

AIR CONDITIONING SYSTEMS

CITY MULTI

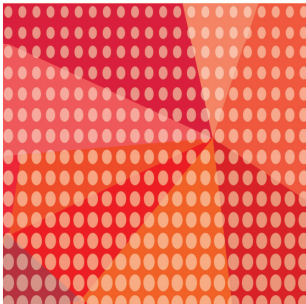


DATA BOOK

MODEL

INDOOR UNIT

PCFY-MS40-125VKM-E



PCFY-MS-VKM-E

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1. SPECIFICATIONS

Ceiling suspended

Model			PCFY-MS40VKM-E	PCFY-MS63VKM-E	PCFY-MS100VKM-E	PCFY-MS125VKM-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	11.2	14.0
	*1	BTU / h	15,400	24,200	38,200	47,800
(220V)	Power input	kW	0.04	0.05	0.09	0.11
	Current input	A	0.28	0.33	0.65	0.76
Heating capacity (Nominal)	*2	kW	5.0	8.0	12.5	16.0
	*2	BTU / h	17,100	27,300	42,700	54,600
(220V)	Power input	kW	0.04	0.05	0.09	0.11
	Current input	A	0.28	0.33	0.65	0.76
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 HxWxD		mm	230x960x680	230x1280x680	230x1600x680	230x1600x680
		in.	9-1/16 x 37-13/16 x 26-3/4	9-1/16 x 50-3/8 x 26-3/4	9-1/16 x 63 x 26-3/4	9-1/16 x 63 x 26-3/4
Net weight		kg(lbs)	25 (55)	32 (71)	37 (82)	39 (86)
Heat exchanger			Cross fin (Aluminum fin and copper tube)	Cross fin (Aluminum fin and copper tube)	Cross fin (Aluminum fin and copper tube)	Cross fin (Aluminum fin and copper tube)
FAN	Type x Quantity		Sirocco fan x 2	Sirocco fan x 3	Sirocco fan x 4	Sirocco fan x 4
	External static press.	Pa	0	0	0	0
		mmH ₂ O	0	0	0	0
	Motor Type		DC motor	DC motor	DC motor	DC motor
	Motor output		kW	0.090	0.095	0.160
	Driving mechanism		Direct-drive	Direct-drive	Direct-drive	Direct-drive
	Air flow rate (Low-Mid2-Mid1-High)	m ³ / min	10-11-12-13	14-15-16-18	21-24-26-28	21-24-27-31
		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)		dB <A>	29-32-34-36	31-33-35-37	36-38-41-43	36-39-42-44
Insulation material			Polyeter sheet	Polyeter sheet	Polyeter sheet	Polyeter sheet
Air filter			PP honeycomb	PP honeycomb	PP honeycomb	PP honeycomb
Protection device			Fuse	Fuse	Fuse	Fuse
Refrigerant control device			LEV (RH50B088H01) (PAM 4 ton)	LEV (RH50B088H01) (PAM 4 ton)	LEV (RH50B089H01) (PAM 8 ton)	LEV (RH50B089H01) (PAM 8 ton)
Connectable outdoor unit			R32 CITY MULTI	R32 CITY MULTI	R32 CITY MULTI	R32 CITY MULTI
Diameter of refrigerant pipe	Liquid	mm(in.)	6.35(1/4) Flare	9.52(3/8) Flare	9.52(3/8) Flare	9.52(3/8) Flare
	Gas	mm(in.)	12.70(1/2) Flare	15.88(5/8) Flare	15.88(5/8) Flare	15.88(5/8) Flare
Field drain pipe size		mm(in.)	O.D. 26mm(1)	O.D. 26mm(1)	O.D. 26mm(1)	O.D. 26mm(1)
Drawing	External		-	-	-	-
	Wiring		-	-	-	-
	Refrigerant cycle		-	-	-	-
Standard attachment	Document		Installation Manual, Instruc- tion Book	Installation Manual, Instruc- tion Book	Installation Manual, Instruc- tion Book	Installation Manual, Instruc- tion Book
	Accessory		-	-	-	-
Optional parts	Drain pump kit		PAC-SJ92DM-E	PAC-SJ93DM-E	PAC-SJ93DM-E	PAC-SJ93DM-E
	High efficiency filter		PAC-SH88KF-E	PAC-SH89KF-E	PAC-SH90KF-E	PAC-SH90KF-E
	Wireless remote controller kit		PAR-FL32MA, PAR-SL101A-E	PAR-FL32MA, PAR-SL101A-E	PAR-FL32MA, PAR-SL101A-E	PAR-FL32MA, PAR-SL101A-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.	* Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.	* Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.	* Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.

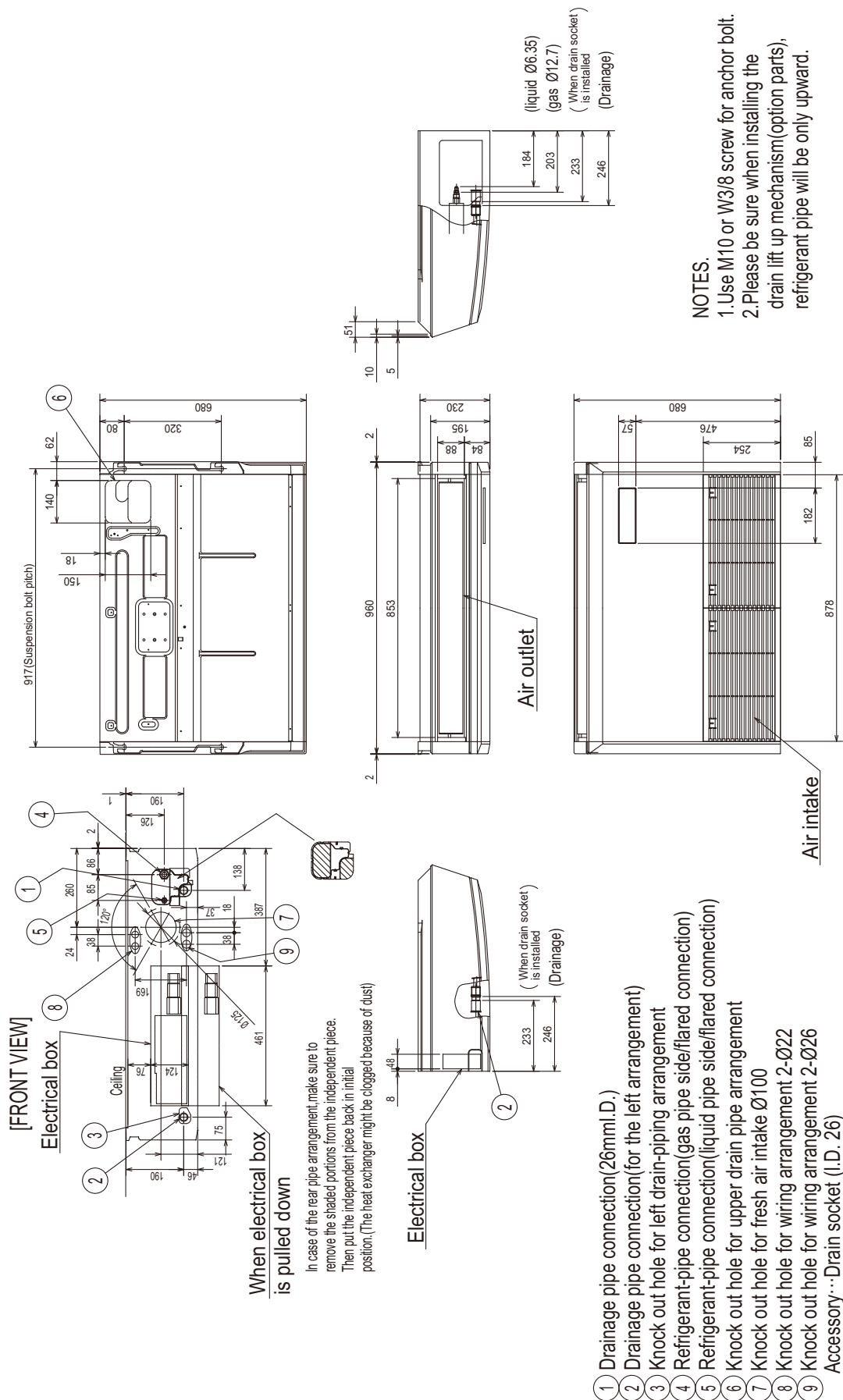
Notes:	*1 Nominal cooling conditions (subject to JIS B8615-1)	*2 Nominal heating conditions (subject to JIS B8615-1)	Unit converter
	Indoor: 27°C.D.B./19°C.W.B. (81°F.D.B./66°F.W.B.) Outdoor: 35°C.D.B. (95°F.D.B.) Pipe length: 7.5 m (24-9/16 ft.) Level difference: 0 m (0 ft.)	20°C.D.B. (68°F.D.B.) 7°C.D.B./6°C.W.B. (45°F.D.B./43°F.W.B.) 7.5 m (24-9/16 ft.) 0 m (0 ft.)	BTU/h = kW x 3.412 cfm = m ³ /min x 35.31 lbs = kg / 0.4536 *The specification data is subject to rounding variation.

2. EXTERNAL DIMENSIONS

Ceiling suspended

PCFY-MS40VKM-E

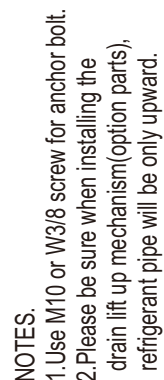
Unit: mm



PCFY-MS-VKM-E

PCFY-MS-VKM-E

Unit: mm



NOTES.

1. Use M10 or W3/8 screw for anchor bolt.
2. Please be sure when installing the drain lift up mechanism(option parts), refrigerant pipe will be only upward.

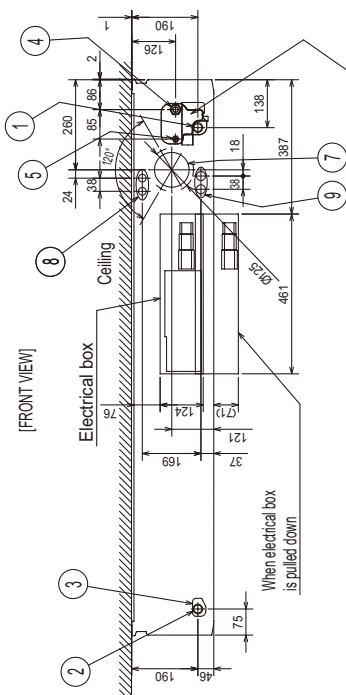
2. EXTERNAL DIMENSIONS

Ceiling suspended

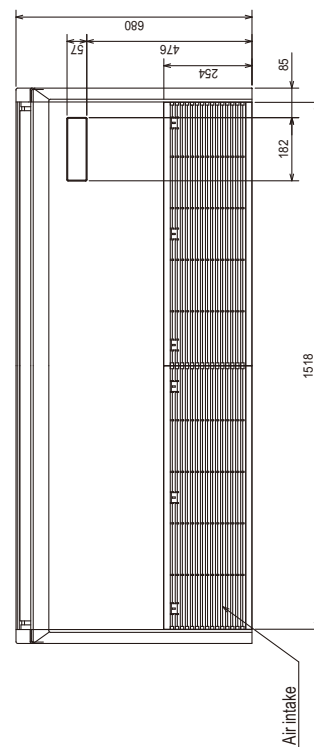
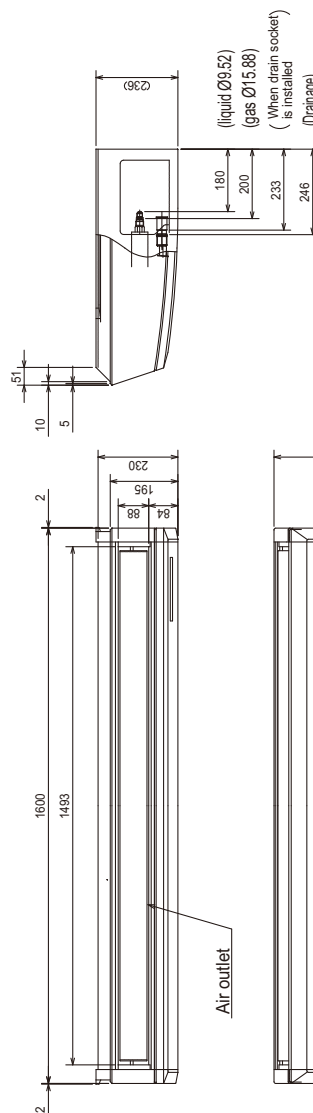
PCFY-MS100, 125VKM-E

Unit: mm

- ① Drainage pipe connection(26mmI.D.)
 - ② Drainage pipe connection(for the left arrangement)
 - ③ Knock out hole for left drain-piping arrangement
 - ④ Refrigerant-pipe connection(gas pipe side/flared connection)
 - ⑤ Refrigerant-pipe connection(liquid pipe side/flared connection)
 - ⑥ Knock out hole for upper drain pipe arrangement
 - ⑦ Knock out hole for fresh air intake Ø100
 - ⑧ Knock out hole for wiring arrangement 2-Ø22
 - ⑨ Knock out hole for wiring arrangement 2-Ø26
- Accessory...Drain socket (I.D. 26)



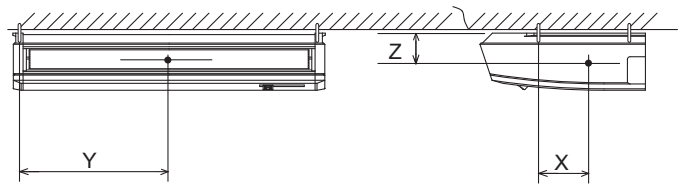
In case of the rear pipe arrangement, make sure to remove the shaded portions from the independent piece. Then put the independent piece back in initial position. (The heat exchanger might be clogged because of dust)



NOTES.

1. Use M10 or W3/8 screw for anchor bolt.
2. Please be sure when installing the drain lift up mechanism(option parts), refrigerant pipe will be only upward.

PCFY-MS40, 63, 100, 125VKM-E

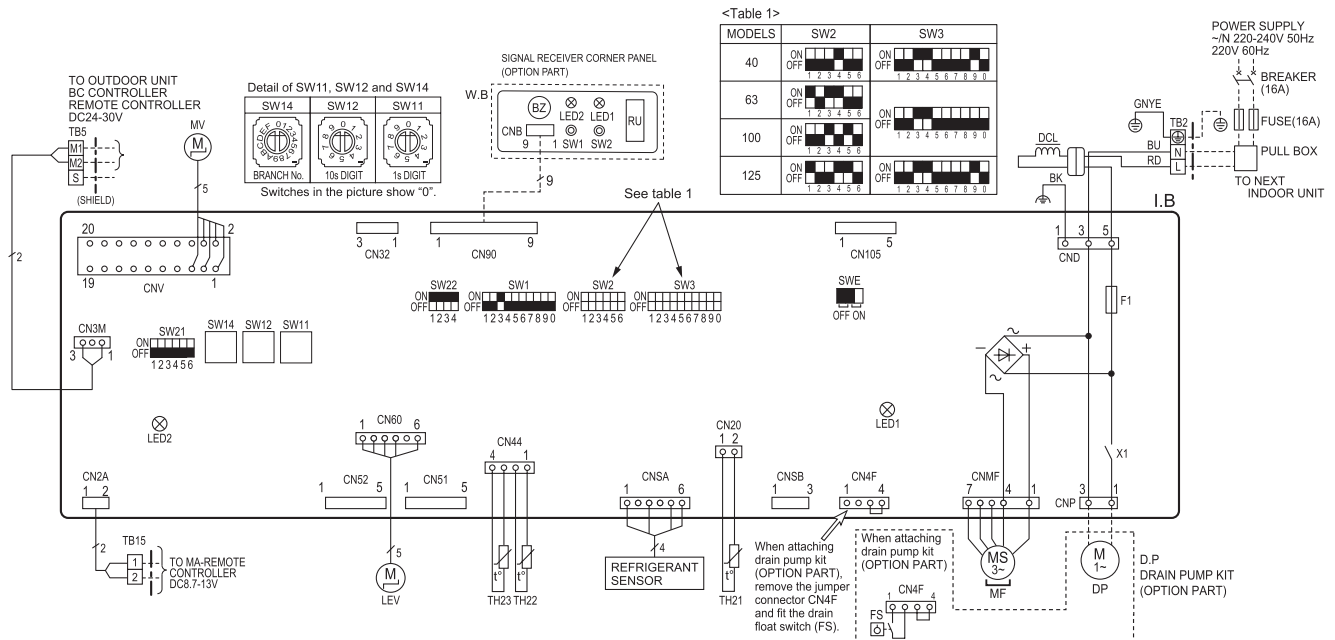


Model name	X	Y	Z
PCFY-MS40VKM-E	110	450	115
PCFY-MS63VKM-E	110	610	115
PCFY-MS100VKM-E	110	770	115
PCFY-MS125VKM-E	110	770	115

PCFY-MS-VKM-E

[LEGEND]

SYMBOL		NAME		SYMBOL		NAME		
I. B	INDOOR CONTROLLER BOARD			TB2	TERMINAL BLOCK	POWER SUPPLY		
	CN32	CONNECTOR	REMOTE SWITCH	TB5		TRANSMISSION		
	CN51		CENTRALLY CONTROL	TB15	MA-REMOTE CONTROLLER			
	CN52		REMOTE INDICATION	TH21	THERMISTOR	ROOM TEMP. DETECTION (0°C / 15kΩ, 25°C / 5.4kΩ)		
	CN105		IT TERMINAL			PIPE TEMP. DETECTION / LIQUID (0°C / 15kΩ, 25°C / 5.4kΩ)		
	F1	FUSE (T6.3AL250V)				TH22	PIPE TEMP. DETECTION / GAS (0°C / 15kΩ, 25°C / 5.4kΩ)	
	SW1	SWITCH	MODE SELECTION	TH23				
	SW2		CAPACITY CODE					
	SW3		MODE SELECTION					
	SW11		ADDRESS SETTING 1s DIGIT	OPTIONAL PARTS				
	SW12		ADDRESS SETTING 10s DIGIT					
	SW14		BRANCH No.					
	SW21		CEILING HEIGHT SELECTOR OPTION SELECTOR					
	SW22		PAIR NO. SETTING					
	SWE	DRAIN PUMP (TEST MODE)						
	X1	AUX. RELAY	DRAIN PUMP (OPTIONAL PARTS)					
LEV		LINEAR EXPANSION VALVE		W.B	PCB FOR WIRELESS REMOTE CONTROLLER			
DCL		REACTOR			BZ	BUZZER		
MF		FAN MOTOR			LED1	LED (OPERATION INDICATION : GREEN)		
MV		VANE MOTOR			LED2	LED (PREPARATION FOR HEATING : ORANGE)		
				D.P	RU	RECEIVING UNIT		
					SW1	EMERGENCY OPERATION (HEAT / DOWN)		
					SW2	EMERGENCY OPERATION (COOL / UP)		
					DRAIN PUMP KIT			
				DP	DRAIN PUMP			
				FS	DRAIN FLOAT SWITCH			



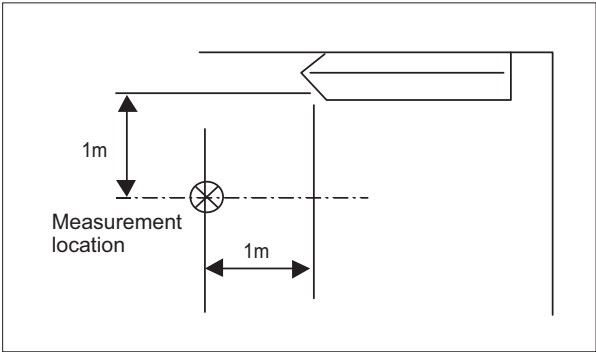
Mark	Meaning	Function
LED1	Main power supply	Main Power supply (Indoor unit:220-240V AC) power on → lamp is lit
LED2	Power supply for MA-Remote controller	Power supply for MA-Remote controller on → lamp is lit

1. At servicing for outdoor unit, always follow the wiring diagram of outdoor unit.
2. In case of using MA-Remote controller, please connect to TB15.
(Remote controller wire is non-polar.)
3. In case of using M-NET, please connect to TB5. (Transmission line is non-polar.)
4. Symbol [S] of TB5 is the shield wire connection.
5. Symbols used in wiring diagram are, : terminal block, : connector.
6. The setting of the SW2, SW3 differs in the capacity. For the detail, see table 1.
7. The black square (■) in the wiring diagram indicates a switch position.

5-1. Sound levels

Ceiling suspended

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



Model	Sound level dB (A)
PCFY-MS40VKM-E	29-32-34-36
PCFY-MS63VKM-E	31-33-35-37
PCFY-MS100VKM-E	36-38-41-43
PCFY-MS125VKM-E	36-39-42-44

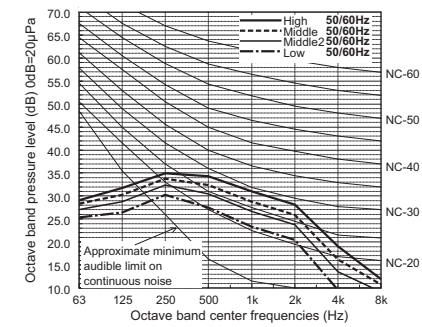
* Measured in anechoic room.

5-2. NC curves

PCFY-MS-VKM-E

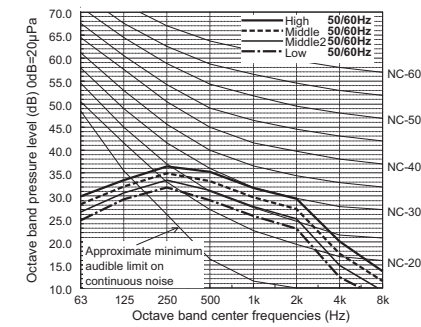
PCFY-MS40VKM

External Static Pressure: 0Pa
Power Source: 220-240V 50Hz/220V 60Hz



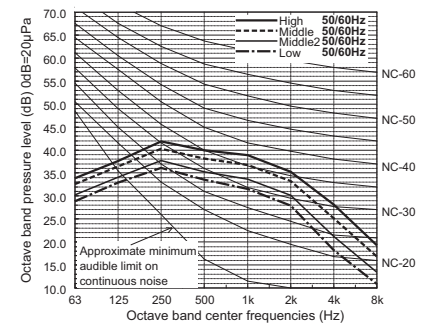
PCFY-MS63VKM

External Static Pressure: 0Pa
Power Source: 220-240V 50Hz/220V 60Hz



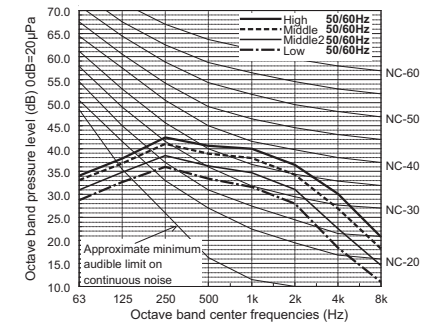
PCFY-MS100VKM

External Static Pressure: 0Pa
Power Source: 220-240V 50Hz/220V 60Hz



PCFY-MS125VKM

External Static Pressure: 0Pa
Power Source: 220-240V 50Hz/220V 60Hz



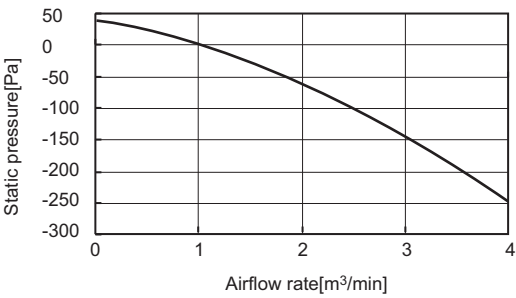
■ PCFY-MS40VKM-E



■ PCFY-MS63VKM-E

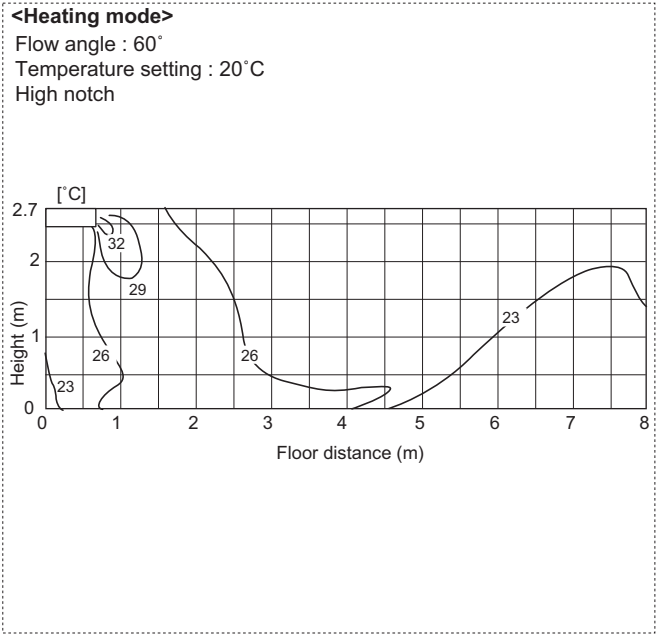
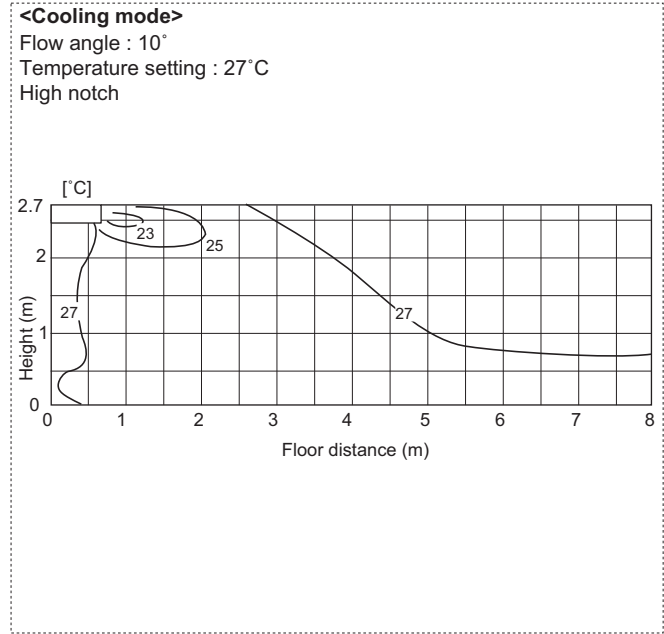


■ PCFY-MS100, 125VKM-E

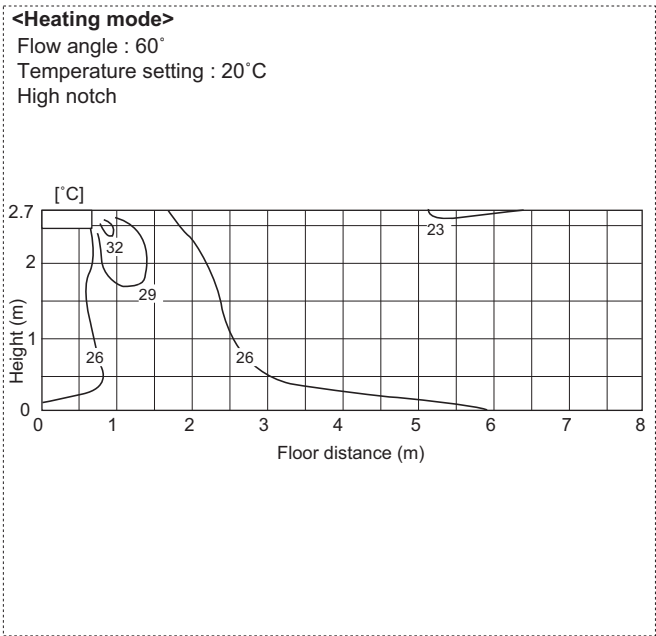
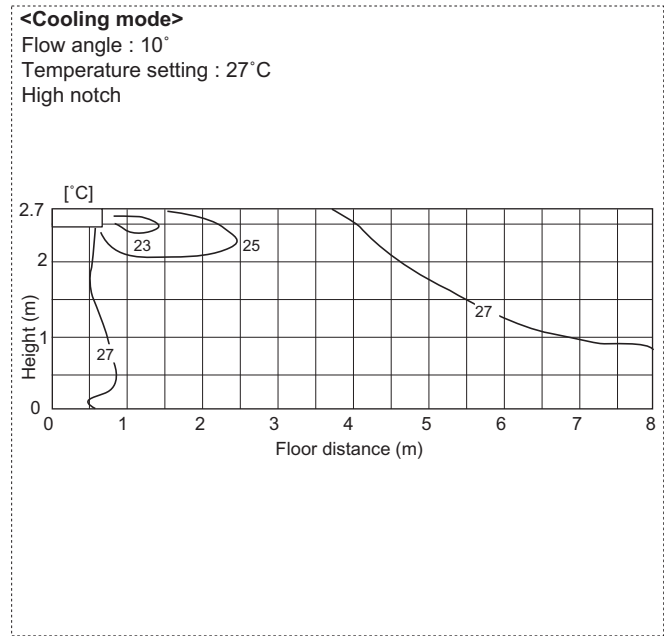


7-1. Temperature distributions

Temperature distributions
PCFY-MS40, 63VKM-E



PCFY-MS100, 125VKM-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-MS40, 63VKM-E

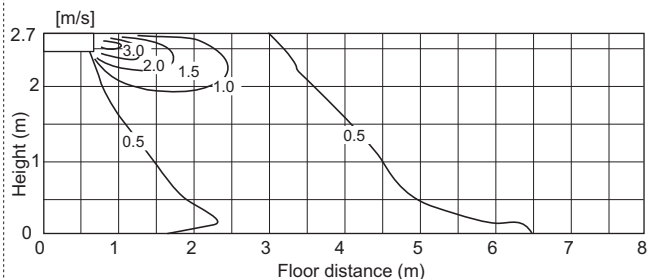
<Cooling mode>

Flow angle : 10°

Temperature setting : 27°C

High notch

Ceiling height : 2.7m



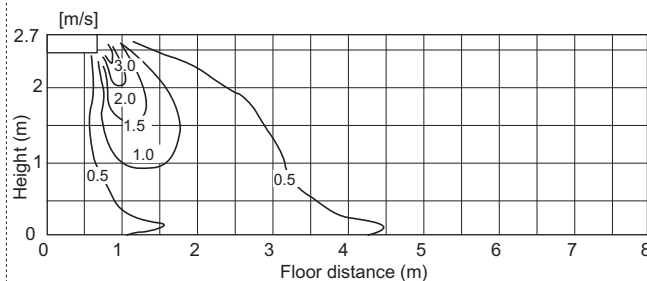
<Heating mode>

Flow angle : 60°

Temperature setting : 27°C

High notch

Ceiling height : 2.7m



PCFY-MS100, 125VKM-E

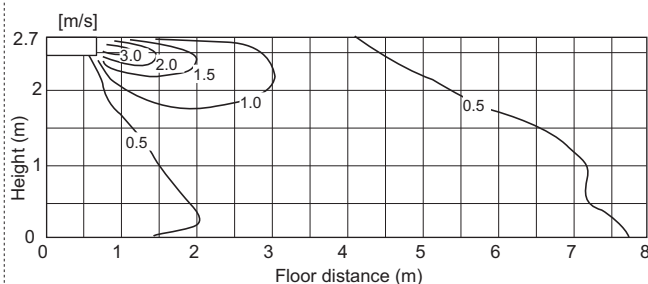
<Fan mode>

Flow angle : 10°

Temperature setting : 27°C

High notch

Ceiling height : 2.7m



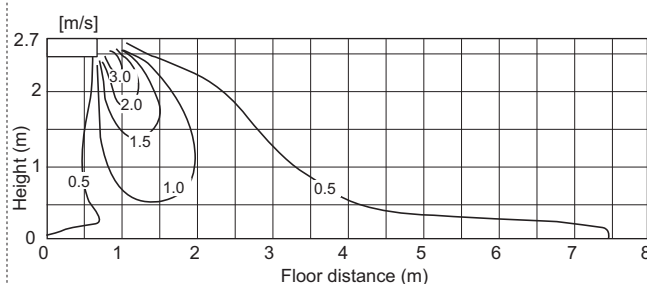
<Fan mode>

Flow angle : 60°

Temperature setting : 27°C

High notch

Ceiling height : 2.7m



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.

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

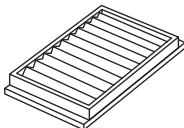
Model name	Power supply			IFM	
	Volts/Hz	Range +-10%	MCA(A)	Output (kW)	FLA(A)
PCFY-MS40VKM-E	220-240V/50Hz 220V/60Hz	Max.: 264V Min.: 198V	0.35	0.090	0.28
PCFY-MS63VKM-E			0.41	0.095	0.33
PCFY-MS100VKM-E			0.81	0.160	0.65
PCFY-MS125VKM-E			0.95	0.160	0.76

PCFY-MS-VKM-E

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

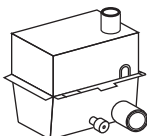
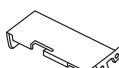
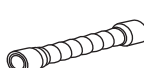
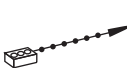
	High-efficiency filter	Wireless remote controller kit	Drain pump
PCFY-MS40VKM-E	PAC-SH88KF-E	PAR-FL32MA, PAR-SL101A-E	PAC-SJ92DM-E
PCFY-MS63VKM-E	PAC-SH89KF-E	PAR-FL32MA, PAR-SL101A-E	PAC-SJ93DM-E
PCFY-MS100, 125VKM-E	PAC-SH90KF-E	PAR-FL32MA, PAR-SL101A-E	PAC-SJ93DM-E

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. Drain pump

If drain water can not flow out the Indoor unit by gravity and gradient, a Drain-pump for draining is needed.
Drain pump PAC-SJ-DM-E can pump water up to 600 mm high from the ceiling.

Item	① Drain lift up mechanism	② Attachment	③ Screws (4×10)	④ VP-20 pipe	⑤ Pipe cover
Quantity	1	1	6	1	1
Shape		 1 Drain lift up mechanism fixture	 For the installation of drain lift up mechanism 1		 For insulation of VP20 pipe4
Item	⑥ Flexible hose	⑦ Fastener	⑧ L-shaped pipe (gas pipe)	⑨ L-shaped pipe (liquid pipe)	⑩ Insulator A
Quantity	1	1	1	1	2
Shape					 6t×220×80 (For internal insulation) For the insulation of L-shaped pipes ⑧ and ⑨ and the refrigerant pipes.
Item	⑪ Insulator B				
Quantity	2				
Shape	 3t×250×120 (For external insulation) For the insulation of L-shaped pipes ⑧ and ⑨ and the refrigerant pipes.				

Detailed installation information should be referred to its Installation Manual.

9-4. Wireless remote controller kit

Wireless remote controller receiver is built-in type.					
Item	① Wireless remote controller	② Remote control holder	③ "AAA" LR3 alkaline batterie	④ 4.1 x 16 wood screw	⑤ Instruction book
Quantity	1	1	2	2	1

Detailed installation information should be referred to 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, R32.

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