	
	Sound pressure level (H/M/L)		dBA	35/29/20	37/31/22	41/37/31	43/37/30	44/40/33	
	Unit dimension		H x W x D	mm	251x774x461	251x774x461	251x874x461	251x1264x461	251x1264x461
	Packing dimension		H x W x D	mm	595x984x284	595x984x284	595x1084x284	595x1473x284	595x1473x284
	Unit weight			kg	14.5	15	17.5	26	26
	Condensate drain size			mm	19.05				
	Pipe connection			mm	19.05 BSPT FEMALE THREAD ADAPTOR				
	Fan	Type			Blower				
		Drive			Direct				
		Quantity			2	2	2	3	3
		Fan speed (H/M/L)	RPM		1115/900/645	1235/990/715	1350/1170/935	1310/1080/830	1405/1190/930
		Fan Efficiency (H/M/L)	%		35.9/37.0/38.7	36.3/36.0/37.0	33.5/33.9/35.4	39.0/39.9/40.4	36.0/38.6/39.6
Fan motor	Type			PERMANENT SPLIT CAPACITOR (INDUCTION)					
	Index of protection (IP)			IP20					
	Insulation grade			B					
	Quantity			1	1	1	2	2	
	Rated input power (H/M/L)	W		61/43/26	87/66/42	130/106/80	184/143/104	235/176/137	
	Rated running current (H/M/L)	A		0.27/0.19/0.12	0.38/0.29/0.19	0.58/0.47/0.35	0.81/0.63/0.46	1.03/0.77/0.60	
	Starting current	A		0.34	0.53	0.91	1.27	2.09	
	Motor output	W		27	43	80	104	140	
	Motor Efficiency (H/M/L)	%		43.0/28.6/15.8	50.3/32.1/17.0	58.8/46.4/30.5	53.3/36.4/21.8	58.3/43.5/25.6	
Coil	Tube			4					
		Material	Copper						
	Fin	Diameter (mm)	7.00						
		Material	Aluminium						
		Face area (m²)	0.12	0.12	0.14	0.22	0.22		
	Row	3							
Water volume		litre	0.45	0.45	0.62	0.90	1.04		
Air quality	Filter	Type	OPTION (WASHABLE SARANET FILTER OR ALUMINIUM MESH FILTER)						
		Quantity	pc	2	2	2	3	3	
Casing			Colour	Without paint					

Mode	Cooling (2 Pipe)
Entering air temperature	27°C DB / 19°C WB
Entering water temperature	7°C
Leaving water temperature	12°C

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## Ceiling Concealed (50Hz)

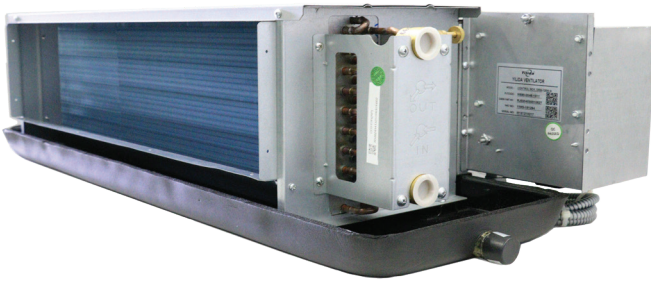
### Specification for ceiling concealed standard delta-T (Medium ESP)

Model				FWC12G	FWC14G	FWC16G	FWC18G	FWC20G
Nominal cooling capacity			Btu/hr	36000	42000	48000	54000	60000
			W	10550	12310	14070	15830	17580
Nominal sensible cooling capacity			Btu/hr	27900	33900	38200	43900	50000
			W	8180	9940	11200	12870	14650
Nominal total input power			W	246	450	558	624	659
Nominal running current			A	1.10	1.96	2.43	2.72	2.87
Power source			V/Ph/Hz	220-240/1/50				
INDOOR UNIT	Control	Air discharge		Ducted				
		Operation		Without controller				
	Air flow (H/M/L)		CFM	1200/975/810	1400/1130/825	1600/1300/905	1800/1445/1060	2000/1530/1075
	External static pressure (H/M/L)		Pa	50/33/23	75/48/24	75/48/24	75/48/25	75/45/22
	Nominal water flow rate		USGPM	7.99	9.32	10.65	11.98	13.31
			litres/min	30.26	35.31	40.35	45.40	50.44
	Head loss (Cooling)		kPa	38	31	27	33	32
	Max. working pressure		kPa	1608				
	Surface air velocity		m/s	2.05	2.43	2.41	2.71	2.65
	Sound pressure level (H/M/L)		dBA	44/40/37	47/43/35	48/44/37	49/45/39	50/46/38
	Unit dimension	H x W x D	mm	251x1514x461	363x1116x660	363x1254x660	363x1254x660	363x1394x660
	Packing dimension	H x W x D	mm	595x1724x284	760x1331x395	760x1469x395	760x1469x395	760x1609x395
	Unit weight		kg	30	34	37	38	41
	Condensate drain size		mm	19.05				
	Pipe connection		mm	19.05 BSPT FEMALE THREAD ADAPTOR	25.4 BSPT FEMALE THREAD ADAPTOR			
	Fan	Type		Blower				
		Drive		Direct				
		Quantity		4	2	2	2	2
		Fan speed (H/M/L)	RPM	1320/1050/965	1065/875/675	1115/920/690	1210/1000/740	1220/1070/875
		Fan Efficiency (H/M/L)		%	32.9/30.1/33.4	37.6/38.6/42.7	31.7/35.0/41.0	33.6/34.5/36.9
Fan motor	Type		PERMANET SPLIT CAPACITOR (INDUCTION)					
	Index of protection (IP)		IP20					
	Insulation grade		B					
	Quantity		2	1	1	1	1	
	Rated input power (H/M/L)	W	246/200/158	450/307/173	558/385/214	624/459/295	659/497/313	
	Rated running current (H/M/L)		A	1.10/0.88/0.70	1.96/1.34/0.76	2.43/1.68/0.95	2.72/2.00/1.31	2.87/2.17/1.40
	Starting current		A	1.62	2.75	3.81	4.38	4.35
	Motor output	W	146	248	342	418	446	
			%	58.8/38.9/33.1	53.2/41.6/29.7	53.3/40.7/26.7	62.1/44.9/27.7	59.8/50.7/37.2
Coil	Tube		Material	Copper				
			Diameter (mm)	7.00	9.52			
	Fin		Material	Aluminium				
			Face area (m²)	0.28	0.22	0.26	0.26	0.29
			Row	3				
	Water volume		litre	1.29	2.00	2.32	2.32	2.63
Air quality	Filter	Type	OPTION (WASHABLE SARANET FILTER OR ALUMINIUM MESH FILTER)					
		Quantity	pc	4	2	3	3	3
Casing			Colour	Without paint				

Mode	Cooling (2 Pipe)
Entering air temperature	27°C DB / 19°C WB
Entering water temperature	7°C
Leaving water temperature	12°C

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## Ceiling Concealed (50Hz)



FWC-G (EC)

- Standard  $\Delta T=5^{\circ}\text{C}$  Application
- Excellent Air Distribution
- Wide Range (200-1200CFM)
- Variable Fan Speed
- Easy Installation & Serviceability
- Medium External Static Pressure (30Pa-50Pa) (50Hz - 60Hz)
- Interchangeable Coil Direction
- Compact Design
  - Low Height
  - Short Length
- FCU Selection Software
- Flexibility & Options
- BAG compatible



## Ceiling Concealed (50Hz)

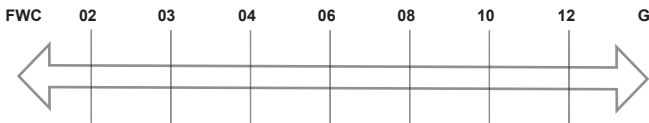
### Excellent Air Distribution

The air can be distributed evenly to every corner of the room through ducting, enabling cooling/heating of multiple areas with one fan coil unit.



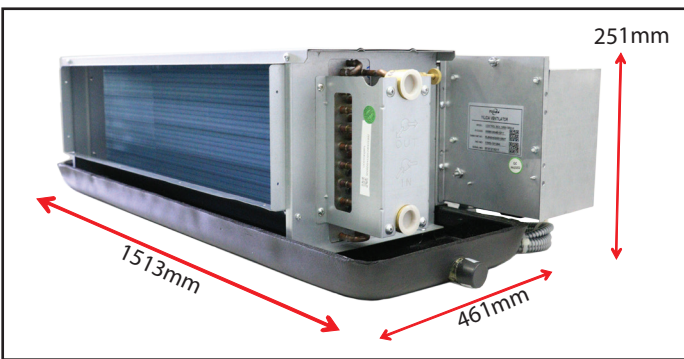
### Wide Range (200-1200CFM)

A wide range of sizes provides versatility for FWC-G to spec in different project requirements



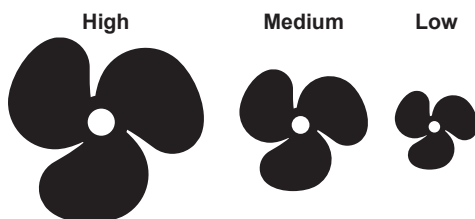
### Compact Design 250mm

It provides flexibility for low ceiling height installations.



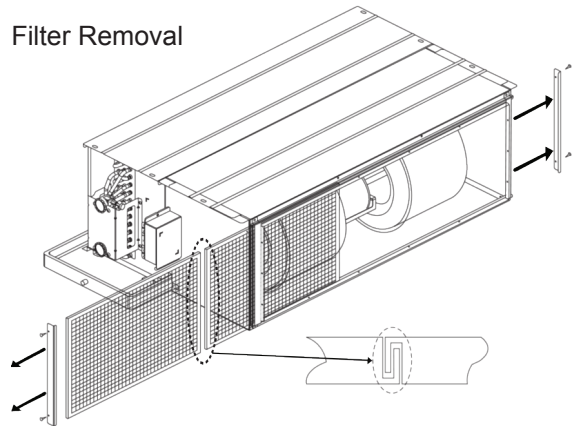
### Variable Fan Speed

Three different fan speeds can be selected from FWC-G according to the external static pressure, airflow and sound level requirements.



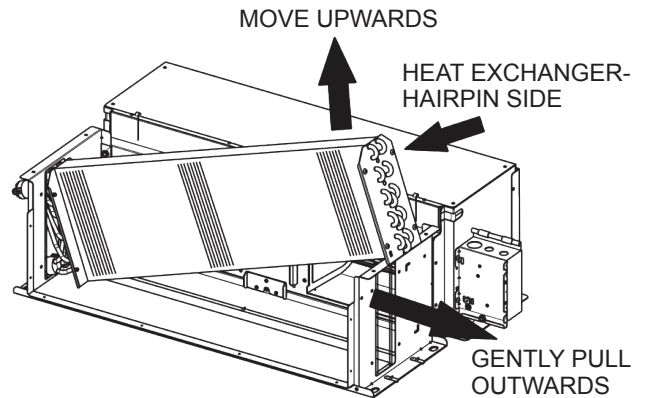
### Easy Serviceability

Filter can be removed from sides easily.



### Interchangeable Coil Direction

To match water connections on the field.



### FCU Selection Software

Selection software allows convenience in obtaining FCU rating at specific design condition.

### Flexibility & Options

- Piping: Left, Right
- Filter: Saranet, 8mm Al, 1" Al, No filter
- Plenum: Without Rear Return Plenum, With Rear Return Plenum
- Insulation: PE, NBR
- Drain Pan Material: Galvanised Steel, Stainless Steel
- Drain Pan Length: Standard, Extended 100mm

## Ceiling Concealed (50Hz)

### Specification for ceiling concealed standard delta-T (Low ESP)

Model			FWC02G EC	FWC03G EC	FWC04G EC	FWC06G EC	
Nominal cooling capacity			Btu/hr	6000	9000	12000	18000
			kW	1.76	2.64	3.52	5.28
Nominal sensible cooling capacity			Btu/hr	5000	7000	9700	14400
			kW	1.47	2.05	2.84	4.22
Nominal total input power			W	19	30	43	80
Nominal running current			A	0.20	0.29	0.40	0.69
Power source			V/Ph/Hz	220-240/1/50 & 208-230/1/60			
INDOOR UNIT	Control	Air discharge		Ducted			
		Operation		Without controller			
	Air flow (H/M/L)		CFM	200/160/130	300/220/150	400/305/200	600/500/385
	External static pressure (H/M/L)		Pa	30/19/12	30/16/7	30/18/7	30/21/13
	Nominal water flow rate		m3/hr	0.30	0.45	0.60	0.91
			USGPM	1.32	2.00	2.66	3.99
			litres/min	5.00	7.57	10.09	15.13
	Head loss (Cooling)		kPa	7	20	25	34
	Max. working pressure		kPa	1608			
	Surface air velocity		m/s	1.26	1.17	1.56	1.99
	Sound pressure level (H/M/L)		dBA	32/27/21	33/26/21	36/30/22	39/36/31
	Unit dimension	H x W x D	mm	251x630x461	251x774x461	251x774x461	251x874x461
	Packing dimension	H x W x D	mm	595x836x284	595x984x284	595x984x284	595x1084x284
	Unit weight		kg	13	16	16	17.5
	Condensate drain size		mm	19.05			
	Pipe connection		mm	19.05 BSPT FEMALE THREAD ADAPTOR			
	Fan	Type		Blower			
		Drive		Direct			
		Quantity		1	2	2	2
		Fan speed (H/M/L)		RPM	985/800/655	970/740/540	1070/870/610
Fan Efficiency (H/M/L)		%	34.2/36.7/40.4	34.8/36.1/39.6	32.5/34.6/39.0	33.4/34.1/35.5	
Fan motor	Type		DC BRUSHLESS MOTOR				
	Index of protection (IP)		IP20				
	Insulation grade		B				
	Quantity		1	1	1	1	
	Rated input power (H/M/L)		W	19/10/6	30/13/6	43/21/9	80/56/30
	Rated running current (H/M/L)		A	0.20/0.15/0.12	0.29/0.18/0.13	0.40/0.22/0.14	0.69/0.50/0.30
	Starting current		A	1.20	1.20	1.20	1.20
	Motor output		W	120	120	120	120
	Motor Efficiency		%	71.5/56.8/38.3	77.9/64.6/44.1	79.9/72.4/56.4	81.1/80.4/76.4
Poles			10				

Mode	Cooling (2 Pipe)
Entering air temperature	27°C DB / 19°C WB
Entering water temperature	7°C
Leaving water temperature	12°C

All specifications are subjected to change by the manufacturer without prior notice.

## Ceiling Concealed (50Hz)

Specification for ceiling concealed standard delta-T (Low ESP)

Model			FWC08G EC	FWC10G EC	FWC12G EC		
Nominal cooling capacity			Btu/hr	24000	30000	36000	
			kW	7.03	8.79	10.55	
Nominal sensible cooling capacity			Btu/hr	19100	23400	27900	
			kW	5.60	6.86	8.18	
Nominal total input power			W	100	142	163	
Nominal running current			A	0.87	1.18	1.35	
Power source			V/Ph/Hz	220-240/1/50 & 208-230/1/60			
INDOOR UNIT	Control	Air discharge		Ducted			
		Operation		Without controller			
	Air flow (H/M/L)		CFM	800/650/465	1000/805/600	1200/975/810	
	External static pressure (H/M/L)		Pa	30/19/10	30/18/11	30/20/13	
	Nominal water flow rate		m3/hr	1.21	1.51	1.81	
			USGPM	5.33	6.66	7.99	
			litres/min	20.18	25.22	30.26	
	Head loss (Cooling)		kPa	38	42	38	
	Max. working pressure		kPa	1608			
	Surface air velocity		m/s	1.69	2.11	2.05	
	Sound pressure level (H/M/L)		dBA	40/35/27	42/38/32	43/40/36	
	Unit dimension		H x W x D	mm	251x1264x461	251x1264x461	251x1514x461
	Packing dimension		H x W x D	mm	595x1473x284	595x1473x284	595x1724x284
	Unit weight		kg	26	26	29.5	
	Condensate drain size		mm	19.05			
	Pipe connection		mm	19.05 BSPT FEMALE THREAD ADAPTOR			
	Fan	Type		Blower			
		Drive		Direct			
		Quantity		3	3	4	
		Fan speed (H/M/L)		RPM	1140/950/710	1275/1035/805	1220/1010/835
Fan Efficiency (H/M/L)		%	52.9/53.6/57.6	43.9/51.2/57.3	37.7/33.9/46.7		
Fan motor	Type		DC BRUSHLESS MOTOR				
	Index of protection (IP)		IP20				
	Insulation grade		B				
	Quantity		2	2	2		
	Rated input power (H/M/L)		W	100/60/29	142/84/40	163/102/62	
	Rated running current (H/M/L)		A	0.87/0.58/0.37	1.18/0.77/0.42	1.35/0.89/0.60	
	Starting current		A	2.40	2.40	2.40	
	Motor output		W	120	120	120	
	Motor Efficiency		%	80.1/77.1/69.1	81.3/78.6/73.9	80.8/79.5/78.0	
Poles		10					

Mode	Cooling (2 Pipe)
Entering air temperature	27°C DB / 19°C WB
Entering water temperature	7°C
Leaving water temperature	12°C

All specifications are subjected to change by the manufacturer without prior notice.

## Ceiling Concealed (50Hz)

### Specification for ceiling concealed standard delta-T (Medium ESP)

Model				FWC03G EC		FWC04G EC		FWC06G EC			
Nominal cooling capacity				Btu/hr		9000		12000		18000	
				kW		2.64		3.52		5.28	
Nominal sensible cooling capacity				Btu/hr		7000		9700		14400	
				kW		2.05		2.84		4.22	
Nominal total input power				W		40		55		94	
Nominal running current				A		0.38		0.49		0.80	
Power source				V/Ph/Hz		220-240/1/50 & 208-230/1/60					
INDOOR UNIT	Control	Air discharge			Ducted						
		Operation			Without controller						
	Air flow (H/M/L)			CFM	300/220/150		400/305/200		600/500/385		
	External static pressure (H/M/L)			Pa	50/32/15		50/32/15		50/35/20		
	Nominal water flow rate			m3/hr	0.45		0.60		0.91		
				USGPM	2.00		2.66		3.99		
				litres/min	7.57		10.09		15.13		
	Head loss (Cooling)			kPa	20		25		34		
	Max. working pressure			kPa	1608						
	Surface air velocity			m/s	1.17		1.56		1.99		
	Sound pressure level (H/M/L)			dBA	35/29/20		37/31/22		41/37/31		
	Unit dimension		H x W x D	mm	251x774x461		251x774x461		251x874x461		
	Packing dimension		H x W x D	mm	595x984x284		595x984x284		595x1084x284		
	Unit weight			kg	16		16		17.5		
	Condensate drain size			mm	19.05						
	Pipe connection			mm	19.05 BSPT FEMALE THREAD ADAPTOR						
	Fan	Type			Blower						
		Drive			Direct						
		Quantity			2		2		2		
		Fan speed (H/M/L)		RPM	1115/900/645		1235/990/715		1350/1170/935		
Fan Efficiency (H/M/L)		%	35.9/37.0/38.7		36.3/36.0/37.0		33.5/33.9/35.4				
Fan motor	Type			DC BRUSHLESS MOTOR							
	Index of protection (IP)			IP20							
	Insulation grade			B							
	Quantity			1		1		1			
	Rated input power (H/M/L)		W	40/19/9		55/27/11		94/62/34			
	Rated running current (H/M/L)		A	0.38/0.20/0.13		0.49/0.26/0.16		0.80/0.56/0.32			
	Starting current		A	1.20		1.20		1.20			
	Motor output		W	120		120		120			
	Motor Efficiency		%	75.0/67.2/54.1		76.4/72.0/59.3		81.5/81.4/77.8			
Coil	Poles			10							
	Tube		Material		Copper						
			Diameter (mm)		7.00						
	Fin		Material		Aluminium						
			Face area (m²)		0.12		0.12		0.14		
			Row		3						
	Water volume		litre	0.45		0.45		0.62			
Air quality	Filter	Type		OPTION (WASHABLE SARANET FILTER OR ALUMINIUM MESH FILTER)							
		Quantity		pc	2		2		2		
Casing				Colour	Without paint						

Mode	Cooling (2 Pipe)
Entering air temperature	27°C DB / 19°C WB
Entering water temperature	7°C
Leaving water temperature	12°C

All specifications are subjected to change by the manufacturer without prior notice.

## Ceiling Concealed (50Hz)

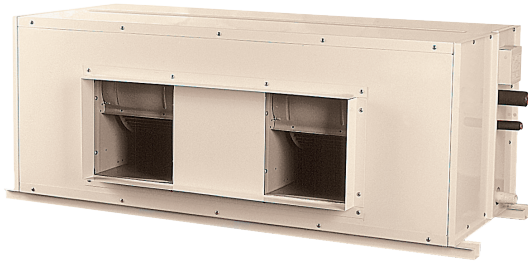
### Specification for ceiling concealed standard delta-T (Medium ESP)

Model				FWC08G EC		FWC10G EC		FWC12G EC			
Nominal cooling capacity				Btu/hr		24000		30000		36000	
				kW		7.03		8.79		10.55	
Nominal sensible cooling capacity				Btu/hr		19100		23400		27900	
				kW		5.60		6.86		8.18	
Nominal total input power				W		120		170		189	
Nominal running current				A		1.02		1.38		1.54	
Power source				V/Ph/Hz		220-240/1/50 & 208-230/1/60					
INDOOR UNIT	Control	Air discharge			Ducted						
		Operation			Without controller						
	Air flow (H/M/L)			CFM	800/650/465		1000/805/600		1200/975/810		
	External static pressure (H/M/L)			Pa	50/33/17		50/33/18		50/33/23		
	Nominal water flow rate			m3/hr	1.21		1.51		1.81		
				USGPM	5.33		6.66		7.99		
				litres/min	20.18		25.22		30.26		
	Head loss (Cooling)			kPa	38		42		38		
	Max. working pressure			kPa	1608						
	Surface air velocity			m/s	1.69		2.11		2.05		
	Sound pressure level (H/M/L)			dBA	43/37/30		44/40/33		44/40/37		
	Unit dimension		H x W x D	mm	251x1264x461		251x1264x461		251x1514x461		
	Packing dimension		H x W x D	mm	595x1473x284		595x1473x284		595x1724x284		
	Unit weight			kg	26		26		29.5		
	Condensate drain size			mm	19.05						
	Pipe connection			mm	19.05 BSPT FEMALE THREAD ADAPTOR						
	Fan	Type			Blower						
		Drive			Direct						
		Quantity			3		3		4		
		Fan speed (H/M/L)		RPM	1310/1080/830		1405/1190/930		1320/1050/965		
Fan Efficiency (H/M/L)		%	39.0/39.9/40.4		36.0/38.6/39.6		32.9/30.1/33.4				
Fan motor	Type			DC BRUSHLESS MOTOR							
	Index of protection (IP)			IP20							
	Insulation grade			B							
	Quantity			2		2		2			
	Rated input power (H/M/L)		W	120/68/34		170/101/45		189/126/72			
	Rated running current (H/M/L)		A	1.02/0.63/0.40		1.38/0.89/0.46		1.54/1.09/0.68			
	Starting current		A	2.40		2.40		2.40			
	Motor output		W	120		120		120			
	Motor Efficiency		%	80.7/78.6/70.7		82.1/80.7/74.6		81.7/80.9/78.5			
	Poles			10							
Coil	Tube		Material		Copper						
			Diameter (mm)		7.00						
	Fin		Material		Aluminium						
			Face area (m²)		0.22		0.22		0.28		
			Row		3						
	Water volume		litre	0.90		1.04		1.29			
Air quality	Filter	Type		OPTION (WASHABLE SARANET FILTER OR ALUMINIUM MESH FILTER)							
		Quantity		pc	3		3		4		
Casing				Colour	Without paint						

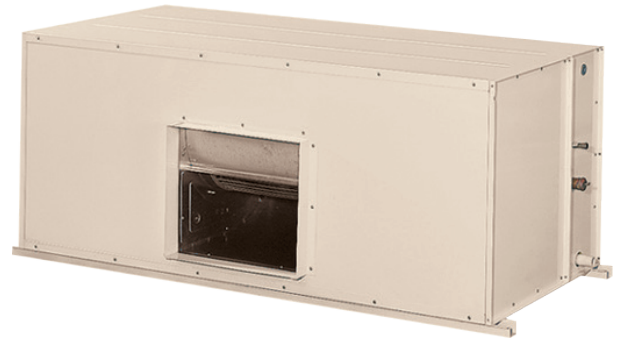
Mode	Cooling (2 Pipe)
Entering air temperature	27°C DB / 19°C WB
Entering water temperature	7°C
Leaving water temperature	12°C

All specifications are subjected to change by the manufacturer without prior notice.

## Ducted Blower (50Hz)



FUD20/25B



FUD40/50B

- Excellent air distribution
- Cabinet construction
- High CFM range
- High external static pressure (ESP) range
- Fire resistant Polyethylene insulation
- Easy serviceability
- Option of left or right piping
- 4 available fan speed\*
- Changeable drive package\*\*
- Convertible air throw direction \*\*
- BAG compatible



## Ducted Blower (50Hz)

### Excellent Air Distribution

The air can be distributed evenly to every corner of the room through ducting, enabling cooling/heating of multiple areas with one fan coil unit.



### 4 Available Fan Speed\*

Each speed offers different external static pressure and air flow which enhances flexibility.

\*Only available for FUD20/25B

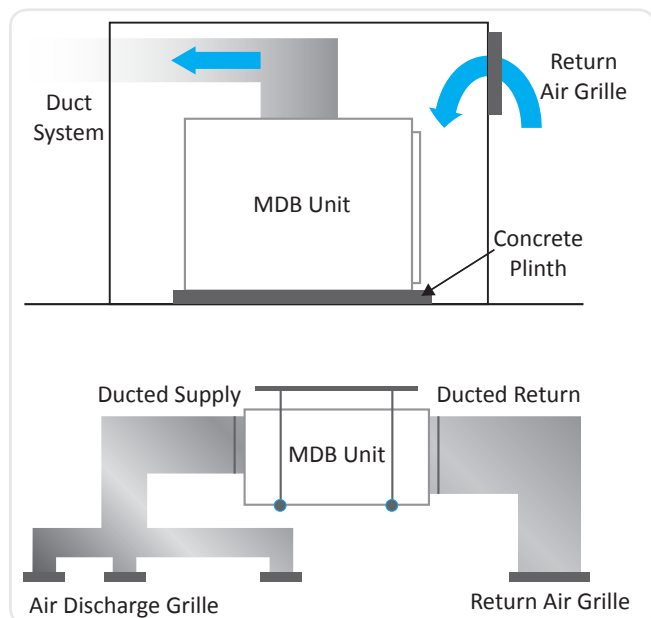
### High Airflow Range

Airflow ranges from 2500CFM to 4600CFM.

### Convertible Air Throw Direction\*\*

Convertible discharge air direction (vertical or horizontal air throw) provides flexibility in installation at site.

\*\*Only available for FUD30/40B



### High External Static Pressure (ESP) Range

Availability of up to 230Pa ESP for high static application (without filter for FUD30/40B).

### Cabinet Construction

The enclosure is made from weather-proofed electro galvanized mild steel and coated with epoxy polyester powder layer for protection against severe conditions. Service panel is also available for ease of servicing.

### Left / Right Piping Option

For flexible installation and application at site.

### Fire-Resistant

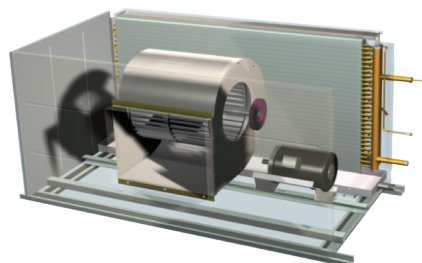
Polyethylene (PE) insulation is used at every possible condensate panel to prevent all forms of water or moisture penetration. Polyethylene, which is also a type of Closed Cell Foam (CCF) insulation has the following advantages:

- Durable external surface that is resilient to tough dirt.
- Higher degree of puncture resistance when compared to fiberglass.
- Easily cleaned surface (if necessary) to further resist microbial growth.

### Changeable Drive Package\*\*

Non-standard external static pressure and airflow requirements can be sized accordingly at site by changing the factory fitted drive package.

\*\*Only available for belt driven FUD30/40B

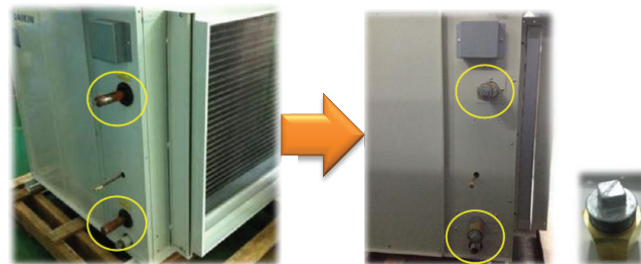


### Easy to Service

For models FUD20/25B, there is a service way allocated at the bottom for servicing.

### Female Adaptor (Threaded)

The units come with threaded female adaptor, making installation at site easy by eliminating the brazing process.



## Ducted Blower (50Hz)

### Specification for ducted blower

Indoor model name			FUD20B	FUD25B	FUD30B	FUD40B			
Nominal cooling capacity			Btu/hr	75600	95000	125000	150000		
			W	22160	27840	36640	43960		
Nominal sensible cooling capacity			Btu/hr	53700	69400	90000	106500		
			W	15740	20340	26380	31210		
Nominal heating capacity (entering water temperature: 50°C)			Btu/hr	78000	97500	138000	170000		
			W	22860	28580	40450	49820		
Nominal total input power			W	760	1800	1620	1910		
Nominal running current			A	3.49	7.84	3.33	4.03		
Power source			V/Ph/Hz	220-240 / 1 / 50		380-415 / 3 / 50			
Indoor	Control		Air discharge		Ducted				
			Operation		Without controller				
	Airflow (H/M/L)		CFM	2500 / 2100 / 1750	3200 / 3000 / 2800	4200 / N/A / N/A	4600 / N/A / N/A		
	External Static Pressure (H/M/L)		Pa	100 / 72 / 50	100 / 80 / 60	149* / N/A / N/A	149* / N/A / N/A		
	Nominal water flow rate		USGPM	16.9	21.1	27.7	33.3		
			liters/min	64	80	105	126		
	Head loss (Cooling)		kPa	34.5	42.0	48.8	53.3		
	Head loss (Heating): 50°C		kPa	32.9	27.4	31.5	63.2		
	Max. working pressure		kPa	1608					
	Surface air velocity		m/s	2.18	2.79	1.97	2.16		
	Sound pressure level (H/M/L)		dBA	50/46/42	54/52/50	58 / N/A / N/A			
	Unit dimension (HxWxD)		mm	572 x 1402 x 605			885 x 1540 x 850		
	Packing dimension (HxWxD)		mm	762 x 1605 x 880			1154 x 1787 x 1188		
	Unit weight		kg	92	102	176	189		
	Condensate drain size		mm	19.05					
	Pipe connection		mm	31.75 BSP female thread adaptor					
	Fan		Type		Blower				
			Drive		Direct		Belt		
	Fan speed (H/M/L)		RPM	835 / 720 / 615	950 / 855 / 805	707 / N/A / N/A			
	Fan motor		Type		Permanent split capacitor (Induction)		Three phase induction		
			Index of Protection (IP)		IP22				
			Insulation grade		B				
			Rated input power (H/M/L)		W	760 / 611 / 478	1800 / 1620 / 1320	1620 / N/A / N/A	1910 / N/A / N/A
Rated running current (H/M/L)			A	3.49 / 2.86 / 2.32	7.84 / 7.06 / 5.82	3.33 / N/A / N/A	4.03 / N/A / N/A		
Starting current			A	5.20	10.30	3.48	4.21		
Motor output			W	375	500	1500	1500		
Poles				6	4				
Coil		Tube		Material		Copper			
				Diameter (mm)		9.52			
		Fin		Material		Aluminium			
				Face area (m²)		0.54		1.01	
				Row		3	4	3	4
		Water volume		liter	4.53	6.27	8.14	11.63	
Air quality		Filter type		Washable saranet filter		Viledon R29			
		Filter quantity		pc	2		3		
Casing		Colour	Ivory white						

\* The external static pressure for FUD30/40B above is **inclusive** of R29 filters whereby R29 filters contribute a pressure drop of 81Pa.

Mode	Cooling	Heating
Entering air temperature	27°C DB / 19°C WB	20°C DB
Entering water temperature	7°C	50°C (2-pipe system)
Leaving water temperature	12°C	-

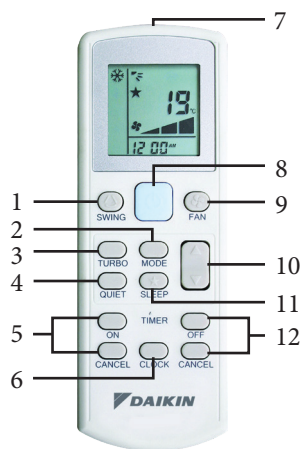
All specifications are subjected to change by the manufacturer without prior notice.

### BRC52A

BRC52A61 – Heatpump with auto mode

BRC52A62 – Cooling only

BRC52A63 – Heatpump



#### Features:

1. Vertical automatic air swing
2. Selectable mode: Auto, Cool, Heat, Dry, Fan
3. Turbo function
4. Quiet function
5. On timer setting
6. Real time clock
7. Transmission source
8. "Glow in the dark" On/Off button
9. Fan speed selection: Low, Med, High, Auto
10. Temperature setting: Up & down
11. Sleep mode function
12. Off timer setting

### BRC51A

BRC51A61 – Heatpump with auto mode

BRC51A62 – Cooling only



#### Features:

- Cool/Heat/Fan/Dry/Auto mode
- Auto/High/Med/Low fan speed
- Temperature operate in °C and °F
- Turbo and Quiet function
- Sleep function
- Swing function
- Real time clock and day display
- 7-days programmable timer
- Error indicator
- Key lock and fan lock features
- Batteries backup and retain setting during power failure
- Last state memory (memory backup setting from mainboard)
- Delay timer (1 or 2 hours)
- Interaction with wireless handset (BRC52A61/62/63)

Network Interface Module (NIM) is a networking system which enables communication among Daikin air conditioners. With the Network interface Module (NIM), all your air conditioning systems can be controlled with just a single controller providing various benefits stated below.

### Network Controls NIM

Benefits:

- More convenience. No more individually controls of air conditioning units.
- Quicker and easier zone control from the master control unit.
- Better control of air conditioning systems operating conditions.

NIM utilizes master-slave type system whereby the master node will issue commands to each of the slave nodes.

Every master unit will have a group address so that every slave can only response to their respective master. Each slave unit must have a unique address so that it can be addressed independently of other nodes.

The master unit will be operating in conjunction with a control panel. Any settings done via the control panel connected to the master will overwrite the settings of its slave units.

Slave unit can be operated with or without control panel. If a slave unit is operating with a control panel, its settings can be changed without following its master.

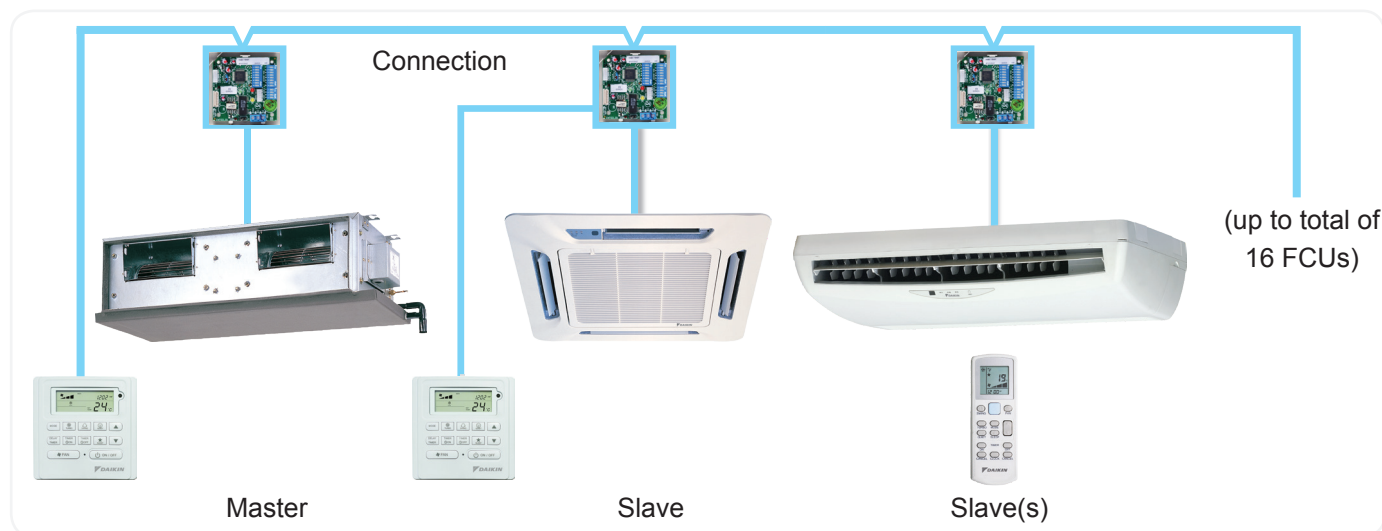


Basic features:

- DIP switch setting for Group & Unit address.
- Master or slave system configuration.
- Automatic detection of control panel existence.
- Error type and unit ID indication through display control panel.
- Maximum point-to-point communication bus up to 1000m.
- A single master unit can control up to 15 slave units in each group.
- Each slave unit will sense their individual local temperature.
- Unit address range from 0 to 15 (0000-1111).

The NIM system consists of:

- Main board controller
- Display control panel
- NIM controller
- Communications bus



### Main board controllers and display control panel

NIM must be used in conjunction with:

- Fan coil units
- BRC51A or BRC52A

Supported configuration:

	Master	Slave
BRC51A	•	•
BRC52A	-	•

### Communication Bus

A 2-way twisted pair cable is used as the communication bus. Recommended cable for communication bus is a pair of screened and shielded twisted single core wire with core diameter of 0.5mm to 1.0mm.

### Connection

The communication bus must be connected serially to the adjacent NIM. (Daisy chain connection). The same polarity has to be connected between the NIMs (A to A, B to B).

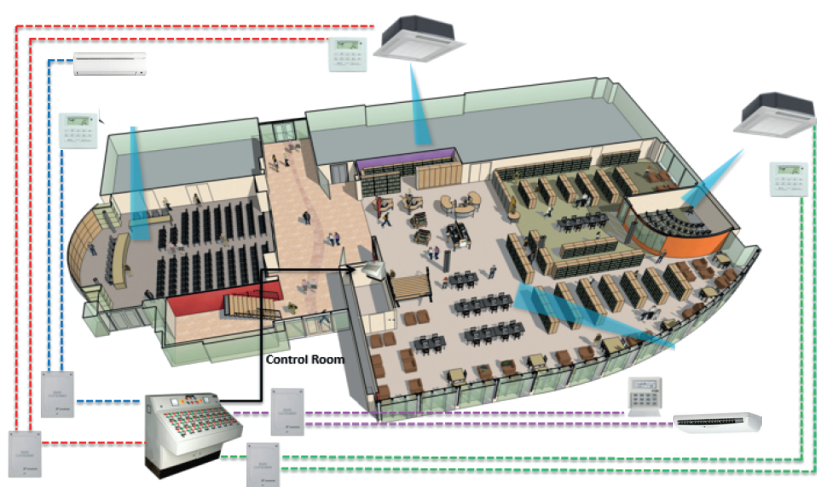
	Recommended maximum cable length (m)
First NIM to the furthest connected NIM	1000
NIM to main board	10
NIM to wired controller	10

# BMS Gateway(BAG)

BAG provides a cost-effective way to control and monitor Daikin Malaysia Units through long distance Building Management System (BMS)

## Advantages

- Short installation time
- Simple setup and convenient operation
- Do not require highly trained installer operator
- Eliminate nuisance of handset setting being change by the public



	BMS Control Funtions	Inputs Controls	Applications
Inputs	Force OFF*	Off / Unchanged	Smoke alarm system
	On / Off	On / Off	On / Off units from long distance control room
	Mode	Heat / Cool	Mode control from long distance control room
	Fan Speed**	High / Low	Fan speed control from long distance control room
Resistance Inputs	On / Off Indication	On / Off	To indicate and monitor unit operation status and functionality from long distance control room
	Fault Indication	Alarm / Normal	
	Heat / Cool Indication	Heat, or Cool / Fan Dry	

\* Normally-Closed type Contact.

\*\* Fan Speed Control is only applicable for units with multiple fan speed.

**Warning**

- Daikin products are manufactured for export to numerous countries throughout the world. Prior to purchase, please confirm with your local authorised importer, distributor and/or retailer whether this product conforms to the applicable standards, and is suitable for use, in the region where the product will be used. This statement does not purport to exclude, restrict or modify the application of any local legislation.
- Ask a qualified installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Use only those parts and accessories supplied or specified by Daikin. Ask a qualified installer or contractor to install those parts and accessories. Use of unauthorised parts and accessories or improper installation of parts and accessories can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Read the User's Manual carefully before using this product. The User's Manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

If you have any enquiries, please contact your local importer, distributor and/or retailer.

**Caution****Cautions on product corrosion**

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided. If you need to install the outdoor unit close to the sea shore, contact your local distributor.

**Dealer****DAIKIN REFRIGERATION MALAYSIA SDN. BHD.**  
(formerly known as J & E Hall Refrigeration Sdn. Bhd.)

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