MITSUBISHI ELECTRIC

CITY MULTI

Air-Conditioners For Building Application
INDOOR UNIT

PLFY-NAMU-A / PKFY-NAMU-A / PKFY-NGMU-A
PKFY-NFMU-A / PMFY-NBMU-A

OPERATION MANUAL

For safe and correct use, please read this operation manual thoroughly before operating the air-conditioner unit.

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Symbols used in the illustrations

⃠ : Indicates an action that must be avoided.

❗ : Indicates that important instructions must be followed.

⏚ : Indicates a part which must be grounded.

⚠ **Warning:**
Carefully read the labels affixed to the main unit.

1. Safety Precautions
2. Names and functions of various parts

- **Before installing the unit, make sure you read all the "Safety precautions".**
- **The "Safety precautions" provide very important points regarding safety. Make sure you follow them.**

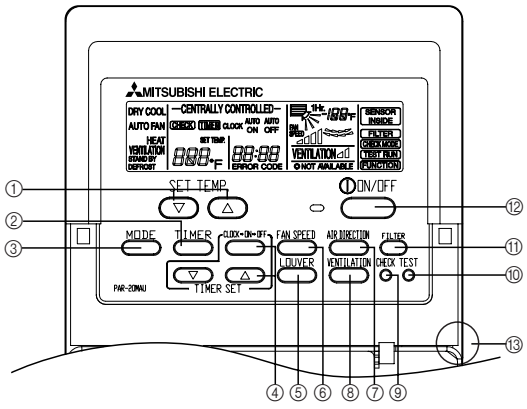
Symbols used in the text

⚠ **Warning:**
Describes precautions that should be observed to prevent danger of injury or death to the user.

⚠ **Caution:**
Describes precautions that should be observed to prevent damage to the unit.

⚠ **Warning:**
- **The unit should not be installed by the user. Must be installed by an authorized technician or dealer. If the unit is installed improperly, water leakage, electric shock or fire may result.**
- **Never repair the unit or transfer it to another site by yourself.**
- **Do not stand on, or place any items on the unit.**
- **Do not splash water over the unit and do not touch the unit with wet hands.**
- **Do not spray combustible gas close to the unit.**

⚠ **Caution:**
- **Do not use any sharp object to push the buttons, as this may damage the remote controller.**
- **Never wipe the remote controller with benzene, thinner, chemical rags, etc.**
- **Never block or cover the indoor or outdoor unit's intakes or outlets.**



⚠ **Warning:**
- **Do not remove the front panel or the fan guard from the outdoor unit when it is running.**
- **When you notice exceptionally abnormal noise or vibration, stop operation, turn off the power switch, and contact your dealer.**
- **Never insert fingers, sticks etc. into the intakes or outlets.**
- **If you detect odd smells, stop using the unit, turn off the power switch and consult your dealer. Otherwise, a breakdown, electric shock or fire may result.**
- **This air conditioner is NOT intended for use by children or infirm persons without supervision.**
- **Young children should be supervised to ensure that they do not play with the air conditioner.**
- **If the refrigeration gas blows out or leaks, stop the operation of the air conditioner, thoroughly ventilate the room, and contact your dealer.**

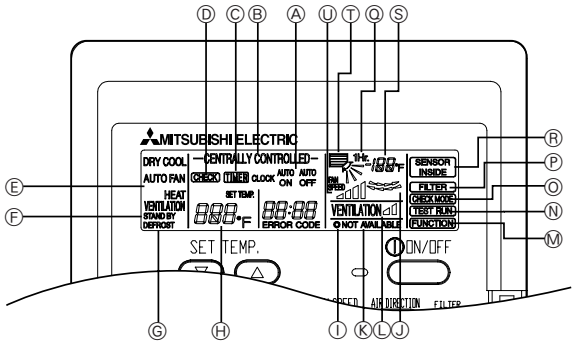
Disposing of the unit

When you need to dispose of the unit, consult your dealer.

① [Room temperature adjustment] Button
② [Timer/continuous] Button
③ [Selecting operation] Button
④ [Time selection] Button
[Time-setting] Button
⑤ [Louver] Button
⑥ [Fan speed adjustment] Button
⑦ [Up/down airflow direction] Button
⑧ [Ventilation] Button
⑨ [Checking/built-in] Button
⑩ [Test run] Button
⑪ [Filter] Button
⑫ [ON/OFF] Button
⑬ Position of built-in room temperature

- Never expose the remote controller to direct sunlight. Doing so can result in the erroneous measurement of room temperature.
- Never place any obstacle around the lower right-hand section of the remote controller. Doing so can result in the erroneous measurement of room temperature.

2. Names and functions of various parts
3. Operation

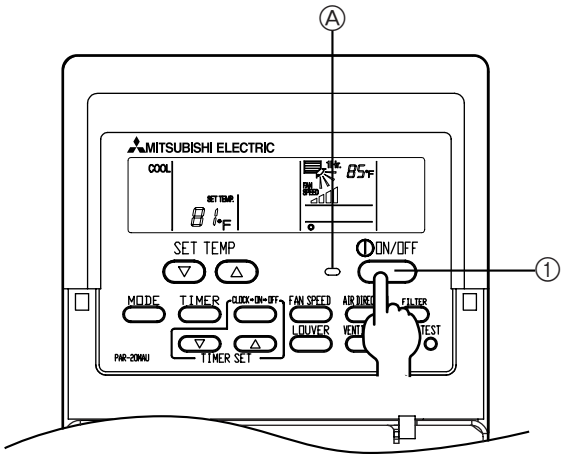


Ⓐ Current time/Timer
Ⓑ Centralized control
Ⓒ Timer ON
Ⓓ Abnormality occurs
Ⓔ Operation mode: COOL, DRY, AUTO, FAN, HEAT
Ⓕ Preparing for Heating mode
Ⓖ Defrost mode
Ⓗ Set temperature
Ⓘ Power ON
Ⓙ Louver
Ⓚ Not available function
Ⓛ Ventilation
Ⓜ Function setting mode
Ⓝ Test run mode
Ⓞ Error check mode
Ⓟ Filter sign
Ⓠ Set effective for 1 hr.
Ⓡ Sensor position
Ⓢ Room temperature
Ⓣ Airflow
Ⓤ Fan speed

Before starting operation

- Make sure that the power supply is turned ON before use.
- Start running after the “HO” display has disappeared. (max. 2 minutes)
- In some systems, more than one indoor unit may be connected to a single outdoor unit. When a remote controller for one indoor unit is used to change modes at the same time as a different indoor unit is working together with the outdoor unit, the operation underway stops, and the new operation begins. Until the old operation is complete, the display on the remote controller flashes to indicate that the new operation is in “waiting” status.

⚠ **Warning:**
Check and confirm the power circuit before use.

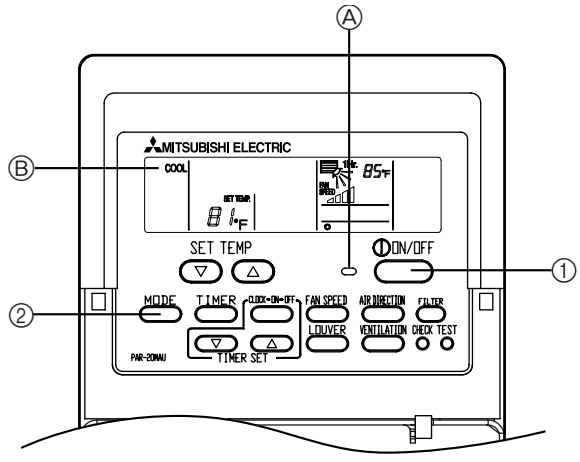


3.1. ON/OFF

Start an operation/Stop an operation

① Press [ON/OFF] button
Operation lamp lights up/off and operation starts/stops.
Ⓐ Operation lamp

⚠ **Caution:**
Even if the operation button is pressed immediately after the operation is stopped, operation is not restarted for about 3 minutes.

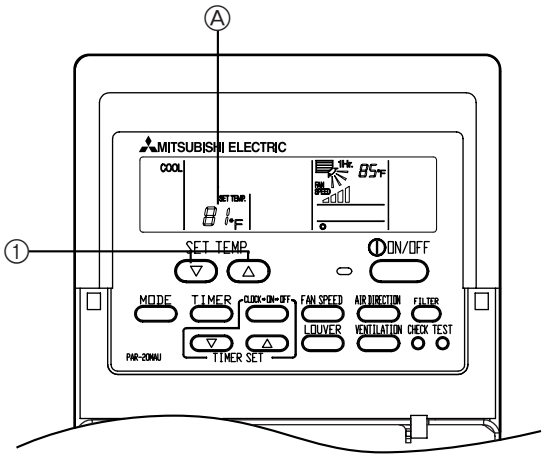


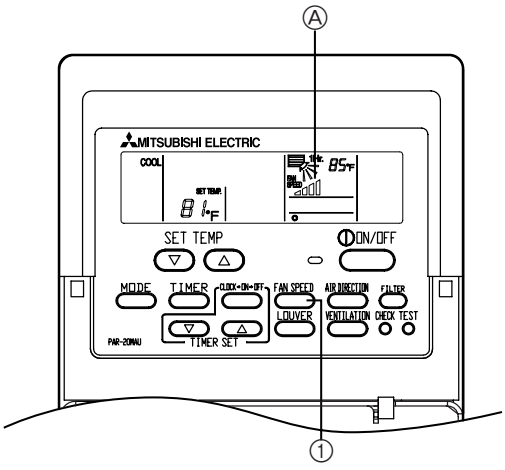
3.2. Mode select

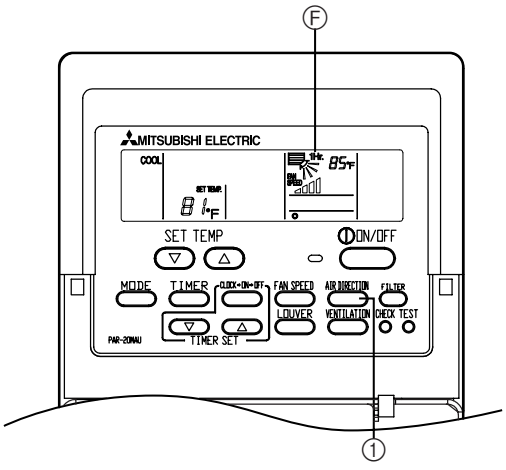
① If the unit is off, press the ON/OFF button to turn it on.
Ⓐ The ON indicator should light up.
② Press the operation MODE button and select the operation mode.
Ⓑ

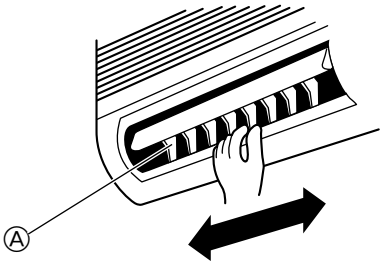
→ COOL
DRY
AUTO
FAN
HEAT

3. Operation









3.3. Selecting a temperature

▶ **To decrease the room temperature:**

① Press ▽ button to set the desired temperature.

Ⓐ The selected temperature is displayed.

- Each time you press the button, the temperature value decreases by 2 °F.

▶ **To increase the room temperature:**

① Press △ button to set the desired temperature.

Ⓐ The selected temperature is displayed.

- Each time you press the button, the temperature value increases by 2 °F.

- Available temperature ranges are as follows:

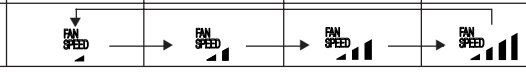
Cooling & Drying:	67 - 87 °F
Heating:	63 - 83 °F
Automatic:	67 - 83 °F
Circulation:	— (Not available)

- The display flashes either 46 °F - 102 °F to inform you if the room temperture is lower or higher than the displayed temperature.

3.4. Selecting a fan speed

① Press FAN SPEED button to select a desired fan speed.

- Each time you press the button, available options change with the display Ⓐ on the remote controller, as shown below.

Fan speed	Remote controller display			
	Low	Medium 2	Medium 1	High
4-stage				

The display and the fan speed of the unit will differ in the following situations:

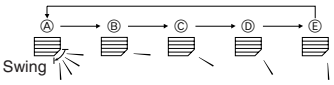
- When STAND BY and DEFROST are displayed.
- Just after the heating mode (while waiting to change to another mode).
- When the temperature of the room is higher than the temperature setting of the unit operating in the heating mode.
- In the dry operation, the indoor fan automatically turns to low-speed operation. Switching of fan speed is impossible.
- PKFY-NFMU-A has 2-stage (Low/High).

3.5. Adjusting the vertical airflow direction

The vertical air vane helps select the vertical direction of the airflow.

① Press AIR DIRECTION button to select the vertical airflow direction.

- Each time you press the button, the option changes are displayed on the remote controller, as shown below.



- If the room temperature is higher than the temperature set on the remote controller while the unit is defrosting or preparing for heating, the vertical air vane will move to the horizontal airflow position (Ⓑ).
- In either cooling or dry mode, if you select Ⓒ, Ⓓ or Ⓔ when the fan speed is low, medium 1 or medium 2, a display reading "1 Hr" Ⓕ will appear.
  After one hour, the air conditioner will switch automatically to horizontal air mode Ⓑ and the display "1 Hr" Ⓕ will disappear.
- When the heating thermostat is OFF, the louver automatically turns horizontally during defrosting or preparation for heating.

Note:

PKFY-NAMU-A has no swing display.

3.6. Adjusting the horizontal airflow direction (manual adjustment)

The airflow horizontal direction can be manually adjusted to the right or the left.

Note:

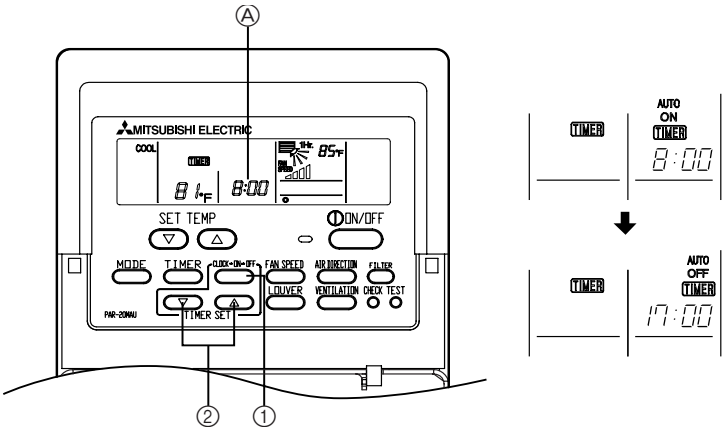
- **The LOUVER button cannot be used.**
- **PLFY-series models are not equipped with guide vanes; the airflow horizontal direction cannot be adjusted to the right or left.**

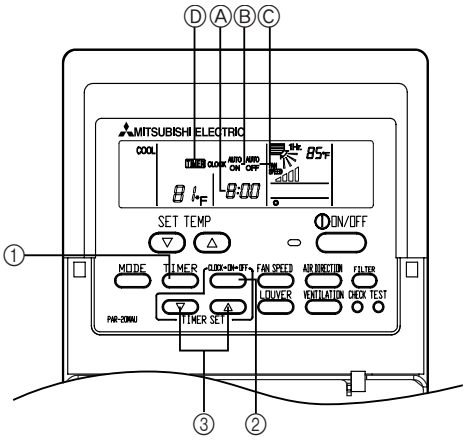
▶ **To adjust, move the guide vanes to the desired direction.**

Ⓐ Guide vane

⚠ **Warning:**

- **Right/left adjustment should be made before starting operation.**
- **Never insert your fingers deep inside the air outlet as you could be hurt by the rotating fan.**





3.7. Using the timer

1) Set the current time

① Press CLOCK-ON-OFF button to display the "current time" Ⓐ.

Remote controller display Ⓐ	CLOCK ("current time") → TIMER ("timer start time") → TIMER ("timer end time") → No display

② Each time you press (△) button, the time increases in increments of one minute.
Each time you press (▽) button, the time decreases in increments of one minute.

- Press and hold the button to rapidly change the time.
- The time changes in increments of one minute → ten minutes → in units of hour; in this order.
- Approximately ten seconds after pressing the button, the display on the remote controller will turn off.

The example shows a timer set for operation start at 8:00 and end at 17:00.

2) Set the mode to continuous as follows

① Press TIMER button to display TIMER Ⓓ.

3) Set the time to start the unit as follows

② Press CLOCK-ON-OFF button to display Ⓑ ON.

③ Press TIMER SET button to set the time that you want the unit to start.
The start time is displayed at Ⓐ.

4) Set the time to stop the unit as follows

② Press CLOCK-ON-OFF button to display Ⓒ OFF.

③ Press TIMER SET button to set the time that you want the unit to stop.
The stop time is displayed at Ⓐ.

5) Set the mode to timer as follows

① Press TIMER button to display TIMER Ⓓ.

4.1. Cleaning the filters and the indoor unit

Cleaning the filters

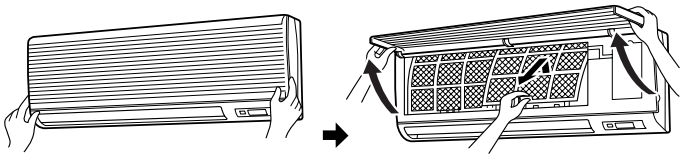
- Clean the filters using a vacuum cleaner. If you do not have a vacuum cleaner, tap the filters against a solid object to knock off dirt and dust.
- If the filters are especially dirty, wash them in lukewarm water. Take care to rinse off any detergent thoroughly and allow the filters to dry completely before putting them back into the unit.

⚠ Caution:

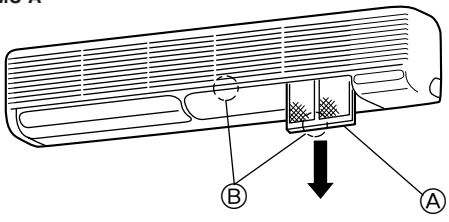
- **Do not dry the filters in direct sunlight or by using a heat source, such as an electric heater: this may warp them.**
- **Do not wash the filters in hot water (above 122°F), as this may warp them.**
- **Make sure that the air filters are always installed. Operating the unit without air filters can cause malfunction.**



■ **PKFY-NAMU-A**
■ **PKFY-NGMU-A**



■ **PKFY-NFMU-A**



⚠ Caution:

- **Before you start cleaning, stop operation and turn OFF the power supply.**
- **Indoor units are equipped with filters to remove the dust of sucked-in air. Clean the filters using the methods shown in the following sketches.**

Filter removal

⚠ Caution:

- **In removing the filter, precautions must be taken to protect your eyes from dust. Also, if you have to climb up on a stool to do the job, be careful not to fall.**
- **When the filter is removed, do not touch the metallic parts inside the indoor unit, otherwise injury may result.**

■ **PKFY-NAMU-A**
■ **PKFY-NGMU-A**

① Pull both the bottom corners of the intake grille to open the grille, then lift the filter.

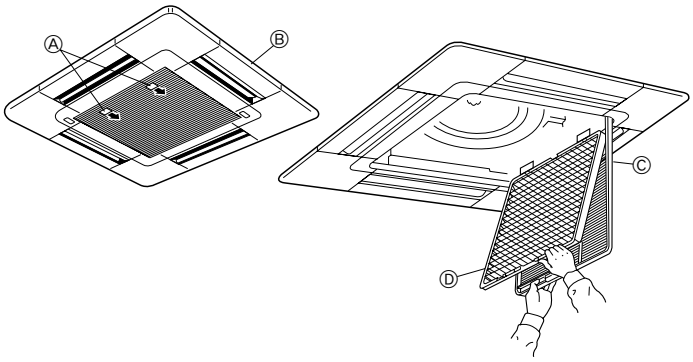
■ **PKFY-NFMU-A**

① Hold the filter lug (located at the bottom of the intake grille) and pull it out downward.
Ⓐ Filter
Ⓑ Lug

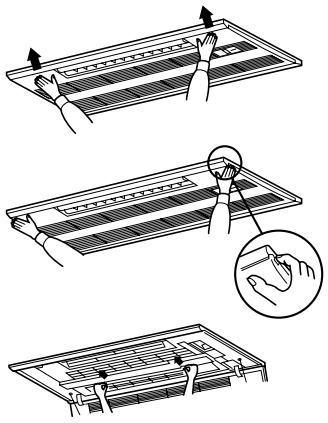
- To reinstall the filters, push the filter lug upward.

4. Care and cleaning
5. Troubleshooting

■ **PLFY-NAMU-A**



■ **PMFY-NBMU-A Series**



⚠ Caution:
- **Before you start cleaning, stop operation and turn OFF the power supply.**
- **Indoor units are equipped with filters to remove the dust of sucked-in air. Clean the filters using the methods shown in the following sketches.**

■ **PLFY-NAMU-A**

① Pull the knob on the intake grille in the direction indicated by the arrow and it should open.
② Open the intake grille.
③ Release the knob on the center edge of the intake grille and pull the filter forward to remove the filter.

Ⓐ Knob Ⓑ Grille Ⓒ Intake grille Ⓓ Filter

■ **PMFY-NBMU-A Series**

① Pressing the PUSH button on the outer side of the intake grille causes the intake grille to open.
② A filter with an intake grille on it can be removed by pulling the filter forward.

Before you ask for repair service, check the following points:

State of Machine	Troubleshooting
It does not run.	Press the [ON/OFF] button after power restoration.
Air flows out but it does not cool enough or heat enough.	Check the set temperature. Clean up the filter.
Cool air or warm air does not come out.	Wait for a while. The restart-preventing circuit is in operation for 3 minutes.
	Wait for a while. Indoor unit operation was started anew during the heating and defrosting operation.
The sound of the exhaust and rotation of the motor can still be heard after stop of running.	Wait for 3 minutes. The machine stops after running a drain-up mechanism for 3 minutes when air-cooling operation is stopped.

The following symptoms are not air conditioner failures:
- The air blown out from the air conditioner can sometimes give off odors. This is due to cigarette smoke contained in the air of the room, the smell of cosmetics, the walls, furniture, etc., absorbed in the air conditioner.
- A hissing noise can be heard immediately after the air conditioner is started or stopped. This is the sound of the refrigerant flowing inside the air conditioner. The problem is insignificant.
- The air conditioner sometimes snaps or clicks at the beginning or end of cooling/heating operation. This is the sound of friction on the front panel and other sections due to inflation and contraction caused by temperature change. The problem is insignificant.

Range of application

The range of working temperatures for both the indoor and outdoor units of the series Y, R2, Multi-S is as below.

⚠ Caution:
The use of your air conditioner outside the range of working temperature and humidity can result in serious failure.

Mode	Indoor unit	Outdoor unit		
		PUHY	PURY	PUMY
Cooling	59 °F - 75 °FWB	23 °F - 110 °FDB	23 °F - 110 °FDB	23 °F - 115 °FDB
Heating	59 °F - 81 °FDB	5 °F - 60 °FWB	5 °F - 60 °FWB	5 °F - 60 °FWB

Note: As an applicable humidity standard for both indoors and outdoors, we recommend use within a range of 30 - 80% relative humidity.

⚠ Warning:
If the air conditioner operates but does not cool or heat (depending on model) the room, consult your dealer since there may be a refrigerant leak. Be sure to ask the service representative whether there is refrigerant leakage or not when repairs are carried out.
The refrigerant charged in the air conditioner is safe. Refrigerant normally does not leak, however, if refrigerant gas leaks indoors, and comes into contact with the fire of a fan heater, space heater, stove, etc., harmful substances will be generated.

6. Specifications

■ **PLFY Series**

Model			PLFY-12NAMU-A	PLFY-20NAMU-A	PLFY-24NAMU-A	PLFY-32NAMU-A	PLFY-40NAMU-A
Power source			Single 208/230V 60Hz				
Capacity	Cooling	<BTU/h>	12,000	20,000	24,000	32,000	40,000
	Heating	<BTU/h>	13,000	22,500	26,500	36,000	39,000
Dimension (Grille)	H	<inch>	10-3/16 (1-3/16)			11-3/4 (1-3/16)	
	W	<inch>	33-1/16 (37-3/8)				
	D	<inch>	33-1/16 (37-3/8)				
Net weight (Grille)		<lbs>	49 (11)	53 (11)		66 (11)	
Fan Airflow rate	DRY	<CFM>	390-420-460-490	490-530-570-640	530-570-640-710	710-810-920-990	780-880-990-1060
(Low-Middle2-Middle1-High)	WET	<CFM>	350-380-410-440	470-500-530-600	500-530-600-670	670-770-870-930	730-830-930-1000
Noise level (Low-Middle2-Middle1-High)		<dB(A)>	24-27-28-30	27-28-31-33	28-30-33-34	34-36-40-41	37-40-43-44

■ **PKFY Series**

Model			PKFY-08NAMU-A	PKFY-12NGMU-A	PKFY-20NFMU-A	PKFY-32NFMU-A
Power source			Single 208/230V 60Hz			
Capacity	Cooling	<BTU/h>	8,000	12,000	20,000	32,000
	Heating	<BTU/h>	9,000	13,500	22,500	35,500
Dimension	H	<inch>	11-5/8	13-3/8	13-3/8	
	W	<inch>	32-3/32	39	55-1/8	66-1/8
	D	<inch>	6-7/32	9-1/4	9-1/4	
Net weight		<lbs>	19	35	53	62
Fan Airflow rate	DRY	<CFM>	170-180-200-210	280-340-370-410	490-640	780-990
(Low-Middle2-Middle1-High)*1	WET	<CFM>	160-170-180-190	250-300-330-370	440-570	700-890
Noise level (Low-Middle2-Middle1-High)*1		<dB(A)>	32-33-35-36	32-36-40-42	39-45	46-49

*1 (Low-High) for PKFY-20/32NFMU-A

■ **PMFY Series**

Model			PMFY-08NBMU-A	PMFY-10NBMU-A	PMFY-12NBMU-A	PMFY-16NBMU-A
Power source			Single 208/230V 60Hz			
Capacity	Cooling	<BTU/h>	8,000	10,000	12,000	16,000
	Heating	<BTU/h>	9,000	11,000	13,500	17,000
Dimension (Grille)	H	<inch>	9-1/16 (1-3/16)			
	W	<inch>	33-5/8 (39-3/8)			
	D	<inch>	15-9/16 (18-1/2)			
Net weight (Grille)		<lbs>	31 (7)			
Fan Airflow rate	DRY	<CFM>	230-250-280-300	250-280-300-320		270-300-340-370
(Low-Middle2-Middle1-High)	WET	<CFM>	200-220-250-270	220-250-270-290		240-270-310-340
Noise level (Low-Middle2-Middle1-High)		<dB(A)>	27-30-33-35	32-34-36-37		33-35-37-39

This product is designed and intended for use in the residential, commercial and light-industrial environment.

Please be sure to put the contact address/telephone number on this manual before handing it to the customer.

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