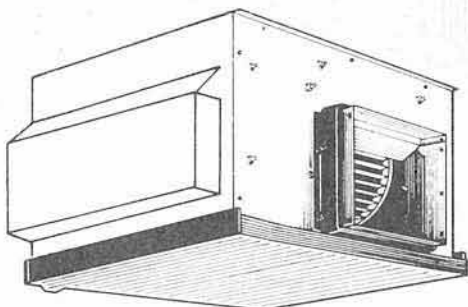


MITSUBISHI ELECTRIC Air-Conditioners

Mr. SLIM

Models : PEH-2.5,3EK(H)A,4,5EK(H)SA,6EKSB

Instructions for use



(Ceiling Concealed)



Contents

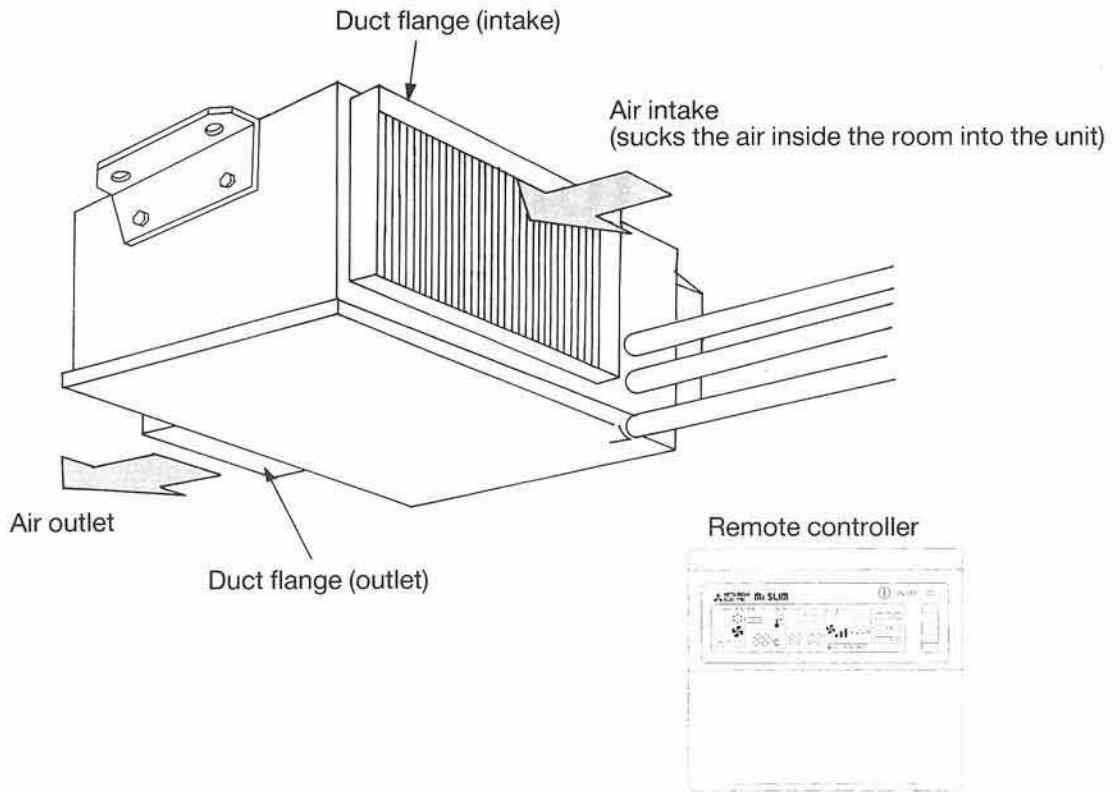
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Attention : The installation manual details the suggested installation method. Any structural alterations necessary for installation must comply with local building code requirements.

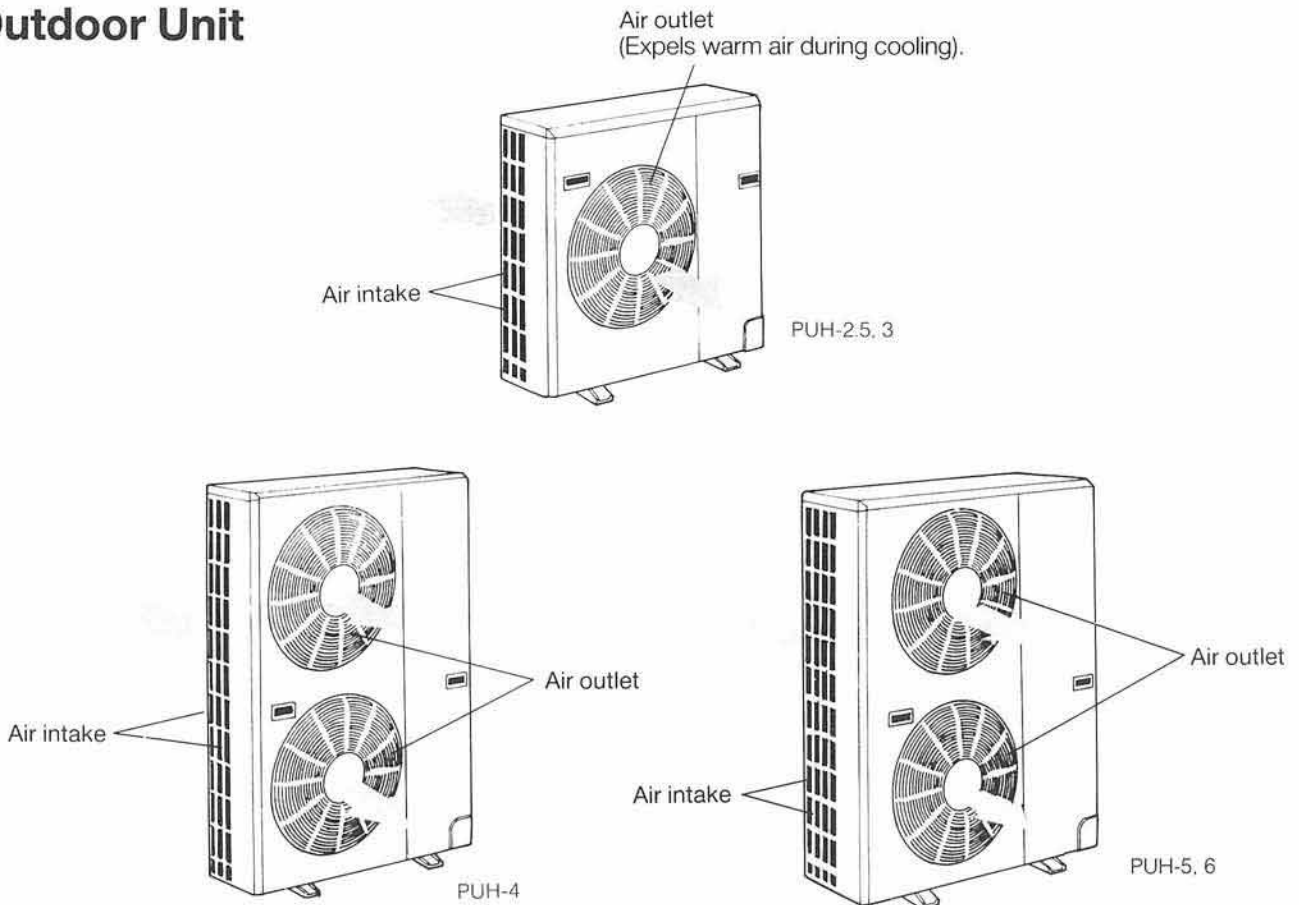
These air conditioners incorporate the latest technological advances of Mitsubishi Electric and are produced under strict quality control.

1. Names and Functions of Parts

● Indoor Unit



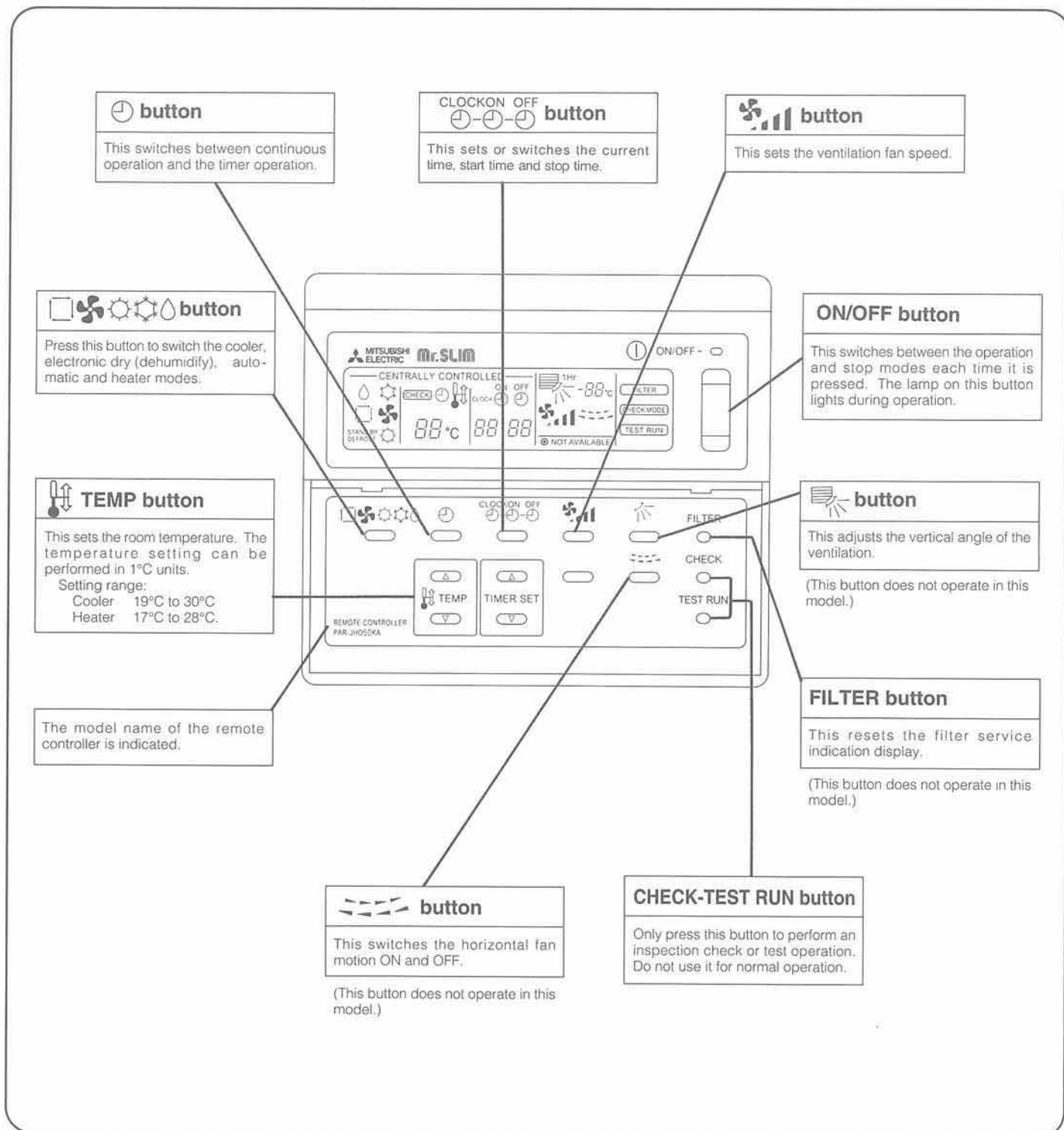
● Outdoor Unit



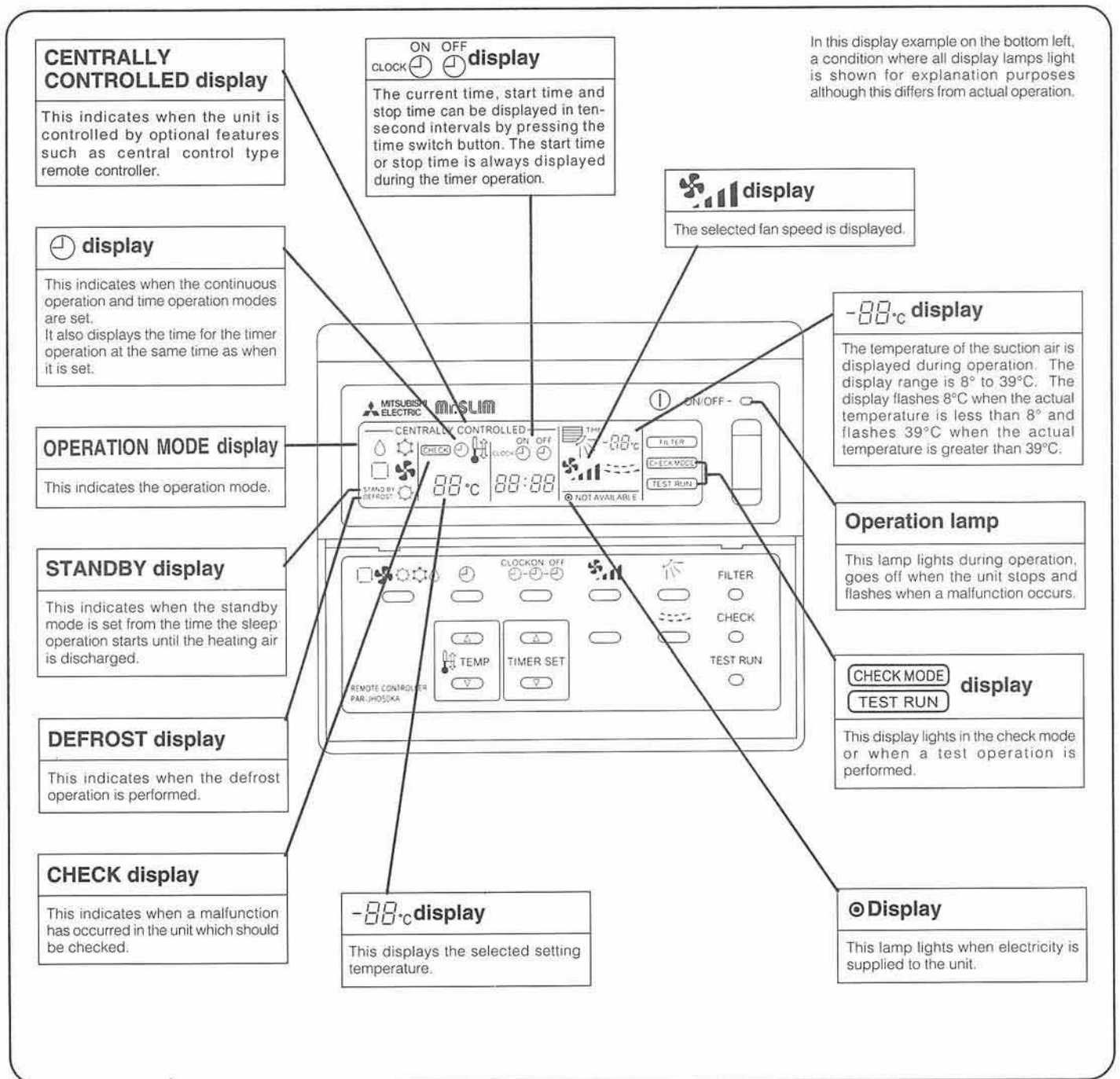
● Remote controller

- Once the operation of the unit is set, subsequent operations can only be performed by pressing the ON/OFF button repeatedly.

● Operation buttons



● Display



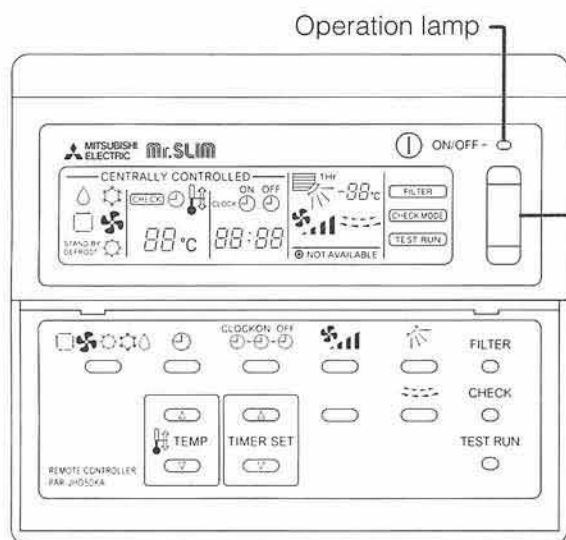
Caution

- Only the ⊙ display lights when the unit is stopped and power supplied to the unit.
- When power is turned ON for the first time the (CENTRAL CTRL) display appears to go off momentarily but this is not a malfunction.
- When the central control remote control unit, which is sold separately, is used the ON-OFF button, □ button and TEMP button do not operate.
- "NOT AVAILABLE" is displayed when the fan direction button and louver button are pressed. This indicates that this room unit is not equipped with the fan direction adjustment function and the louver function.

2. Operation Procedures

1 Operation - Stop

Make sure that the power is turned on before operating this unit.
(Do not turn off the air conditioner power supply while the air conditioner is being used.)



The display unit shown above this figure indicates [HEATING] as an example.

Starting operation

Press the ON/OFF button.
The operation lamp lights and operation starts.

Stopping operation

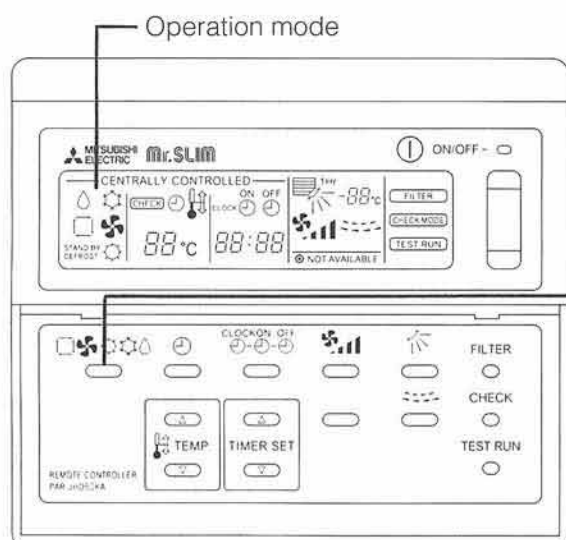
Press the ON/OFF button again.
The operation lamp goes off and operation stops.

- If each button is set one time, operation can be repeated just by the operation of the ON/OFF button.
- The lamp on the ON/OFF button lights during operation.

Note

When operation stops one time, operation starts again automatically after approximately three minutes have passed to protect the unit even if the operation button is pressed again.

2 Operation Switching



Press the button.

Each time the operation switch button is pressed, operation changes in the order of "COOL", "DRY", "FAN" and "HEAT".
Observe the display to confirm the operation setting.

Cooling

Press the button to display " ".

Electronic drying (dehumidifying)

Press the  button to display “”.

- The “electronic dry” (dehumidifying) operation cannot be performed when the room temperature is lower than 18°C.
- The fan operates automatically in the room unit and the fan speed cannot be switched. (Only the remote control display changes.)

AUTOMATIC

Press the  button to display “”.

- “AUTOMATIC” works to change by itself the operation mode either to cooling or heating according to the room temperature.

Heating

Press the  button to display “”.

- These symbols are displayed during the heating operation.

[DEFROST]

The [DEFROST] symbol is only displayed during the defrost operation.

[STANDBY]

The [STANDBY] symbol is displayed from the time the heating operation starts until the heated air begins to blow.

“For (OPTIONAL) fan operation (COOL-FAN-HEAT) the removal of the automatic function (COOL-AUTO-HEAT) is required. For further information please contact your sales outlet or nearest Mitsubishi Electric sales office”.

Electronic Dry (Dehumidifying) Operation

The electronic dry (dehumidifying) operation is performed by microprocessor control which prevents an excessively cold temperature depending on the room temperature. (The electronic dry (dehumidifying) operation cannot be performed when heating is set.)

1. Until the desired room temperature is reached:
The air compressor and the room fan operation start and stop operations are linked and are performed repeatedly according to changes in the room temperature.
2. If the desired room temperature is reached:
The air compressor and room fan both stop. If they stop continuously for ten minutes, both units will then operate for a three-minute period to maintain a low humidity.

Note

The microprocessor operates under the following conditions.

The fan does not operate when the heating operation starts.

The room fan gradually switches from the stop setting to the slight, weak setting and the set ventilation levels according to the temperature increase so the cooled air is not expelled. Please wait a short period of time and the fan will start to operate.

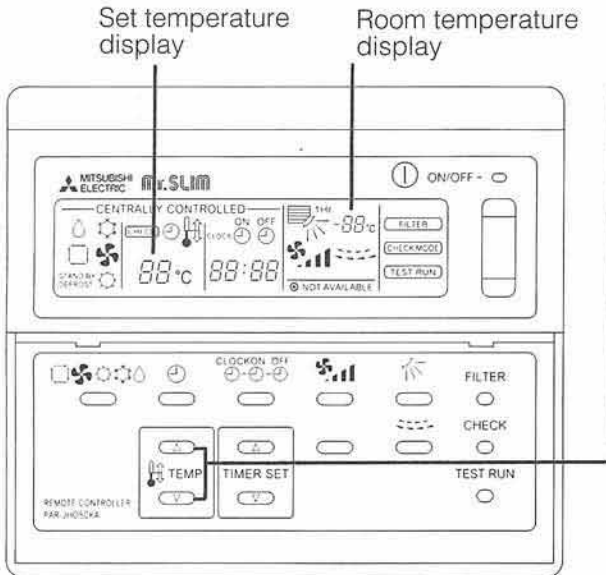
The fan does not operate at the set speed.

When the room temperature is reached to the set level and the compressor stops, the ventilation extremely decreases. The fan stops while the defrost operation is performed not to expel the cold air.

The fan rotates even though the unit stops the operation.

The fan in the room unit may keep rotating for approximately one minute after the operation stops to eliminate the remaining heat. In this case the fan speed is at a low level.

3 Room Temperature Adjustment



The display shown above is the example of the cooling operation setting.

To change the room temperature.

Press the TEMP button to set the desired temperature.

The set temperature changes 1°C when the or button is pressed one time.

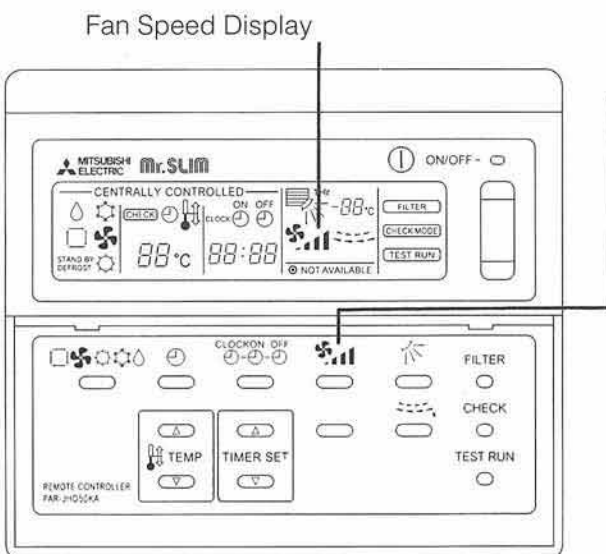
The setting temperature keeps changing in 1°C units if the TEMP button is pressed continuously.

- The room temperature can be set within the following range

| | |
|---------------|------------|
| Cooling / Dry | 19 to 30°C |
| Heating | 17 to 28°C |
| Automatic | 19 to 28°C |

- The room temperature setting can not be performed for the fan operation.

4 Fan Speed Adjustment



The display shown above is an example of the cooling operation setting.

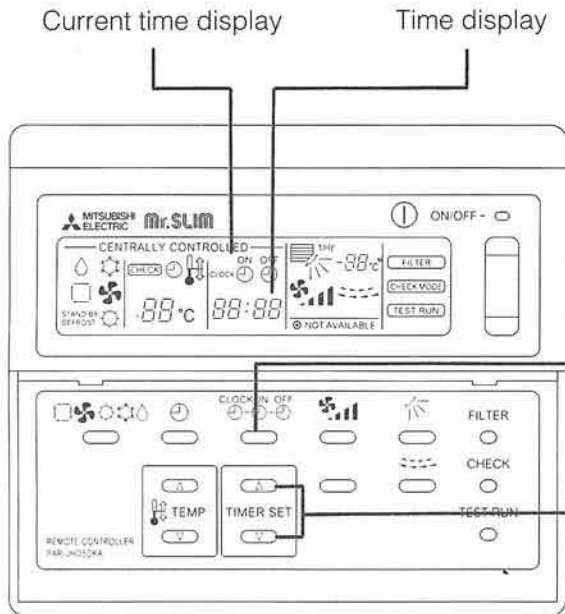
To change the fan speed:

Adjust the fan speed to the desired setting.

The low or high fan operation speed setting is performed each time the button is pressed one time.

- In the electronics dry operation mode, the fan of the room unit is set to automatic operation and the fan speed can not be switched. (Only the remote controller display changes.)

5 Time setting



- Always set the current time after turning the air conditioning unit power supply ON or performing a reset after a power failure.



Note: When the current time is not set, the display of “current time” flashes and the timer operation cannot be set.








- The time can be set without any relation to the room unit operation.
- The time setting button does not operate while the timer operation is performed and the time setting cannot be performed.

Press the  button to display the “current time”.

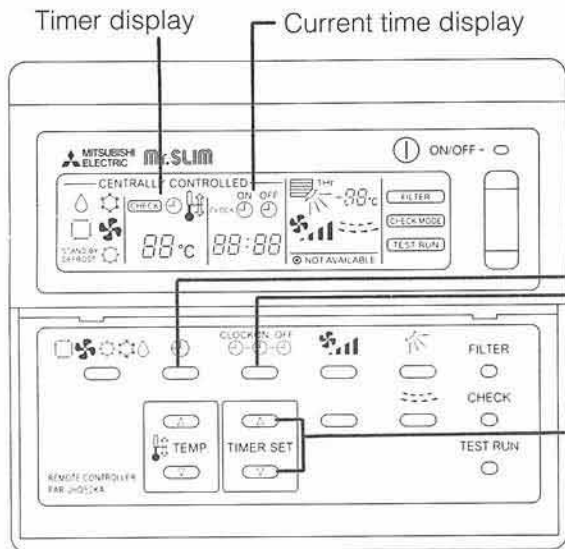
- The display changes each time this button is pressed.

“Current time” → “Start time” → “Stop time” → No display

Press the  button or  button to adjust the current time.

- The time setting cannot be performed while  is displayed.
- Press the  or  time setting buttons to adjust the time while “current time” is displayed.
- The time setting increases one minute each time the  button is pressed and decreases one minute each time the  button is pressed.
The time display operates at a high speed each time the  or  button is pressed continuously.
The display operates in the order of one-minute units, ten-minute units and one-hour units.
- The “Current time” and “Time” displays go off after approximately ten seconds when the button operation is completed.
- Time accuracy of this unit is one minute per month.
The time resetting is required when the power of the unit is turned OFF or the power outage occurred.

6 Timer



There are three ways to use the timer.

1. **ON/OFF timer setting:** To set the timer for both the start and stop time.
2. **ON timer setting:** To set the timer to only the start time. (However, set the stop time to “_:_:” in this case.)
3. **OFF timer setting:** To set the timer to only the stop time. (However, set the start time to “_:_:” in this case.)

- The unit stops operation at the set time and ends the timer mode when the timer is set.
- Press the button while is displayed to verify the start time and stop time.

Timer Setting Display Example



In this example, the timer setting indicates that the unit starts operation at 8:00 and stops at 17:00.

Timer applications

ON timer:

Set the timer to the time that business starts in the office or other desired time. The air conditioner will start the operation at the set time.

OFF timer:

Use this function to prevent forgetting to stop the unit or other operation. The air conditioner will stop operation at the set time.

1 Press the button to set the “continuous” display.

2 Press the button to set the “start time” display.

3 Press the button of the TIMER SET to set the start time.

When these buttons are used for the OFF timer, set the start time to “_:_:” (“_:_:” is displayed after “23:50”).

4 Press the button to set “stop time” display.

5 Press the button of TIMER SET to set the stop time.

When these buttons are used for the ON timer, set the stop time to “_:_:” (“_:_:” is displayed after “23:50”).

6 Press the button to set the “” display.

The setting is completed when is displayed.

- The time increases (decreases) ten minutes each time the button of TIMER SET is pressed one time.

The indicated time increases (decreases) continuously if the button is continuously pressed.

First set the hour setting and then set the minute setting.

- Even though the ON or OFF timer is set, the unit can be turned ON (ON timer) or stopped (OFF timer) if the button of the remote controller is pressed.

Cancel Press the button to set the “” display.

3. For Best Results ...

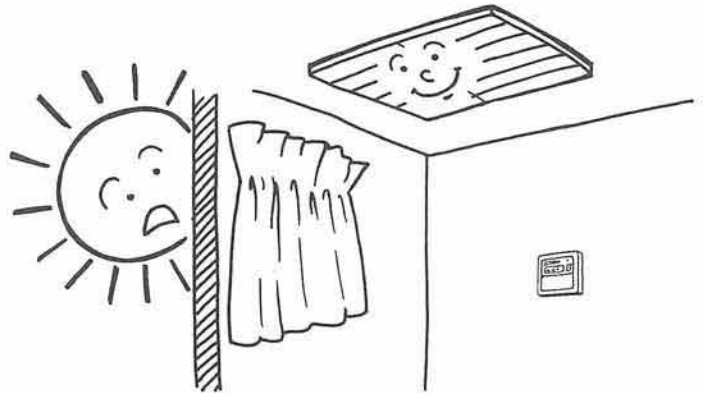
A few simple steps will permit the most effective and economical air conditioner operation.

Cool to Reasonable Temperatures

- Cooling is most efficient when the difference between room and outside temperatures is less than 5°C
- Raising room temperature 1°C during cooling will result in electricity savings of about 10%.
- Overcooling is not good for health and wastes electricity.



Block Sources of Outside Heat



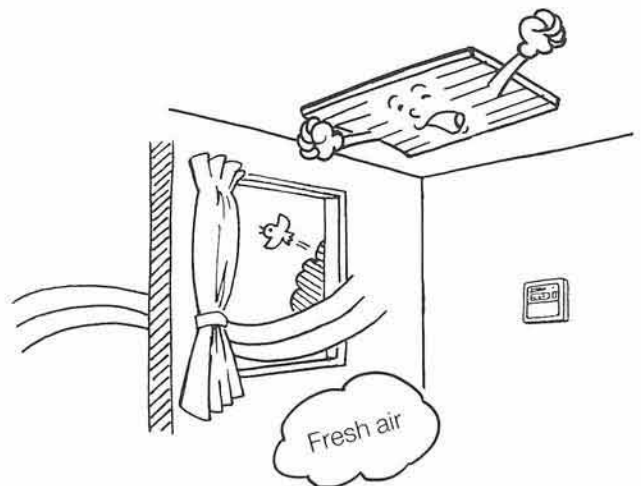
- Use curtains to cover windows subject to direct sunlight during cooling. Avoid opening doors more often than necessary.

Clean Filters Conscientiously



- Dirty or clogged filters block airflow and reduce cooling efficiency. Especially dirty filters can damage the air conditioner itself. Clean filters once a week, or more often in particularly dusty locations.

Allow Fresh Air into Room Occasionally



- Air is closed off rooms will grow musty over time as changing air.

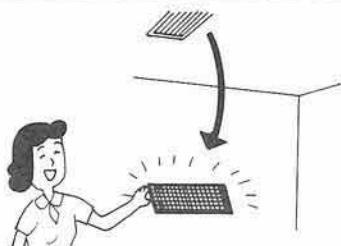
4. Care and Cleaning

Always turn power off before cleaning or servicing air conditioner.

Filters

Clean filters weekly.

Removing the Air Filter



The air filters should be obtained locally. Be sure to check on the location and the way of setting with the contractor when the unit perform a trial run.

(Example)

The air filter is attached to the indoor unit's air intake (rear side of unit).

Cleaning Filters

- Air filter cleaning method varies according to filter material. Read instructions concerning filter material and cleaning method carefully. General method for cleaning filters is shown below.
- Tap lightly or clean with vacuum cleaner. Rinse in water or neutral detergent dissolved in lukewarm water if filters are especially dirty. Be sure to thoroughly rinse off any detergent used. Dry before reinstalling into air conditioner.



Attention

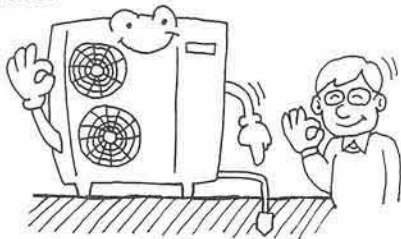
- Do not dry filters in direct sunlight or by other heat sources. Heat may disfigure filters.
- Washing in hot water (over 50°C) may disfigure filters.

Before Season Starts

- Check that intakes and outlets on both indoor and outdoor units are free of obstruction.
- Be sure to remove protective cover from outdoor unit.



- Check that ground wire is properly in place.



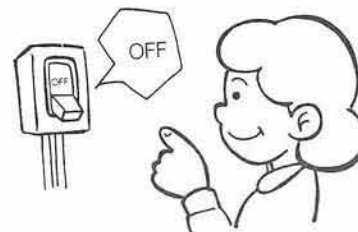
- Check drain hose for bends, kinks, clogging and improper positioning.

- Always replace filters before starting air conditioner. Running air conditioner without filters can damage unit.

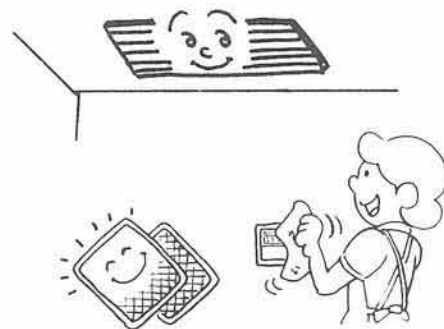
- Turn main power on at least 12 hours before starting actual operation. This will ensure smooth trouble-free starting.

After Season is Over

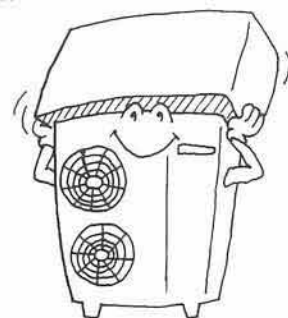
- Turn main power off.



- Clean filters and other parts.



- Cover outdoor unit with plastic or other cover to protect from dirt and foreign matter.




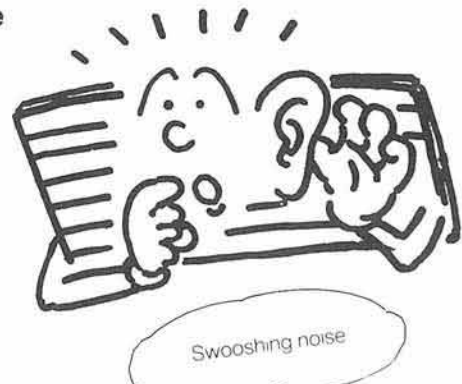
5. Troubleshooting

Check the following points before calling for service.

| Problem | Display | Cause | Remedy |
|---|--|--|--|
| Unit does not operate at all. | When POWER ON/OFF button is pushed, there is no beep and nothing is displayed. | Power outage. | Push POWER ON/OFF button after power restored. |
| | | Main power not on. | Turn main power on. |
| | | Main power fuse blown. | Replace fuse. |
| | | Ground fault breaker open. | Reset ground fault breaker. |
| Air is blown but is not cooled or heated. | Liquid-crystal display indicates that the unit is on. | Improper temperature setting. | After checking the temperature setting and the intake air temperature reading on the liquid-crystal display and after referring to "Regulating Room Temperature" on page 7, make the necessary adjustment with the WARMER or COOLER button. |
| | | Clogged filters. | Clean filters. See page 9 "Cleaning Filters". |
| | | Intake or outlet of indoor or outdoor unit obstructed. | Remove obstruction. |
| | | Open window or door. | Shut window or door. |
| Neither cool nor warm air is blown out | Liquid-crystal display indicates that the unit operates. | 3-Minute Restart Preventive Circuit is functioning. | As 3-Minute Restart Preventive Circuit is built in outdoor unit to protect compressor, compressor will not sometimes restart at once. In such case, please wait for a little while until the compressor restarts. It takes three minutes at longest. |
| Operation stops soon after starting. | Liquid-crystal display reads CHECK and "P8" or "P8" | Intake or outlet of indoor or outdoor unit obstructed. | Restart after removing obstruction. |
| | | Clogged filters. | Restart after cleaning filters. See page 9 "Cleaning Filters". |

If the above measures fail to solve the problems, turn off main switch and inform the dealer from which the air conditioner was purchased of the model name and the nature of the problem. If remote control liquid-crystal display panel displays "CHECK" and "P1-P8, EQ" also inform the dealer of that. Never attempt to repair the air conditioner yourself. ("UB" is not malfunction.)

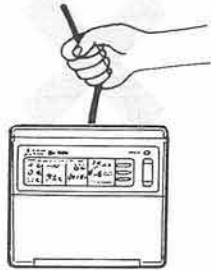
The following are not malfunctions

| | |
|---|---|
| <p>Odor</p>  <p>Bad odors!</p> <p>Air from air conditioner may sometimes carry odors. These odors are from tobacco smoke, cosmetics, furniture finish or other odors taken in during air conditioning and adhering to filters and other parts of air conditioner.</p> | <p>Noise</p>  <p>Swooshing noise</p> <p>A swooshing noise may be heard during and upon stopping operation. This is merely refrigerant circulating inside air conditioner and does not represent a problem.</p> |
|---|---|

6. Special Precautions

This conditioner is NOT intended for use by children or infirm persons without supervisions.

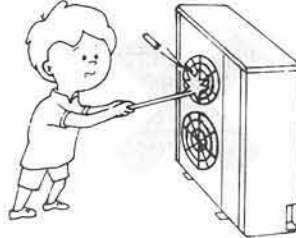
Avoid pulling remote controller cord strongly.



Yanking or tugging cord can damage unit or controller.

Never insert stick or foreign object in intakes or outlets.

Touching rotating or electrical parts can be hazardous. Young children should be supervised to ensure that they do not play with the air conditioner.

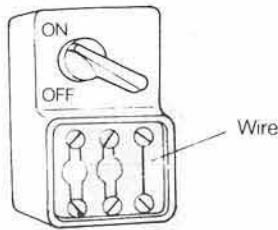


When stopping operation for long periods of time.

Turn main air conditioner power off before stopping air conditioner for extended periods of time or between operating seasons. Transformer and compressor-protection crankcase heater will consume electricity unless main power is turned off.

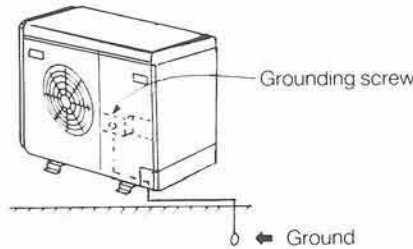
Always observe voltage rating and fuse and breaker capacities.

Never substitute piece of wire or higher capacity fuse for fuse of rated capacity. This can cause breakdowns or fires.



Always ground air conditioner.

Check that wire is properly connected between unit ground wire terminal and ground.



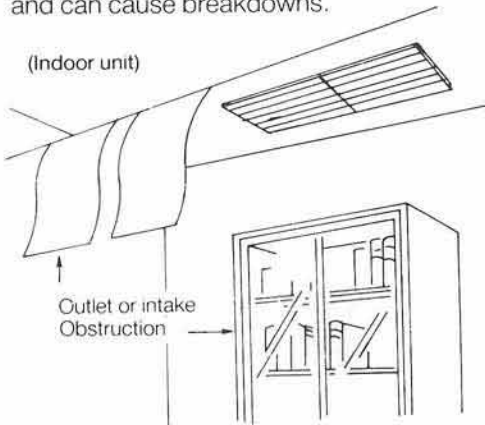
When restarting after long periods of no operation.

Turn main power on at least 12 hours before starting actual operation. This will ensure smooth trouble-free starting.



Do not obstruct indoor or outdoor unit intake or outlet

Obstruction will impeded performance and can cause breakdowns.



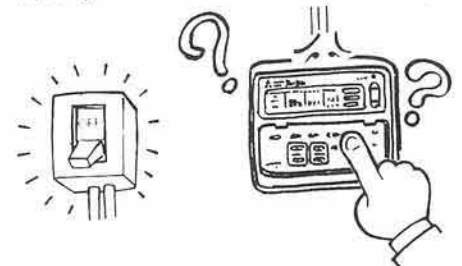
Restarting after power outage

When operation has been stopped by power outage the "power outage restarting prevention circuit" keeps unit from restarting itself after power is restored. Push ON/OFF button to restart.

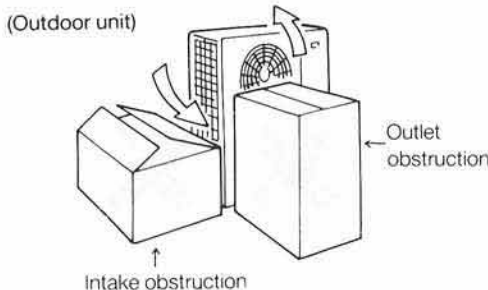
Stop operation and contact dealer in the following cases.

Breaker is tripped frequently.

Remote controller functions erratically.



- Remote controller inspection display runs continuously.
- Any other operation or display differing from normal.



7. Specifications

| Item | | Models | PEH-2.5EK(H)A | PEH-3EK(H)A | PEH-4EK(H)A | PEH-5EK(H)A | PEH-6EKSB | |
|-------------------------|--------------------|------------------------|--------------------------------|---|-------------------------------------|-------------------------------------|-------------------------------------|------------------|
| Performance★5 | Cooling capacity★2 | W | 6100 | 8000 | 9700 | 12400 | 15200 | |
| | | BTU/h | 20500 | 27300 | 33100 | 42300 | 51800 | |
| | | Total input | kw | 2.79 | 3.54 | 3.64 | 4.86 | 5.81 |
| | Heating capacity★3 | W | 6500(8600) | 8300(10400) | 10400(12800) | 13000(16000) | 17400 | |
| | | BTU/h | 22200(29300) | 28300(35500) | 35500(43700) | 44400(54600) | 59400 | |
| | | Total input | kw | 2.59(4.69) | 3.33(5.43) | 3.63(6.03) | 4.81(7.81) | 5.66 |
| Indoor unit | Model Name | | PEH-2.5EK(H)A | PEH-3EK(H)A | PEH-4EK(H)A | PEH-5EK(H)A | PEH-6EKSB | |
| | Power supply★1 | | ~(1ph),240V,50Hz | ~(1ph),240V,50Hz | ~(1ph),240V,50Hz | ~(1ph),240V,50Hz | ~(1ph),240V,50Hz | |
| | Fan | Air flow (Lo-Hi) | CMM | 22-27 | 22-27 | 27-34 | 34-42 | 48-60 |
| | | Ex. Static pressure | mmAq(Pa) | 12.7(124)at Hi | 12.7(124)at Hi | 12.7(124)at Hi | 12.7(124)at Hi | 12.7(125)at Hi |
| | | Motor output | kw | 0.23 | 0.23 | 0.24 | 0.28 | 0.21 |
| | Booster heater★4 | | kw | (2.1) | (2.1) | (2.4) | (3.0) | - |
| | Dimensions (HxWxD) | | mm | 428 x 785 x 690 | 428 x 785 x 690 | 428 x 1055 x 690 | 428 x 1055 x 690 | 428 x 1415 x 690 |
| | Weight | | kg | 45(47) | 46(48) | 58(61) | 72(75) | 73 |
| Model Name | | PUH-2.5AKA | PUH-3VKA | PUH-3YKA | PUH-4YKSA | PUH-5YKSA | PUH-6YKSA | |
| Power supply★1 | | ~(1ph) 240V 50Hz | ~(1ph) 220- 240V 50Hz | 3N-(3ph, 4wires) 415/240V 50Hz | 3N-(3ph,4wires) 415/240V 50Hz | 3N-(3ph,4wires) 415/240V 50Hz | 3N-(3ph,4wires) 415/240V 50Hz | |
| Fan | Air flow | CMM | 50 | 50 | 95 | 95 | 100 | |
| | Motor output | kw | 0.085 | 0.085 | 0.065 + 0.065 | 0.065 + 0.065 | 0.10 + 0.10 | |
| Compressor motor output | | kw | 2 | 2.2 | 2.4 | 2.7 | 3.5 | 4 |
| Crankcase heater | | W | 38 | 38 | 38 | 38 | 38 | |
| Dimensions (H x W x D) | | mm | 850 x 870 x 295 | 850 x 870 x 295 | 1258 x 870 x 295 | 1258 x 970 x 345 | 1258 x 970 x 345 | |
| Weight | | kg | 68 | 75 | 94 | 114 | 117 | |

- Notes: ★1 Refer to the product nameplate attached to the unit for the electrical specifications.
 ★2 Rating conditions (cooling) ... Indoor : 27 °C DB, 19 °C WB Outdoor : 35 °C DB
 ★3 Rating conditions (heating) ... Indoor : 20 °C DB Outdoor : 7 °C DB, 6 °C WB
 ★4 Only models PEH-2.5,3EKHA,4,5EKHSA are equipped with booster heater.
 ★5 Specifications subject to change without notice.

Operating range

| | | Indoor air intake temperature | Outdoor air intake temperature |
|---------|---------|-------------------------------|--------------------------------|
| Cooling | Maximum | 35 °C DB, 22.5 °C WB | 46 °C DB |
| | Minimum | 21 °C DB, 15.5 °C WB | -5 °C DB |
| Heating | Maximum | 27 °C DB | 21 °C DB, 15.5 °C WB |
| | Minimum | 20 °C DB | -8.5 °C DB, -9.5 °C WB |

Units should be installed by licensed electric contractor accordingly to local code requirement.

 **mitsubishi electric corporation**
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