

AIR CONDITIONING SYSTEMS

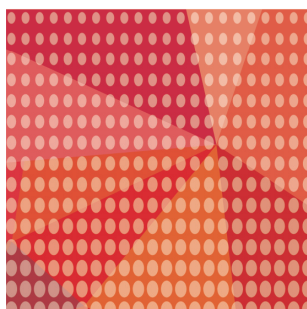
**HYBRID**  
CITY MULTI



# DATA BOOK

MODEL

**PCFY-WL-VKM-E**



**PCFY-WL-VKM-E**

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# 1. SPECIFICATIONS

Ceiling suspended

PCFY-WL-VKM-E

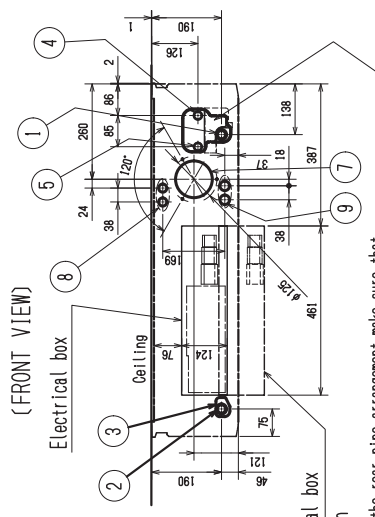
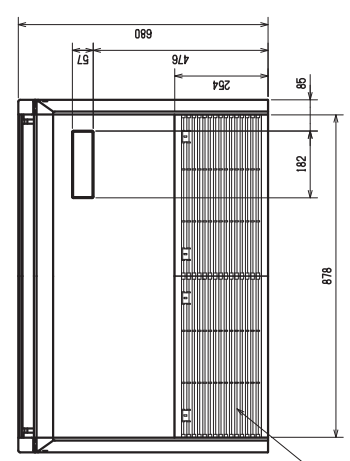
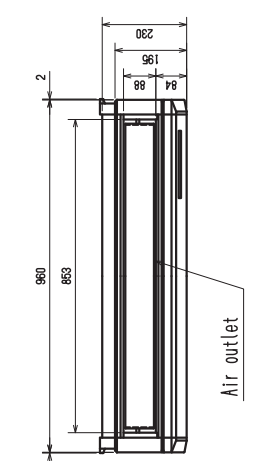
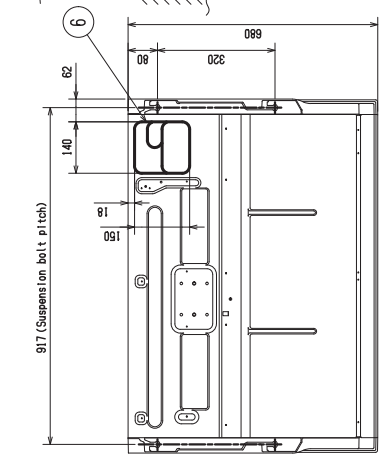
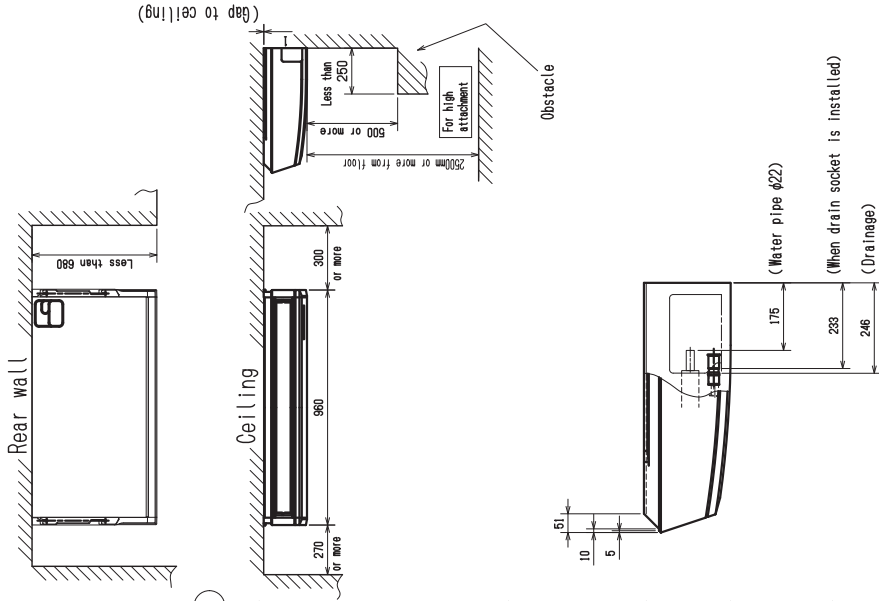
Model		PCFY-WL40VKM-E	PCFY-WL63VKM-E	PCFY-WL80VKM-E	PCFY-WL100VKM-E			
Power source		1-phase 220-240V 50Hz, 1-phase 220V 60Hz	1-phase 220-240V 50Hz, 1-phase 220V 60Hz	1-phase 220-240V 50Hz, 1-phase 220V 60Hz	1-phase 220-240V 50Hz, 1-phase 220V 60Hz			
Cooling capacity (Nominal)	*1 kW	4.5	7.1	9.0	11.2			
	*1 BTU/h	15,400	24,200	38,200	47,800			
	*2 Power input kW	0.04	0.06	0.08	0.11			
	*2 Current input A	0.34	0.52	0.69	0.95			
Heating capacity (Nominal)	*3 kW	5.0	8.0	10.0	12.5			
	*3 BTU/h	17,100	27,300	42,700	54,600			
	*2 Power input kW	0.04	0.06	0.08	0.11			
	*2 Current input A	0.34	0.52	0.69	0.95			
External finish		MUNSELL (6.4Y 8.9/0.4)	MUNSELL (6.4Y 8.9/0.4)	MUNSELL (6.4Y 8.9/0.4)	MUNSELL (6.4Y 8.9/0.4)			
External dimension H × W × D		mm	230×960×680	230×1280×680	230×1600×680			
		in.	9-1/16×37-13/16×26-3/4	9-1/16×50-3/8×26-3/4	9-1/16×63×26-3/4			
Net weight		kg (lbs)	25 (55)	32 (71)	39 (86)			
Heat exchanger		Cross fin (Aluminum fin and copper tube)						
		Water Volume L	1.1	1.9	2.5	2.5		
FAN		Type × Quantity						
		External static press.		Pa	0	0	0	0
				mmH <sub>2</sub> O	0	0	0	0
		Motor Type		DC motor				
		Motor output kW		0.090	0.095	0.160	0.160	
		Driving mechanism		Direct-driven by motor				
		Air flow rate		(Low-Mid2-Mid1-High)				
m <sup>3</sup> /min	10-11-12-13			15-17-19-21	22-23-25-27	22-25-28-31		
L/s	167-183-200-217			233-250-267-300	350-400-433-467	350-400-450-517		
		cfm	353-388-424-459	494-530-565-636	742-847-918-989	742-847-953-1095		
Sound pressure level (measured in anechoic room)		(Low-Mid2-Mid1-High)						
		*2 dB <A>	32-35-37-39	34-37-40-43	39-40-42-44	39-42-45-47		
Insulation material		Polyeter sheet						
Air filter		PP honeycomb						
Protection device		Fuse						
Refrigerant control device		-						
Connectable HBC/Hydro unit		CMB-WM-V-AA, CMB-WM-V-AB/CMH-WM-V-A	CMB-WM-V-AA, CMB-WM-V-AB/CMH-WM-V-A	CMB-WM-V-AA, CMB-WM-V-AB/CMH-WM-V-A	CMB-WM-V-AA, CMB-WM-V-AB/CMH-WM-V-A			
Water piping diameter *4, 5								
Connection size	Inlet	mm O.D.	22	22	22	22		
		mm O.D.	22	22	22	22		
	Field pipe size	Inlet	mm I.D.	20	30	30	30	
		Outlet	mm I.D.	20	30	30	30	
Field drain pipe size		mm (in.)	O.D.26 (1)	O.D.26 (1)	O.D.26 (1)	O.D.26 (1)		
Drawing		External	RG01V955	RG01V955	RG01V955	RG01V955		
		Wiring	RH79B150	RH79B150	RH79B150	RH79B150		
		Refrigerant cycle	-	-	-	-		
Standard attachment		Document	Installation Manual, Instruction Book	Installation Manual, Instruction Book	Installation Manual, Instruction Book	Installation Manual, Instruction Book		
		Accessory	-	-	-	-		
Optional parts		High efficiency filter						
		Wireless remote controller kit						
		Anti-allergy enzyme filter						
		V Blocking filter						
		Wired remote controller kit						
		Valve kit *6		PAC-SK35VK-E				
				6m Lead wire		PAC-SK40LW-E		
		Attachment plate		PAC-SK39AP-E				
Remarks		* Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. * Due to continuing improvement, above specifications may be subject to change without notice.						

Notes:	Unit converter
1. Nominal cooling conditions Indoor: 27°C D.B./19°C W.B. (81°F D.B./66°F W.B.), Outdoor: 35°C D.B. (95°F D.B.) Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)	BTU/h = kW × 3.412
2. The values are measured at the factory setting of external static pressure.	cfm = m <sup>3</sup> /min × 35.31
3. Nominal heating conditions Indoor: 20°C D.B. (68°F D.B.), Outdoor: 7°C D.B./6°C W.B. (45°F D.B./43°F W.B.) Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)	lbs = kg/0.4536
4. Be sure to install a valve on the water inlet/outlet.	
5. Install a strainer (40 mesh or more) on the pipe next to the valve to remove the foreign matters.	
6. Certain restrictions apply to indoor unit combinations. Refer to the section on the valve kit in the chapter "OPTIONAL PARTS" in the DATA BOOK for the restrictions. When the valve kit is installed farther away from the HBC than the distance between the HBC and the WL-model indoor unit, the maximum allowable height difference between the HBC and the valve kit is 15 meters. The maximum allowable piping length between the indoor unit and the valve kit is 5 meters.	*Above specification data is subject to rounding variation.
7. Please group units that operate on 1 branch of HBC controller.	

PCFY-WL40VKM-E

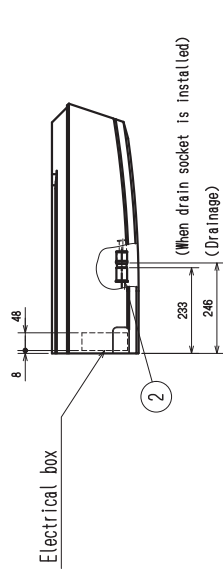
Unit: mm

Allowing clearances



When electrical box is pulled down

In case of the rear pipe arrangement, make sure that remove the shaded portions from the independent piece. Then put the independent piece back in initial position. (The heat exchanger might be clogged because of dust)



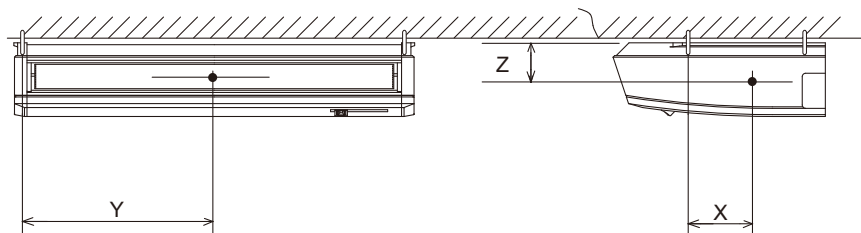
- ① Drainage pipe connection (26mm I.D.)
- ② Drainage pipe connection (for the left arrangement)
- ③ Knock out hole for left drain-piping arrangement
- ④ Water-pipe connection (Water outlet pipe O.D. φ22)
- ⑤ Water-pipe connection (Water inlet pipe O.D. φ22)
- ⑥ Knock out hole for upper drain pipe arrangement
- ⑦ Knock out hole for fresh air intake φ100
- ⑧ Knock out hole for wiring arrangement 2-φ22
- ⑨ Knock out hole for wiring arrangement 2-φ26

NOTES,  
1. Use M10 or M3/8 screw for anchor bolt.





## PCFY-WL40, 63, 80, 100VKM-E



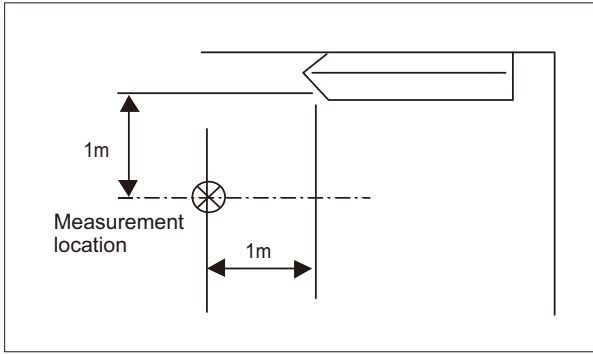
Model name	X	Y	Z
PCFY-WL40VKM-E	110	450	115
PCFY-WL63VKM-E	110	610	115
PCFY-WL80VKM-E	110	770	115
PCFY-WL100VKM-E	110	770	115





5-1. Sound levels

Ceiling suspended

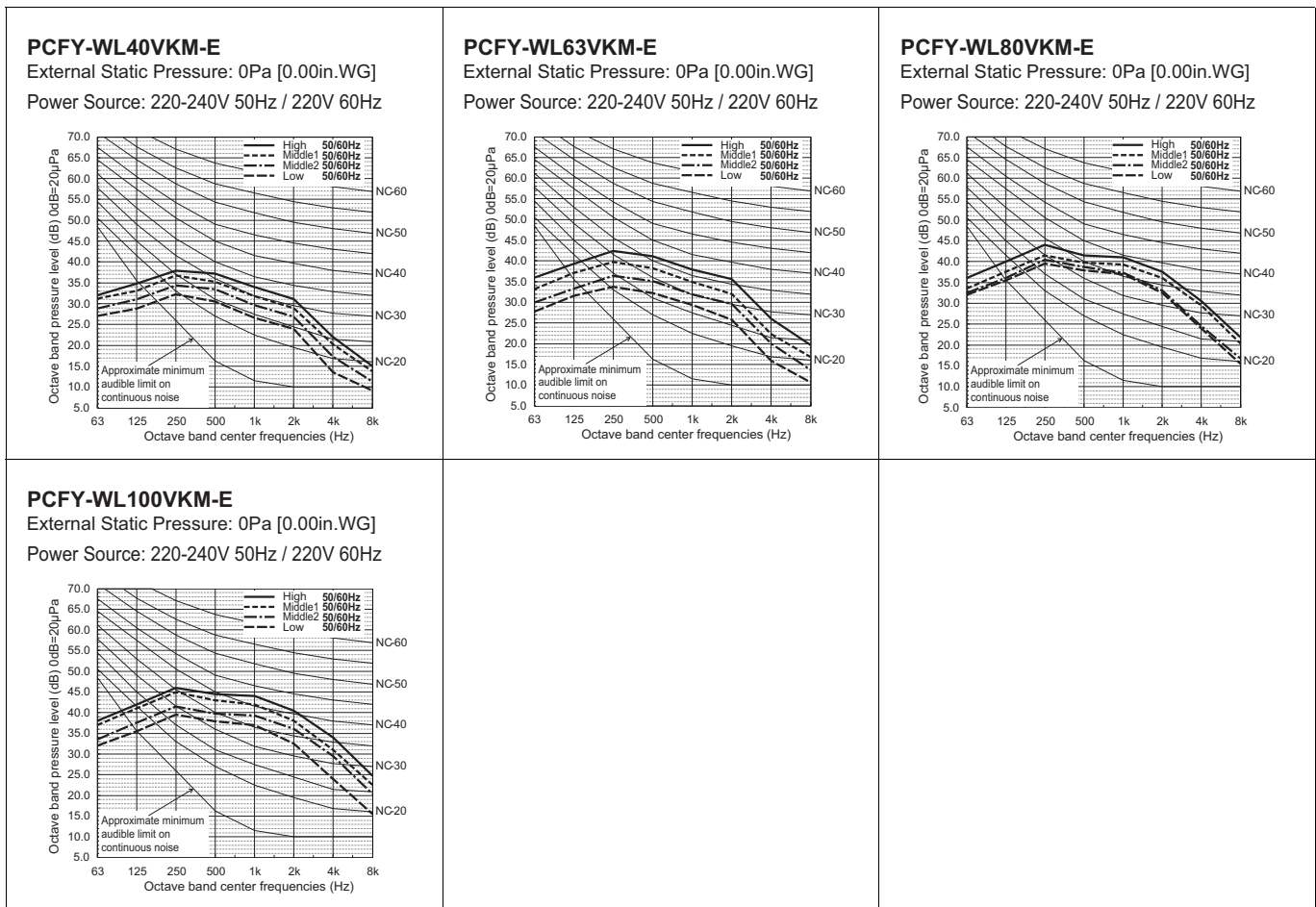


Sound level at anechoic room : Low-Middle2-Middle1-High

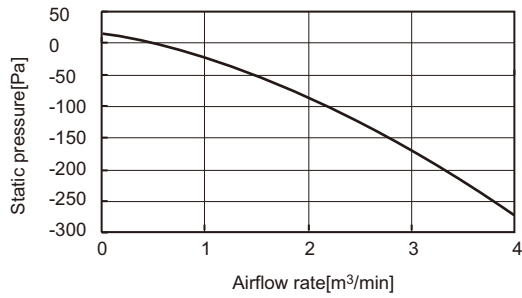
Model	Sound level dB (A)
PCFY-WL40VKM-E	32-35-37-39
PCFY-WL63VKM-E	34-37-40-43
PCFY-WL80VKM-E	39-40-42-44
PCFY-WL100VKM-E	39-42-45-47

\* Measured in anechoic room.

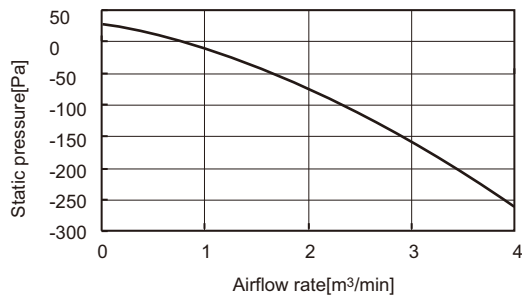
5-2. NC curves



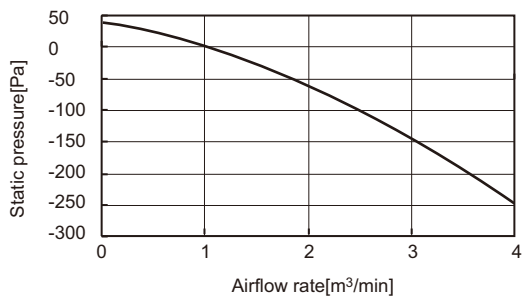
■ PCFY-WL40VKM-E



■ PCFY-WL63VKM-E



■ PCFY-WL80, 100VKM-E

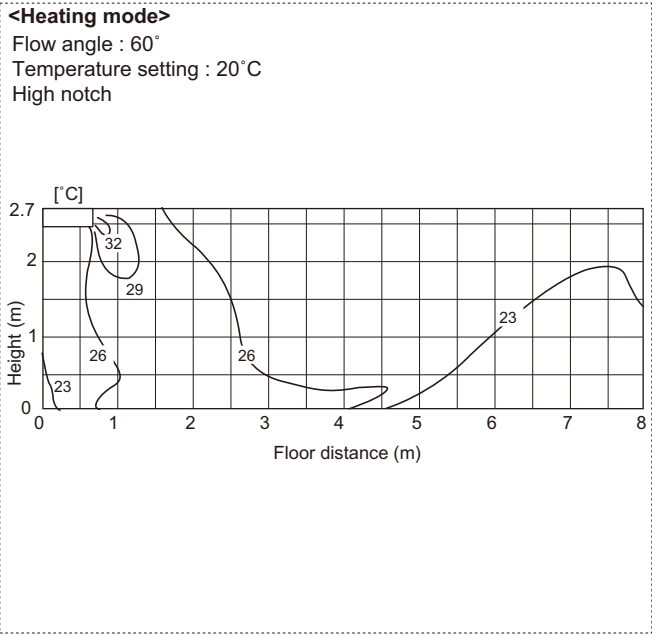
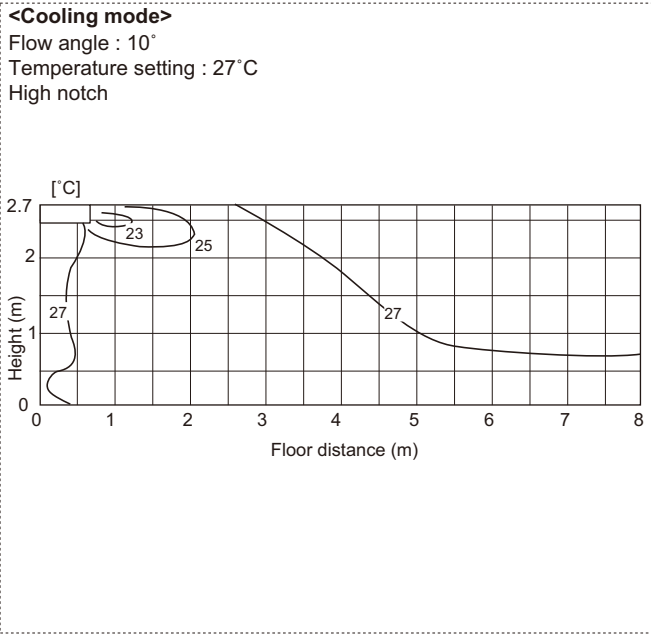


7-1. Temperature distributions

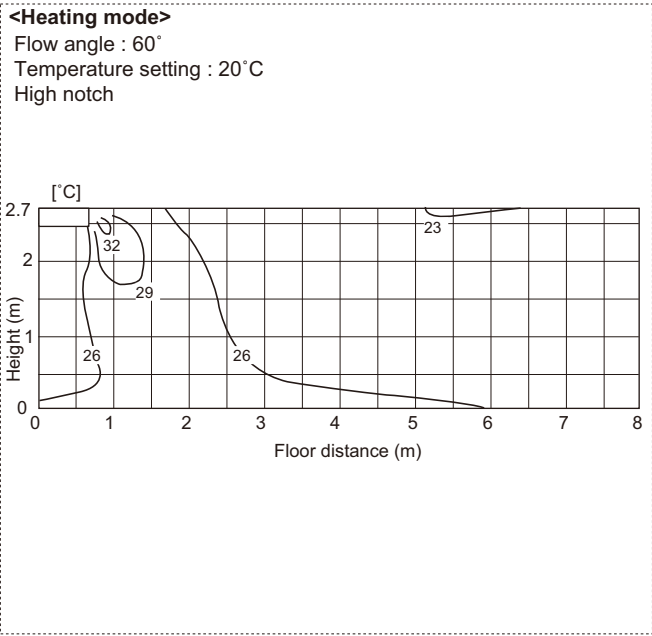
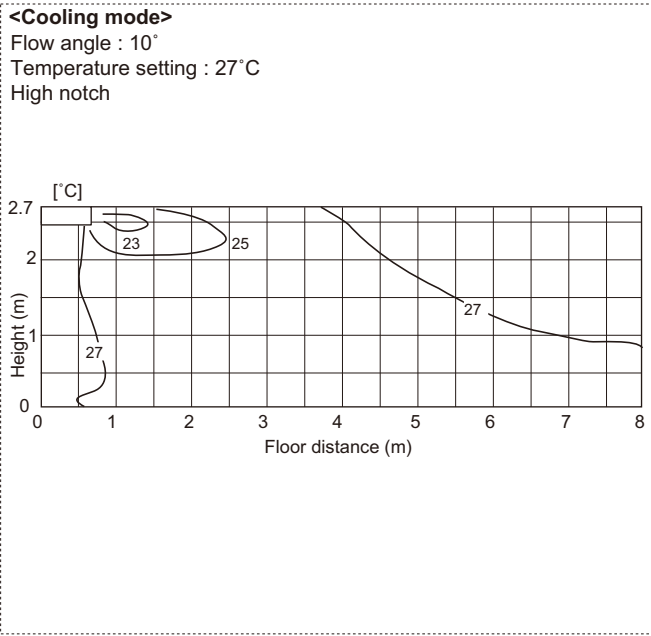
Temperature distributions

PCFY-WL40, 63VKM-E

PCFY-WL-VKM-E



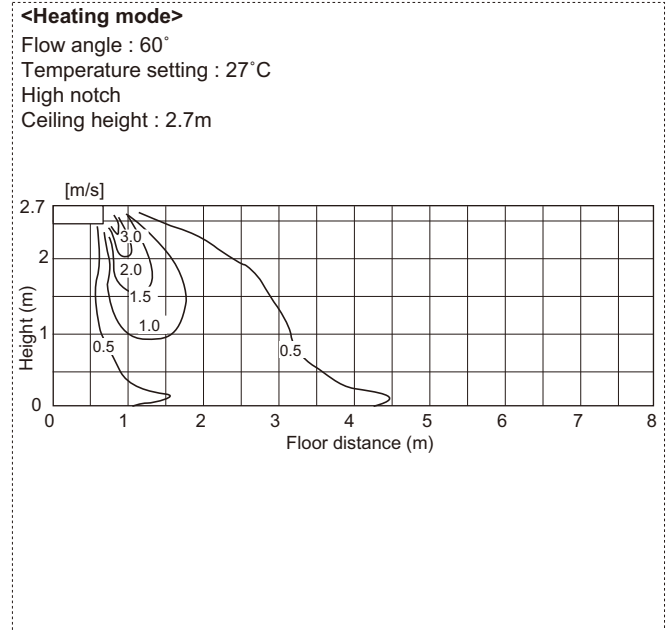
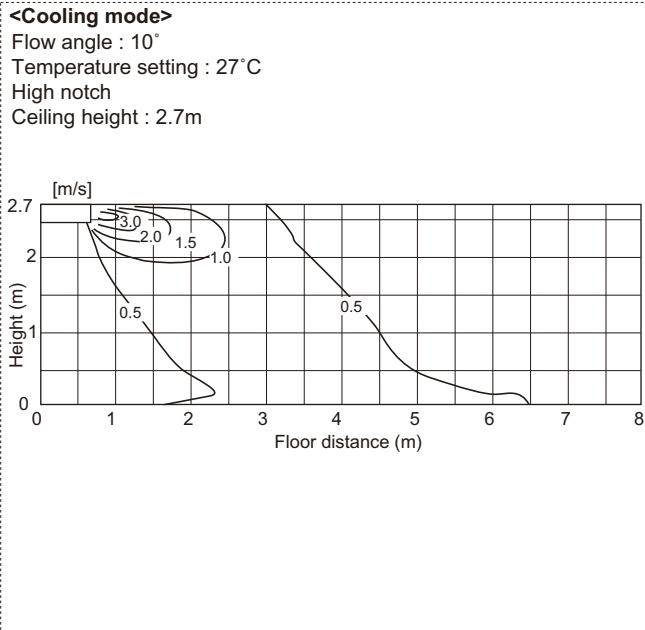
PCFY-WL100VKM-E



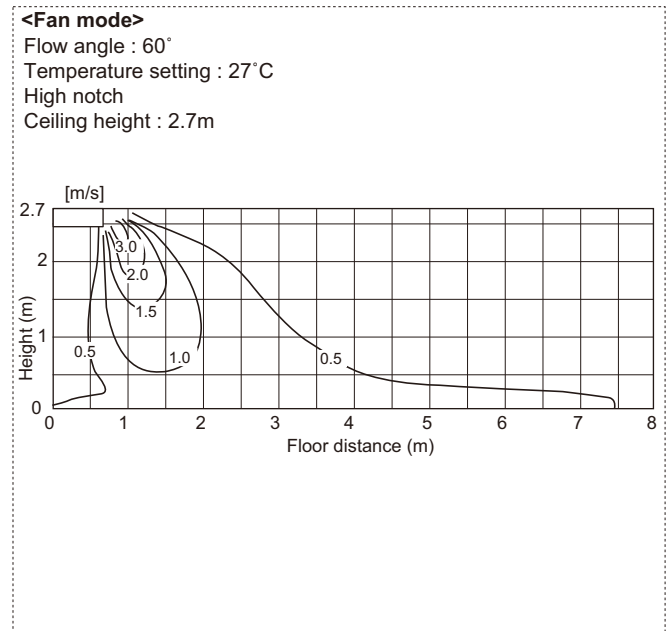
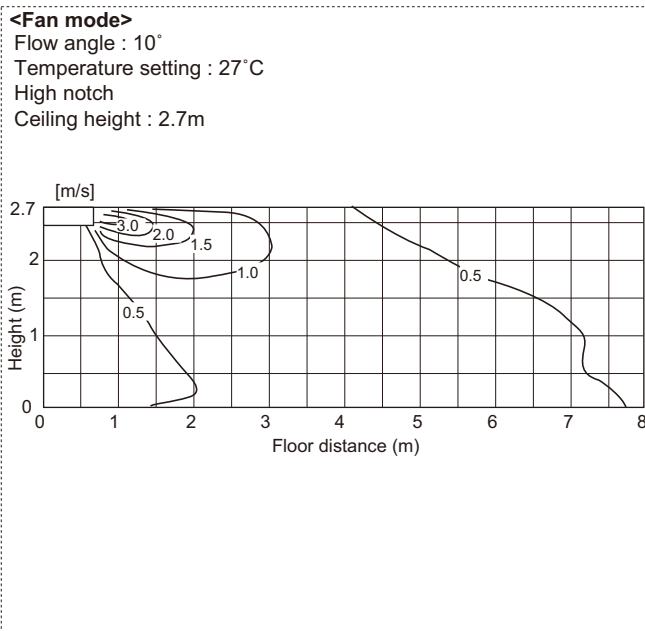
Note : These figures show typical airflow distributions in the conditions above. In the actual installation, they may differ from these figures under the influence of air temperature conditions, ceiling height, cooling/heating load, obstacles, etc.

7-2. Airflow distributions

**Airflow distributions  
PCFY-WL40, 63VKM-E**



**PCFY-WL100VKM-E**



Note : These figures show typical airflow distributions in the conditions above. In the actual installation, they may differ from these figures under the influence of air temperature conditions, ceiling height, cooling/heating load, obstacles, etc.

## 8. ELECTRICAL CHARACTERISTICS

Ceiling suspended

Symbols: MCA (Max.Circuit Amps =1.25xFLA), FLA (Full Load Amps)  
IFM (Indoor Fan Motor), Output (Fan motor rated output)

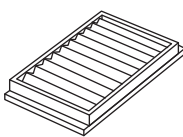
Model	Power supply			IFM	
	Volts/Hz	Range +-10%	MCA(A)	Output (kW)	FLA(A)
PCFY-WL40VKM-E	220-240V/50Hz 220V/60Hz	Max.: 264V Min.: 198V	0.43	0.090	0.34
PCFY-WL63VKM-E			0.65	0.095	0.52
PCFY-WL80VKM-E			0.87	0.160	0.69
PCFY-WL100VKM-E			1.19	0.160	0.95

PCFY-WL-VKM-E

9-1. Optional parts line up for the Indoor unit

	High-efficiency filter	Wireless remote controller kit	Valve kit	Attachment plate	6m Lead wire	V Blocking filter
PCFY-WL40VKM-E	PAC-SH88KF-E	PAR-SL94B-E	PAC-SK35VK-E	PAC-SK39AP-E	PAC-SK40LW-E	PAC-SK55KF-E
PCFY-WL63VKM-E	PAC-SH89KF-E	PAR-SL94B-E	PAC-SK35VK-E	PAC-SK39AP-E	PAC-SK40LW-E	PAC-SK56KF-E
PCFY-WL80, 100VKM-E	PAC-SH90KF-E	PAR-SL94B-E	PAC-SK35VK-E	PAC-SK39AP-E	PAC-SK40LW-E	PAC-SK57KF-E

9-2. High efficiency filter

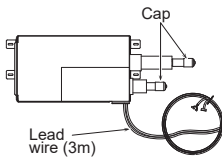
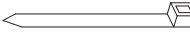
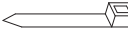

Material: PP honeycomb Gravimetric method: 70%			
Item	PAC-SH88KF-E	PAC-SH89KF-E	PAC-SH90KF-E
Quantity	2 (Small)	1 (Small), 2 (Large)	2 (Large)
Shape			

9-3. Wireless remote controller kit

Wireless remote controller receiver is built-in type.					
Item	① Wireless remote controller receiver	② Wireless remote controller	③ Remote control holder	④ "AAA" LR3 alkaline batterie	⑤ 4.1 x 16 wood screw
Quantity	1	1	1	2	2
Item	⑥ Cord retaining clips	⑦ Connection cord fixing seal (12x30 size)			
Quantity	2	1			

Detailed installation information should be referred to its Installation Manual.

9-4. Valve kit

Valve kit is necessary for using HVRF-Y system In an HVRF-R2 system, if a valve kit is connected to any of the WL indoor units, all other indoor units must also have a valve. The table below summarizes the connectability of different combinations of indoor units.				
Item	VALVE KIT	Band (large)	Band (small)	Screw
Quantity	1	1	1	8
Shape				

Outdoor Unit	Indoor Unit			Connection
	A	B	C	
HVRF-R2 System	WL V	WL V	-	Connectable
	WL V	W	-	Connectable
	WL V	WL	-	Not connectable
	WL V	WP	-	Not connectable
	WL V	WL	W	Not connectable
	WL V	WL	WP	Not connectable
	WL V	W	WP	Not connectable
	WL	WL	-	Connectable
	WL	WP	-	Connectable
	WL	W	-	Not connectable
	WL	WP	W	Not connectable
	W	WP	-	Not connectable

WL V = (E)WL-Type (With an optional valve kit)

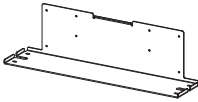
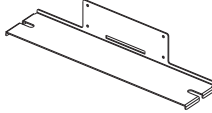
WL = (E)WL-Type (Without an optional valve kit)

WP = WP-Type (Without a built-in valve and not compatible with the optional valve kit)

W = W-Type (With a built-in valve)

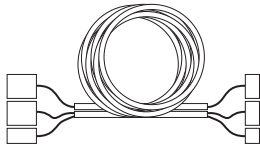

### 9-5. Attachment plate

When installing the valve kit on the ceiling plate or hanging it from the ceiling, the use of an attachment plate (PAC-SK39AP-E) is recommended.

Item	Attachment-1	Attachment-2
Quantity	1	1
Shape		


### 9-6. 6m Lead wire

The lead wire attached to the valve kit is 3 meters. If a longer lead wire is needed, use an optional part PAC-SK40LW-E (6m). Note that the maximum allowable piping distance between the valve kit and the indoor unit is 5 meters.

Item	Lead wire (6m)	Band (large)
Quantity	1	
Shape		

### 9-7. V blocking filter

V Blocking Filter with antiviral effect inhibits 99% of adhered virus, and other harmful substances, such as bacteria, mold and allergen. Two-layered filter with non-woven fabric and electrostatic filter can effectively capture and remove small particles from the air in your room.

Quantity	1	
Shape		

Detailed installation information is referred in its Installation Manual.

**⚠ Warning**

- Do not use refrigerant other than the type indicated in the manuals provided with the unit and on the nameplate.
  - Doing so may cause the unit or pipes to burst, or result in explosion or fire during use, repair, or at the time of disposal of the unit.
  - It may also be in violation of applicable laws.
  - MITSUBISHI ELECTRIC CORPORATION cannot be held responsible for malfunctions or accidents resulting from the use of the wrong type of refrigerant.
- Our air conditioning equipment and heat pumps contain a fluorinated greenhouse gas, R410A/R32.

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