# HITACHI

# SERVICE MANUAL

**TECHNICAL INFORMATION** 

FOR SERVICE PERSONNEL ONLY

**OUTDOOR UNIIT** 



RAC-10GH5 RAC-10KH3



RAC-14GH5 RAC-14KH3

**SPECIFICATIONS** 

**INDOOR UNIT** 



RAS-10GH5 RAS-14GH5 RAS-10KH3 RAS-14KH3



# HHAW

NO.0043E

RAS-10GH5/RAC-10GH5 RAS-14GH5/RAC-14GH5 RAS-10KH3/RAC-10KH3 RAS-14KH3/RAC-14KH3

### REFER TO THE FOUNDATION MANUAL

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				WALL	TYPE	
TYPE			COOLING UNIT	CONDENSING UNIT	COOLING UNIT	CONDENSING UNIT
MODEL		RAS-10GH5 RAS-10KH3	RAC-10GH5 RAC-10KH3	RAS-14GH5 RAS-14KH3	RAC-14GH5 RAC-14KH3	
POWER SOUR	RCE			1φ,230\	/,50 HZ	
	TOTAL INPUT	(W)	78	0	1,0	90
COOLING	TOTAL AMPERES	(A)	3.58		5.00	
COOLING	CAPACITY	(Kw)	2.50		3.50	
	CAPACITY	(BTU/H)	8,530		11,9	942
	TOTAL INPUT	(W)	77	0	1,1	00
HEADING	TOTAL AMPERES	(A)	3.5	54	5.	05
HEADING	CAPACITY		2.80		4.0	
CAFACITI		(BTU/H)	9,554		13,648	
		W	780	700	780	750
DIMENSIONS	ENSIONS (mm)		280	505	280	548
	(mm)	D	210	258	210	288
NET WEIGHT	(kg)		9	30	9	37

RAS-08AH1/RAC-08AH1

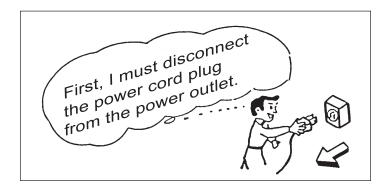
RASITEAHTIPACIONASIAND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

OM AIR CONDITIONER

**COOLING UNIT + CONDENSING UNIT** 

### SAFETY DURING REPAIR WORK

 In order to disassemble and repair the unit in question, be sure to disconnect the power cord plug from the power outlet before starting the work.



2. If it is necessary to replace any parts, they should be replaced with respective genuine parts for the unit, and the replacement must be effected in correct manner according to the instructions in the Service Manual of the unit.

If the contacts of electrical parts are defective, replace the electrical parts without trying to repair them.

- 3. After completion of repairs, the initial state should be restored.
- 4. Lead wires should be connected and laid as in the initial state.
- 5. Modification of the unit by user himself should absolutely be prohibited.



- 6. Tools and measuring instruments for use in repairs or inspection should be accurately calibrated in advance.
- 7. In installing the unit having been repaired, be careful to prevent the occurrence of any accident such as electrical shock, leak of current, or bodily injury due to the drop of any part.
- 8. To check the insulation of the unit, measure the insulation resistance between the power cord plug and grounding terminal of the unit. The insulation resistance should be  $1M\Omega$  or more as measured by a 500V DC megger.
- The initial location of installation such as window, floor or the other should be checked for being and safe enough to support the repaired unit again.
   If it is found not so strong and safe, the unit should be installed at the initial location reinforced or at a new location.
- 10. Any inflammable thing should never be placed about the location of installation.
- 11. Check the grounding to see whether it is proper or not, and if it is found improper, connect the grounding terminal to the earth.



### WORKING STANDARDS FOR PREVENTING BREAKAGE OF SEMICONDUCTORS

### Scope

The standards provide for items to be generally observed in carrying and handling semiconductors in relative manufacturers during maintenance and handling thereof. (They apply the same to handling of abnormal goods such as rejected goods being returned).

### 2. Object parts

- (1) Micro computer
- (2) Integrated circuits (IC)
- (3) Field-effect transistors (FET)
- (4) P.C. boards or the like on which the parts mentioned in (1) and (2) of this paragraph are equipped.

### 3. Items to be observed in handling

(1) Use a conductive container for carrying and storing of parts. (Even rejected goods should be handled in the same way).

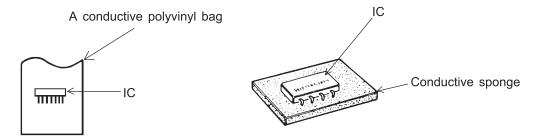


Fig. 1. Conductive Container

- (2) When any part is handled uncovered (in counting, packing and the like), the handling person must always use himself as a body earth. (Make yourself a body earth by passing one M ohm earth resistance through a ring or bracelet).
- (3) Be careful not to touch the parts with your clothing when you hold a part even if a body earth is being taken.
- (4) Be sure to place a part on a metal plate with grounding.
- (5) Be careful not to fail to turn off power when you repair the printed circuit board. At the same time, try to repair the printed circuit board on a grounded metal plate.

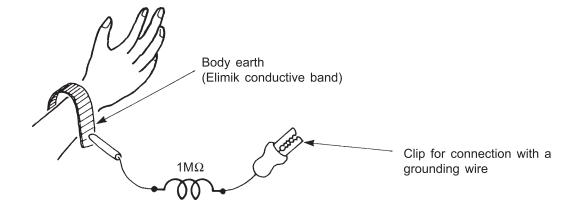


Fig. 2. Body Earth

(6) Use a three wire type soldering iron including a grounding wire.

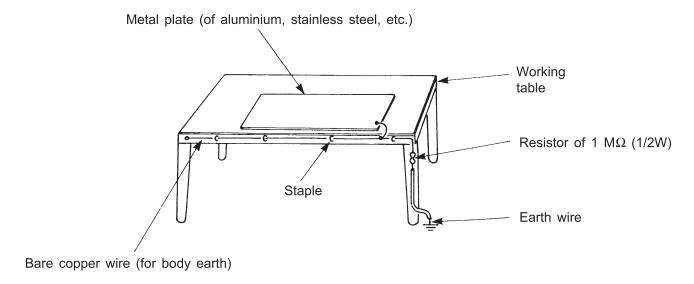


Fig. 3. Grounding of the working table

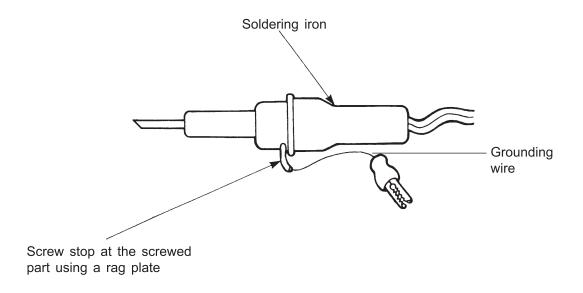


Fig. 4. Grounding a soldering iron

Use a high insulation mode (100V,  $10M\Omega$  or higher) when ordinary iron is to be used.

(7) In checking circuits for maintenance, inspection or some others, be careful not to have the test probes of the measuring instrument shortcircuit a load circuit or the like.

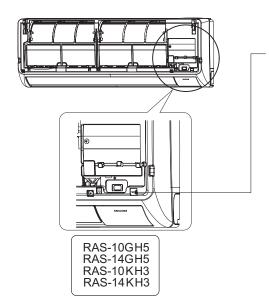
# **A** CAUTION

- 1. In quiet operation or stopping the operation, slight flowing noise of refrigerant in the refrigerating cycle is heard occasionally, but this noise is not abnormal for the operation.
- 2. When it thunders near by, it is recommend to stop the operation and to disconnect the power cord plug from the power outlet for safety.
- 3. If the room air conditioner is stopped by setting the temperature or mis-operation, and then re-started in a moment, cooling operation does not start for 3 minutes, it is not abnormal and this is the result of the operation of IC delay circuit. This IC delay circuit ensures that there is no danger of blowing fuse or damaging parts even if operation is restarted accidentally.
- 4. This room air conditioner should not be used at the cooling operation when the outside temperature is below 20°C.
- 5. When the operation knob is set to "COOL" from another position, IC delay circuit functions and stops the compressor for the first 3 minutes, which is not an abnormal phenomenon.

### **SPECIFICATIONS**

3FECIFICATIONS						
MODEL		RAS-08AH1 RAS-10AH1 RAS-10GH5 RAS-10KH3	RAS-14AH1 RAS-14GH5 RAS-14KH3	RAC-08AH1 RAC-10AH1 RAC-10GH5 RAC-10KH3	RAC-14AH1 RAC-14GH5 RAC-14KH3	
FAN MOTOR		7 W	11 W	28 '	W	
FAN MOTOR CAPA	ACITOR	YI	ES	YE	S	
FAN MOTOR PRO	TECTOR	YI	ES	YE	S	
COMPRESSOR			_	ASG108TV-A7AT	ASL145SV-C7LU	
COMPRESSOR MO	OTOR CAPACITOR	N	0	YE	S	
OVERLOAD PROT	ECTOR	N	0	YE	S	
OVERHEAT PROTI	OVERHEAT PROTECTOR		0	YES		
FUSE (for MICROPROCESSOR)		3.15 A		NO		
POWER RELAY		891WP-1A-C		NO		
POWER SWITCH	POWER SWITCH		NO		NO	
TEMPORARY SWI	TCH	YI	ES	NO	)	
SERVICE SWITCH		NO		NO	)	
TRANSFORMER		YES		NO		
VARISTOR		YES		NO		
NOISE SUPPRESSOR		YES		NO	)	
THERMOSTAT		YES(IC)		NO		
REMOTE CONTRO	REMOTE CONTROL SWITCH (LIQUID CRYSTAL)		YES		)	
REFRIGERANT CHARGING	UNIT			780g	1080g	
VOLUME (Refrigerant 410A)	PIPES (MAX. 20m)			FRIGERANT BEO IG IS FLARE TYP		

# **OPERATION INDICATOR**

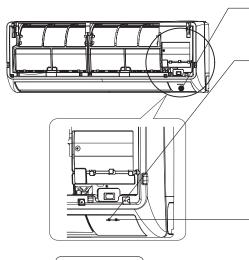


### **TEMPORARY SWITCH**

Use this switch to start and stop when the remote controller does not work.

- By setting the temporary switch, the operation is done in previously set operation mode.
- When the operation is done using the temporary switch after the power source is turned off and turn on again, the operation is done in automatic mode.

# **INDOOR UNIT INDICATORS**



RAS-10GH5 RAS-14GH5 RAS-10KH3 RAS-14KH3

### SIGNAL RECEIVER

There will be a beep sound when this receiver receives signal from remote controller.

### **OPERATION LAMP**

This lamp lights during operation.

The OPERATION LAMP flashes in the following cases during heating.

### (1) During preheating

For about 2-3 minutes after starting up.

### (2) During defrosting

Defrosting will be performed about once an hour when frost forms on the heat exchanger of the outdoor unit, for 5–10 minutes each time.

### TIMER LAMP

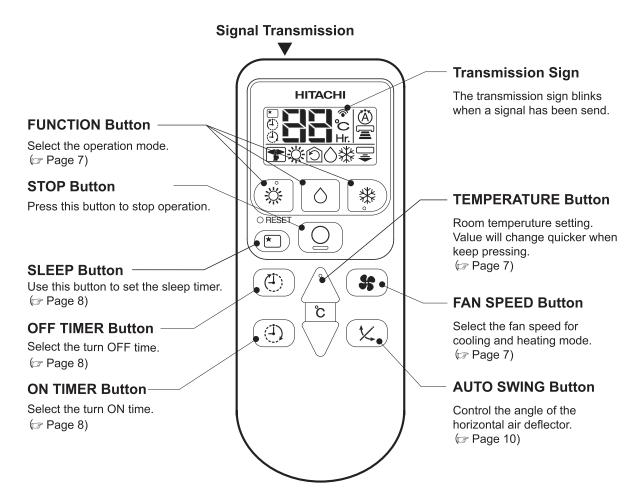
This lamp lights when the timer is working.

### OPERATION INDICATOR

- The auto restart feature prompts the air-conditioner to restart in its previous setting right after the power failure.
- In case of the power failure during the use of timer mode (Sleep Timer or ON/OFF Timer), timer mode is cancelled and the air-conditioner stops operation.
- Please reset the remote controller to restart the unit after the power has been restored.

# NAMES AND FUNCTIONS OF REMOTE CONTROL UNIT

■ This controls the operation function and timer setting of the room air conditioner. The range of control is about 7 meters. If indoor lighting is controlled electronically, the range of control may be shorter.



### **Precautions for Use**

- Do not put the remote controller under direct sunlight and high temperature.
- Do not drop it on the floor, and protect it from water.
- If you press the FUNCTION button during operation, the air conditioner may stop for about 3 minutes for protection before you can start it again.

# MANUAL OPERATION [Heating • Dehumidify • Cooling]

■ Please use under below condition when you want to set the function mode, room temperature and fan speed by manually.

HEATING	DEHUMIDIFYING	COOLING
Outdoor Temperature 24°C below	Room Temperature 16°C above	Outdoor Temperature 21°C above

# 1 OPERATION MODE SELECTION

• Each time you press the button, the mode will change as the below.

: HEATING

: DEHUMIDIFYING

\* : COOLING

# 2 ROOM TEMPERATURE SETTING



Recommend Temperature

Heating 20~24°C

Heating	20~24°C
Dehumidify	20~26°C
Cooling	25~28°C

 The cooling operation does not start if the temperature setting is higher than the current room temperature.





# 3 FAN SPEED SETTING

 Each time you press the button, fan speed will change as below sequence.

• HEATING COOLING } : AUTO → HIGH → MED → LOW

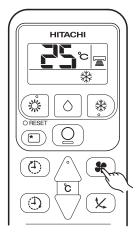
DEHUMIDIFYING : LOW (FIXED)



# 4 Press the (STOP) button

• Operation stops with a signal received sound "beep".





### TIMER RESERVATION

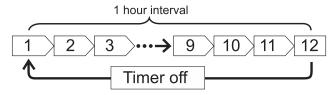
■ ON Timer and OFF Timer are available.

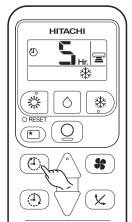
### Timer Reservation

Operation will stop at setting time.



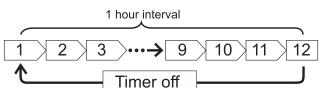
- Setting time will change according to the below sequence when you press the button.





# 2 ① ON TIME setting

- Select the ON TIME by pressing the (ON) Button.
- Setting time will change according to the below sequence when you press the button.



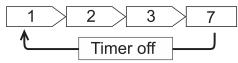
 Operation will start for setting temperature at setting time
 (The starting time may different depending on

(The starting time may different depending on the room temperature and set temperature).



# 3 Sleep timer setting

- Select the OFF TIME by pressing the (SLEEP) Button.
- Setting time will change according to the below sequence when you press the button.





### NOTE

- The device will continue working for the designated number of hours and then turn off.
   Point the signal window of the remote controller toward the indoor unit,
   and press the SLEEP button.
  - The timer information will be displayed on the remote controller.
  - The TIMER lamp lights with a beep from the indoor unit.
- If you set the sleep timer when the off-timer or on-timer has been set earlier, the sleep timer becomes effective instead of the on-timer or off-timer set earlier.

# **Explanation of the sleep timer**

The device will control the FAN SPEED and room temperature automatically so as to be quiet and good for people's health.

You can set the sleep timer to turn off after 1, 2, 3 or 7 hours. The FAN SPEED and room temperature will be controlled as shown below.

# Operation with the sleep timer

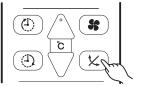
Function	Operation		
Heating " <del>淡</del> "	The room temperature will be controlled 5°C below the temperature setting 30 minutes after the setting of the sleep timer. The FAN SPEED will be set to LOW immediately.	The room temperature is kept at about 12°C minimum.  5°C  Sleep timer set 2 hours 7 hours later  1 hour later 3 hours later	
Cooling  " * * "  and  Dehumidifying  " \( \) "	The FAN SPEED will be set to LOW immediately.	The room temperature is kept at about 25-28°C.  Sleep 2 2°C 6 hours later  1 2 hours 2 hours 1 ater  30 minutes later 3 hours later	

# ADJUSTING THE AIR DEFLECTOR

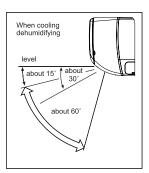


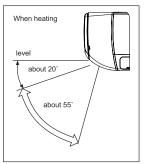
Adjustment of the conditioned air in the upward and downward directions.

The horizontal air deflector is automatically set to the proper angle suitable for each operation. The deflector can be swung up and down continuously and also set to the desired angle using the "() (AUTO SWING)" button.



- If the " (AUTO SWING)" button is pressed once, the horizontal air deflector swings up and down. If the button is pressed again, the deflector stops in its current position. Several seconds (about 6 seconds) may be required before the deflector starts to move.
- Use the horizontal air deflector within the adjusting range shown on the right.
- When the operation is stopped, the horizontal air deflector moves and stops at the position where the air outlet closes.





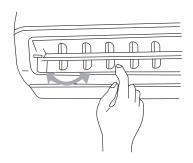
# **▲** CAUTION

• In "Cooling" operation, do not keep the horizontal air deflector swinging for a long time. Some dew may form on the horizontal air deflector and dew may drop.



Adjustment of the conditioned air to the left and right.

Hold the vertical air deflector as shown in the figure and adjust the conditioned air to the left and right.



# HOW TO EXCHANGE THE BATTERIES IN THE REMOTE CONTROLLER

When using the remote control, if there is no response from the air conditioner unit and / or the remote control has fading and dim displays, the batteries in the remote control device need to be removde and replaced with new ones



Remove the cover as shown in the figure and take out the old batteries.



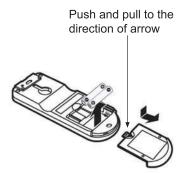
2

Install the new batteries.

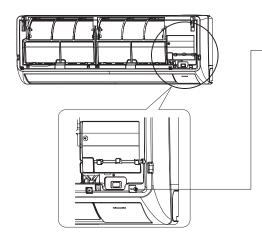
The direction of the batteries should match the marks in the case.

# **A** CAUTION

- 1. Do not use new and old batteries, or different kinds of batteries together.
- 2. Take out the batteries when you do not use the remote controller for 2 or 3 months.



# **TEMPORARY SWITCH**



### **TEMPORARY SWITCH**

Use this switch to start and stop when the remote controller does not work.

- By setting the temporary switch, the operation is done in previously set operation mode.
- When the operation is done using the temporary switch after the power source is turned off and turn on again, the operation is done in automatic mode.

# THE IDEAL WAYS OF OPERATION

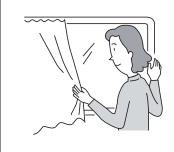
# **Suitable Room Temperature**



# **A** Warning

Freezing temperature is bad for health and a waste of electric power.

# Install curtain or blinds



It is possible to reduce heat entering the room through windows.

### **Ventilation**



### ⚠ Caution

Do not close the room for a long period of time. Occasionally open the door and windows to allow the

entrance of fresh air.



# **Effective Usage Of Timer**

At night, please use the "OFF or ON timer operation mode", together with your wake up time in the morning. This will enable you to enjoy a comfortable room temperature. Please use the timer effectively.



# Do Not Forget To Clean The Pre Filter

Dusty Pre filter will reduce the air volume and the cooling efficiency. To prevent from wasting electric energy, please clean the filter every 2 weeks.



# **Please Adjust Suitable Temperature** For Baby And Children

Please pay attention to the room temperature and air flow direction when operating the unit for baby, children and old folks who have difficulty in movement.

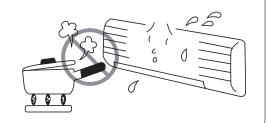
# FOR USER'S INFORMATION

# The Air Conditioner And The Heat Source In The Room



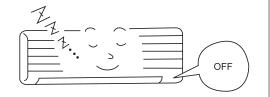
### **A** Caution

If the amount of heat in the room is above the cooling capability of the air conditioner (for example: more people entering the room, using heating equipments and etc.), the preset room temperature cannot be achieved.



# Not Operating For A Long Time

When the indoor unit is not to be used for a long period of time, please switch off the power from the mains. If the power from mains remains "ON", the indoor unit still consumes about 8W in the operation control circuit even if it is in "OFF" mode.

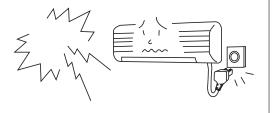


# When Lightning Occurs



### **A** Warning

To protect the whole unit during lightning, please stop operating the unit and remove the plug from the socket.



### **MAINTENANCE**

### ▲ CAUTION

Cleaning and maintenance must be carried out when filter lamp lights. Before cleaning, stop operation and switch off the power supply.

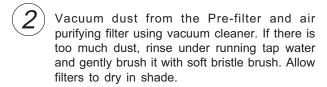
### 1. AIR FILTER Ⅲ

Clean the Pre-filter, as it removes dust inside the room. In case the Pre-filter is full of dust, the air flow will decrease and the cooling capacity will be reduced. Further, noise may occur. Be sure to clean the Pre-filter following the procedure below.

### PROCEDURE



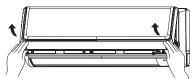
- Open the front panel and remove the Pre-filter
- Gently lift and remove the air purifying filters from the air purifying filter frame.

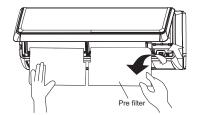




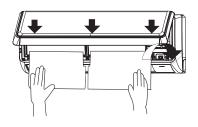
- (3)
- Re-insert the air purifying filter to the filter frame. Set the Pre-filter with "FRONT" mark facing front, and slot them into the original state.
- After attaching the Pre-filters, push the front panel at three arrow portions as shown in figure and close it.

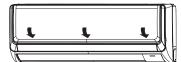
### **REMOVING METHOD**





### **INSTALLATION METHOD**





# ▲ CAUTION

- Do not wash with hot water at more than 40°C. The filters may shrink.
- When washing it, shake off moisture completely and dry it in the shade; do not expose it directly to the sun. The filters may shrink.

### 2. CLEANING OF FRONT PANEL

 Remove the front panel and wash with clean water.

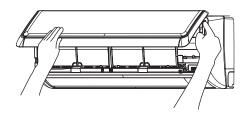
Wash it with a soft sponge.

After using neutral detergent, wash thoroughly with clean water.

- When front panel is not removed, wipe it with a soft dry cloth. Wipe the remote controller thoroughly with a soft dry cloth.
- Wipe the water thoroughly.
   If water remains at indicators or signal receiver of indoor unit, it causes trouble.

Method of removing the front panel. Be sure to hold the front panel with both hands to detach and attach it.

### Removing the Front Panel

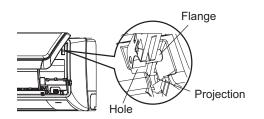


 When the front panel is fully opened with both hands, push the right arm to the inside to release it, and while closing the front panel slightly, pull it out forward.





### Attaching the Front Panel



 Move the projections of the left and right arms into the Flanges in the unit and securely insert them into the holes.

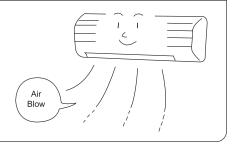
### **A** CAUTION

- Do not splash or direct water to the body of the unit when cleaning it as this may cause short circuit.
- Never use hot water (above 40°C), benzine, gasoline, acid, thinner or a brush, because they will damage the plastic surface and the coating.



### 3. MAINTENANCE AT BEGINNING OF LONG OFF PERIOD

- Running the unit setting the operation mode to \*
   (COOL), the temperature to 32°C and the fan speed
   to HI for about half a day on a fine day, and dry the
   whole of the unit.
- Disconnect the power plug.



### REGULAR INSPECTION

PLEASE CHECK THE FOLLOWING POINTS BY QUALIFIED SERVICE PERSONAL EITHER EVERY HALF YEARLY OR YEARLY. CONTACT YOUR SALES AGENT OR SERVICE SHOP.

1		Is the earth line disconnected or broken?
2		Is the mounting frame seriously affected by rust and is the outdoor unit tilted or unstable?
3	Confirm	Is the plug of power line firmly plugged into the socket? (Please ensure no loose contact between them).

### AFTER SALE SERVICE AND WARRANTY

# WHEN ASKING FOR SERVICE, CHECK THE FOLLOWING POINTS.

CONDITION	CHECK THE FOLLOWING POINTS
When it does not operate	<ul> <li>Is the fuse all right?</li> <li>Is the voltage extremely high or low?</li> <li>Is the circuit breaker "ON"?</li> </ul>
When it does not cool well When it does not hot well	<ul> <li>Is the air filter blocked with dust?</li> <li>Does sunlight fall directly on the outdoor unit?</li> <li>Is the air flow of the outdoor unit obstructed?</li> <li>Are the doors or windows opened, or is there any source of heat in the room?</li> <li>Is the set temperature suitable?</li> </ul>



### **Notes**

- In quiet operation or stopping the operation, the following phenomena may occassionally occur, but they are not abnormal for the operation.
  - (1) Slight flowing noise of refrigerant in the refrigerating cycle.
  - (2) Slight rubbing noise from the fan casing which is cooled and then gradually warmed as operation stops.
- The odor will possibly be emitted from the room air conditioner because the various odor, emitted by smoke, foodstuffs, cosmetics and so on, sticks to it. So please clean the air filter and the evaporator regularly to reduce the odor.
- Please contact your sales agent immediately if the air conditioner still fails to operate normally after the above inspections. Inform your agent of the model of your unit, production number, date of installation. Please also inform him regarding the fault.
- Power supply shall be connected at the rated voltage, otherwise the unit will be broken or could not reach the specified capacity.

# INSTALLATION MANUAL

# FOR SERVICE PERSONNEL ONLY

### SAFETY PRECAUTION

- Read the safety precautions carefully before operating the unit.
- The contents of this section are vital to ensure safety. Please pay special attention to the following sign.

⚠ WARNING ...... Incorrect methods of installation may cause death or serious injury.

⚠ CAUTION ...... Improper installation may result in serious consequence.

Be sure that the unit operates in proper condition after installation. Explain to customer the proper way of operating the unit as described in the user's guide.

# **MARNING**

- Please request your sales agent or qualified technician to install your unit. Water leakage, short circuit or fire may
  occur if you do the installation work yourself.
- Please observe the instructions stated in the installation manual during the process of installation. Improper installation may cause water leakage, electric shock and fire.
- Make sure that the units are mounted at locations which are able to provide full support to the weight of the units.
   If not, the units may collapse and impose danger.
- Observe the rules and regulations of the electrical installation and the methods described in the installation manual
  when dealing with the electrical work. Use only power cables which are approved from the Authorities of your
  country. A short circuit and fire may occur due to the use of low quality wire or improper work.
- Be sure to use approved cables also for the connection indoor/outdoor units. Please ensure that the connections
  are tight after the conductors of the wire are inserted into the terminals. Improper insertion and loose contact may
  cause over-heating and fire.
- Please use the specified components for installation work. Otherwise, the units may collapse or water leakage, electric shock and fire may occur.
- Do not mix any coolant other than R-22 into the cooling circulation path when mounting or shifting the unit. If it is mixed with air, the high pressure in the circulation path will rise and this may result in broken copper pipes or faults.

### **A** CAUTION

- This is a stationary class 1 appliance. The electrical installation should be installed fixed by using IEC approved power cables. In the installation a main switch must be used with an opened contact gap of more than 3mm.
- Piping shall be suitable supported with a maximum spacing of 1m between the supports.
- Do not install the unit near a location where there is flammable gas. The outdoor unit may catch fire if flammable gas leaks around it.



• Please ensure smooth flow of water when installing the drain hose.

# THE CHOICE OF MOUNTING SITE (Please note the following matters and obtain permission from customer before installation.)

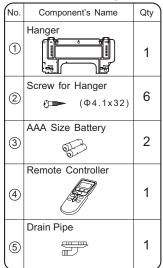
### A WARNING

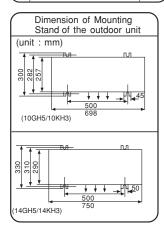
The unit should be mounted at stable, non-vibratory location which can provide full support to the unit.

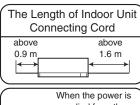
### CAUTION

- No nearby heat source and no obstruction near the air outlet is allowed.
- The clearance distances from top, right and left are specified in figure below.
- The location must be convenient for water drainage and pipe connection with the Outdoor unit.
- To avoid interference from noise, please place the unit and its remote controller at least 1m from the radio and television.
- To avoid any error in signal transmission from the remote controller, please put the controller far away from highfrequency machines and high-power wireless systems.
- The installation height of the indoor unit must be at least 2300mm or more from the floor.

### Names of Indoor Components

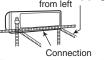






supplied from the indoor unit, pull the power cable from the cable drawer at the right or left side of the indoor unit. Cable drawer (right side)

### Direction of Piping Backward piping from left



There are 6 directions allowed, namely, backward piping, backward piping from left, horizontally piping from right, horizontally piping from left, vertically down from right, vertically down from left.

The clearances of the unit from top, left, right and front are specified in figure below. At least

three of the above sides must be open air.

above 100mm

\* above 400mm

### ▲ WARNING

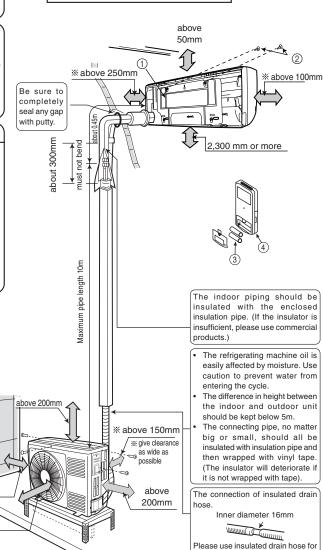
The Outdoor unit must be mounted at a location which can support heavy weight. Otherwise, noise and vibration will increase

### **A** CAUTION

- Do not expose the unit under direct sunshine or rain. Besides, ventilation must be good and clear of obstruction.
- The air blown out of the unit should not point directly to animals or plants.
- The clearances of the unit from top, left, right and front are specified in figure below. At least three of the above sides must be open air.
- The installation height should be at least 2,300 mm or more from the floor.
- Be sure that the hot air blown out of the unit and noise do not disturb the neighbourhood.

  Do not install at a location where there is flammable gas,
- steam, oil and smoke.
- The location must be convenient for water drainage.
- Place the Outdoor unit and its connecting cord at least 1 m away from the antenna or signal line of television, radio or telephone. This is to avoid noise interference.

### Figure showing the Installation of Indoor and Outdoor Unit.



the indoor piping (commercial

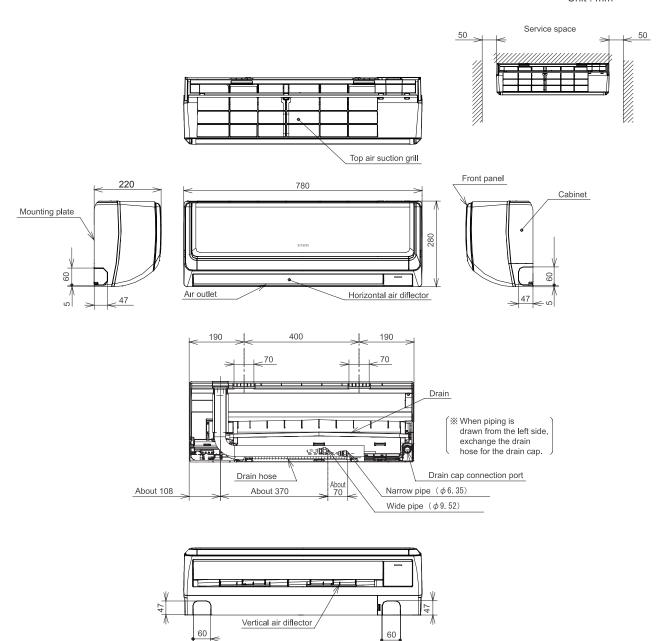
product)

### CONSTRUCTION AND DIMENSIONAL DIAGRAM

MODEL RAS-08AH1, RAS-10AH1, RAS-14AH1 RAS-10GH5, RAS-10KH3 RAS-14GH5, RAS-14KH3

**INDOOR UNIT** 

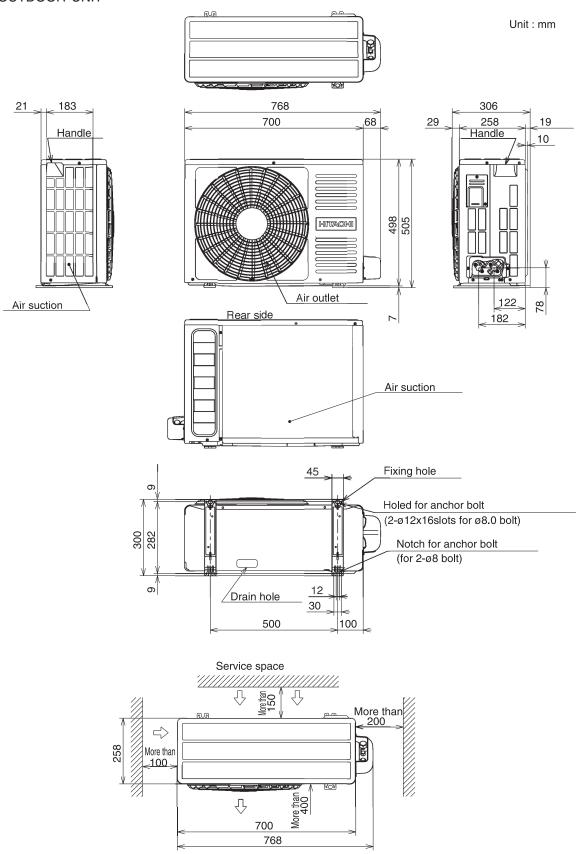
Unit: mm



### **CONSTRUCTION AND DIMENSIONAL DIAGRAM**

MODEL RAC-08AH1, RAC-10AH1 RAC-10GH5, RAC-10KH3

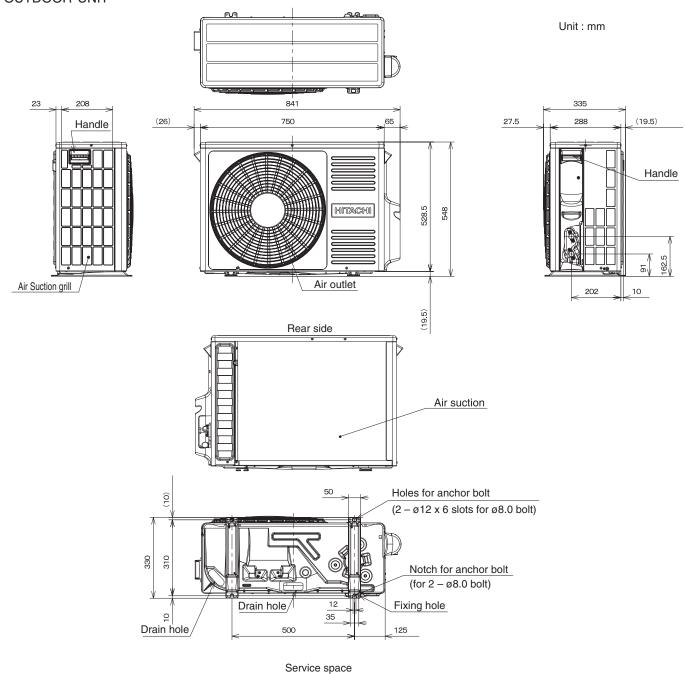
**OUTDOOR UNIT** 

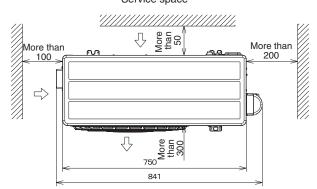


# CONSTRUCTION AND DIMENSIONAL DIAGRAM

MODEL RAC-14AH1 RAC-14GH5, RAC-14KH3

**OUTDOOR UNIT** 





# **MAIN PARTS COMPONENT**

# **THERMOSTAT**

Thermostat Specifications

MODEL			RAS-10GH5 RAS-10KH3 RAS-14GH5 RAS-14KH3	RAS-10GH5 RAS-10KH3 RAS-14GH5 RAS-14KH3
THERMOSTAT MODEL			I	С
OPERATION MODE			COOL	HEAT
	INDICATION		17.0 (62.6)	15.7 (60.3)
	16	OFF	16.3 (61.3)	16.3 (61.3)
TEMPERATURE	INDICATION	ON	25.0 (77.0)	23.7 (74.7)
°C (°F) 24 INDICATION		OFF	24.3 (75.7)	24.3 (75.7)
		ON	33.0 (91.4)	31.7 (89.1)
	32		30.6 (90.1)	33.3 (90.1)

### **FAN MOTOR**

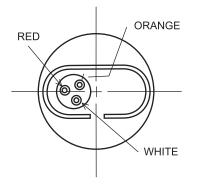
# Fan Motor Specifications

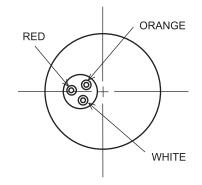
MODEL		RAS-10GH5	RAS-14GH5	RAC-10GH5 RAC-14GH5 RAC-10KH3 RAC-14KH3
		RAS-10KH3	RAS-14KH3	RAC-10KH3 KAC-14KH3
PHASE			SINGLE	
RATED VOLTAGE			220 V	
RATED FREQUENCY		50 Hz		
OUTPUT		6.8 W	11 W	28 W
POLE NUMBER		4	4	6
CONNECTION		RED WM  BLK  GRAY  RED  WHT  GRAY	WM  BLK  CAPACITOR WHT  A2  BLU  BA3  GRAY	INTERNAL THERMAL FUSE  BLACK  WM  CAPACITOR  GRAY
RESISTANCE VALUE $(\Omega)$	20°C (68°F)	WM = 566 WA = 250	WM = 448 WA = 341	WM = 316 WA = 175

### **COMPRESSOR MOTOR**

### Compressor Motor Specifications

MODEL		RAC-10GH5 RAC-10KH3	RAC-14GH5 RAC-14KH3
COMPRESSOR MODEL		AGS/08TV-B7AT	AGS/08TV-B7AT
PHASE		SINGLE	SINGLE
RATED VOLTAGE		220-240 V	220-240 V
RATED FREQUENCY		50 Hz	50 Hz
LOCKED ROTOR CURRI	ENT	18 A	27 A
POLE NUMBER		2	2
CONNECTION		ORANGE  CAPACITO	RM RA  OR RED
RESISTANCE VALUE $(\Omega)$	20°C (68°F)	RA = 3.72 RM = 3.60	RA = 2.45 RM = 2.92





# **▲** CAUTION

When the refrigerating cycle has been operated for a long time with the capillary tubes clogged or crushed or with too little refrigerant, check the color of the refrigerating machine oil inside the compressor. If the color has been changed conspicuously, replace the compressor.

### WIRING DIAGRAM

MODEL RAS-10GH5/RAC-10GH5

RAS-14GH5/RAC-14GH5 RAS-10KH3/RAC-10KH3 RAS-14KH3/RAC-14KH3

(A) : COMPRESSOR

(B): FAN MOTOR

C : FAN MOTOR PROTECTOR

D: 1.5 µF CAPACITOR

(E) : COMPRESSOR CAPACITOR

RAC-10GH5/RAC-10KH3: 25 µF

RAC-14GH5/RAC-14KH3: 35 µF

(H): 2.5 µF CAPACITOR

(I): FAN MOTOR PROTECTOR (INTERNAL)

(J): LINE CORD

(K): TERMINAL BOARD

(L): OUTDOOR FAN RELAY

(M): THERMAL FUSE FOR PCB

(N) : REVERSING VALVE COIL

P : POWER RELAY

R : SURGE ASSORBER

(S): THERMISTOR

(T): TRANSFORMER

U<sub>P</sub>: OVER LOAD PROTECTOR (INTERNAL)

(V): VARISTOR

(W): INDOOR FAN RELAY

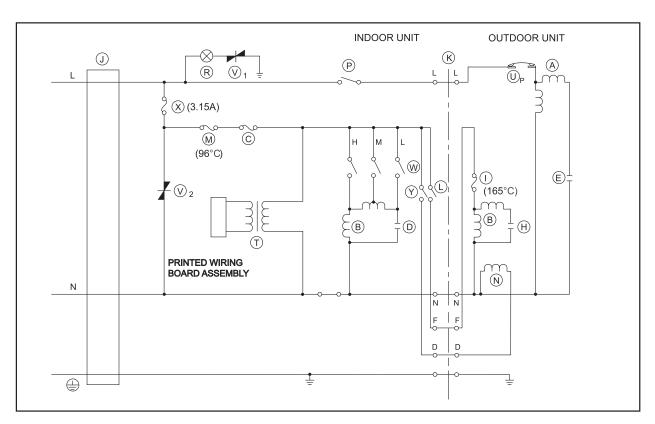
(X) : FUSE

Y : REVERSING VALVE RELAY

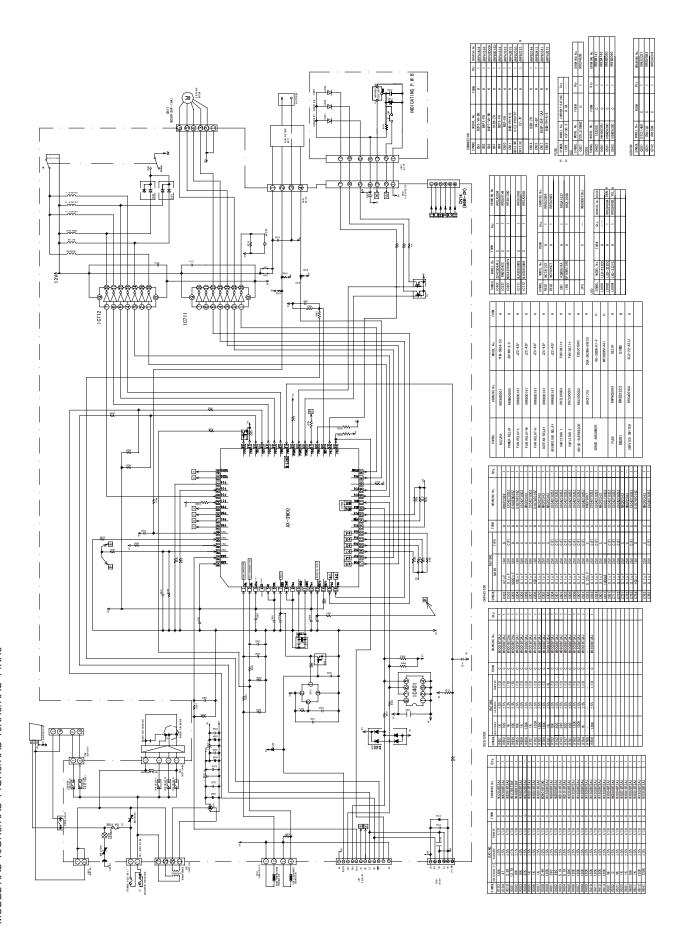
(Z) : AUTO SWEEP MOTOR

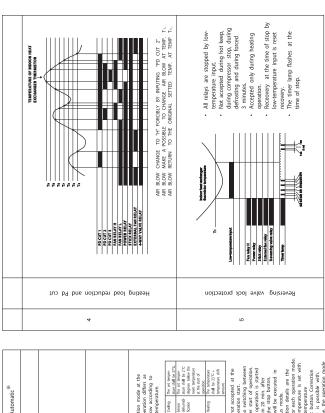
BLU : BLUE YEL : YELLOW BRN : BROWN WHT : WHITE
GRY : GRAY ORN : ORANGE GRN : GREEN RED : RED

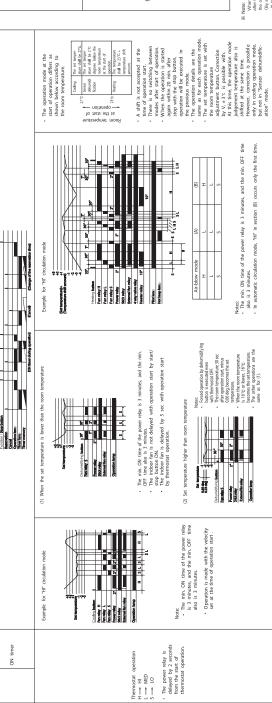
BLK : BLACK



OUTDOOR FAN MOTOR COMPRESSOR \_V(R) BLACK 7(S)X BLUE / ORANGE 띮 ခ် CAPACI TANCE GRAY 2. 5 μ F YEL+GRN **OUTDOOR UNIT** WHITE. REVERSING BLUE BLUE TERMINAL Board 6 AUTO SWEEP MOTOR THERMISTOR B THERMISTOR A TERMINAL Board INDOOR UNIT CN12 (H) CN12 (M) 7 P.W.B BLACK N RED F YELLOW D YEL+GRN CN17 SKO S REVERSING VALVE RELAY OYTDOOR FAN RELAY #LIM CN16 CONTROL P. W. B CN3 (BLACK) CN7 (BLACK) CN11 BLUE NO I SE SUPPRESSOR POWER RELAY SURGE 3.15A ABSORBER S FUSE GRAY BLACK RAS-10GH5/RAC-10GH5 RAS-14GH5/RAC-14GH5 RAS-10KH3/RAC-10KH3 RAS-14KH3/RAC-14KH3 BLUE CN10 VARISTOR1 BLUE WHITE RED (H) (N) INDOOR FAN MOTOR M EVAPORATOR YELLOW/GREEN SPEED (L) GREEN VARISTOR2 옹 CN1 (BLACK) CONTROL FUSE (96°C) BROWN POWER SUPPLY CORD BLACK SHOWN ORANGE TRANSFORMER BROWN BLUE YELLOW/GREEN FAN MOTOR PROTECTOR MODEL







Eunction J Step button
Operation and step are repeated
Operation Imp.
Independent of time reservations

Sensor dehumidification

Cooling

Operation mode

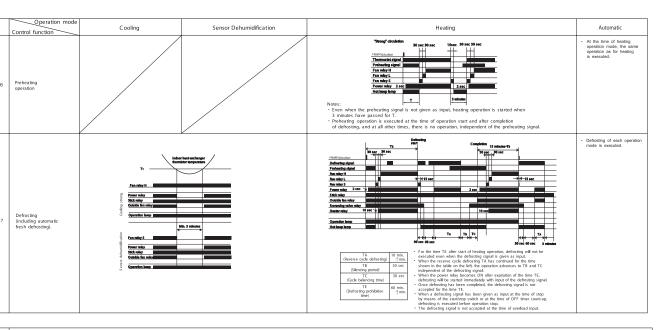
BASIC MODE

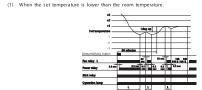
Control function Function / Stop button, basic mode timer

H

Timer

Who the operation is done using the temporary switch when the power source is turned off and turn on again, after the power include is for one in automatic mode. (by setting the temporary switch, the operation is done in previously set operation mode.)





The min. ON time of the power relay is 3 minutes, and the min. OFF time is also 3 minutes
 The indoor fan is not delayed in operation when the Dehumidifying button is pressed ON.

(2) Set temperature higher than room temperature.



- Not
- · Forced operation by Dehumidifying button ON is executed even with thermostat OFF.
- The room temperature 30 sec after operation start minus 0.33 deg., becomes the set temperature.
- · When the room temperature is 16°C or lower, 16°C becomes the set temperature.
- The other operation are the same as for (I).
- $\boldsymbol{\cdot}$  The indoor fan is not delayed in operation when the Dry button is pressed ON.

### Table 1 Specifications

Item		
Operation switching	Automatic	No
	Heating	Yes
	Fan	No
	Sensor dehumidification	Yes
	Cooling	Yes
Temporary switch		Yes (automatic)
Service switch	Heating	Yes
	Cooling	Yes
Nice temperature res	ervation	Yes
Automatic fresh defre	sting	Yes
Defrosting		Yes
Pd cut 1		Yes
Pd cut 2		Yes
Pd cut 3		Yes
Heating load reduction	on	Yes
External fan relay		Yes
Reversing valve rela-	у	Yes
Reversing valve lock protection		Yes
Sleep circuit		Yes
Heater operation at the time of sensor dehumidification		No
Automatic blowing direction		Yes
Filter sign		No
Wireless mode		Heating wireles

Table 2 Sensor operation values

Item					RAS-10GH5 RAS-10KH3	
			Cooling, Sensor	16	17	.6
	ON tem	perature	dehumidification	24	25	.6
Thermostat	(Thermo	stat relay)		32	33	.6
operation	power re	elay	Heating	16	15.7	16.7
	(°C)			24	23.7	24.7
				32	31.7	32.7
	Different	ial (°C)			0.	33
Low-temper	ature	(T1)	10	(°C) ا	0.0	2.0
defrosting			Rese	t (°C)	8.0	12.0
Preheating (T		(T2)	Reset (°C)		24	.0
			ON (°C)		18	.0
Pd cut 1		(T3)	ON (°C)		53.0	45.0
		(T4)	Rese	t (°C)	49.0	42.0
Pd cut 2		(T6) ON (°C)			55.0	57.0
		(T7)	Rese	t (°C)	49.0	53.0
		(T5) Fan	Relay H Origina	I (°C)	52.0	55.0
Pd cut 3		(T8)	10	۱ (°C)	69.0	69.0
		(T9)	Rese	t (°C)	58.0	59.0

### Other detailed specifications

- When the room temperature rises within 3 minutes after thermostat OFF during cooling operation with automatic velocity, the blowing velocity changes in the order of S → L → H in the same way as at the time of thermostat ON.
- In case of Tele, control input during stopped ON timer, operation will be started at that time and the timer will be cleared.
- In case of Tele. control input during operation of the OFF timer, the operation will be stopped at that time and the timer will be cleared.
- Even when operation stop is executed at the time of outside fan OFF by overload, automatic fresh defrosting will not be executed.
- 5. In case of switching from "Sensor dehumidification" operation to "Cooling", as it is when the thermostat is ON. 3 min delay will not be entered. However, the set room temperature and the blowing velocity will be according to the remote control signal. The same applies for switching from "Cooling" to "Sensor dehumidifications of the property of the same dehumidification of the property of the same applies for switching from "Cooling" to "Sensor dehumidifications".
- The filter sign lights after operation of the indoor fan for 100 hours. The time is cleared by the filter switch.

- After entry into trouble mode (s the indication lamp is flashing) rapid feed mode can not changed.
- When operation by nice temper reservation is executed during soperation, normal operation we continued, and the advance becomes the temperature differ between the set temperature is sleep shift and the removariance.
- 9. The 60 minutes of defroir prohibition are counted Thermostat. On after Funos switch ON. When the throos OFF at the time of Function s ON, the 60 minutes will be coufrom the time of thermostat ON, initial OFF time is not coun Counting stars when the them becomes ON, and the count continues even if the therm becomes OFF.
- In case of switching from "Hea the reversing valve is held f minutes.
- The defrosting signal is accepted with overload input, the operation becomes as sh below when the overload i disappears.
  - (1) When previously defrosting signal exi without overload in defrosting will immediately.
  - (2) In cases other than above, defrosting will executed with a defrosignal in the condition will overload input.

-25-

# **AUTO SWING FUNCTION**

C C L		PRESENT CONDITION	NOI	MOLEN CITIZETOR CLAIM COLOR	
INPUI SIGNAL	OPERATION	OPERATION MODE	AIR DEFLECTOR	OPERATING SPECIFICATION	KEFEKENOE
KEY INPUT	STOP	EACH MODE	STOP	ONE SWING (CLOSING AIR DEFLECTOR)  ① DOWNWARD ② UPWARD	INITIALIZE AT NEXT OPERATION.
			DURING ONE SWING	STOP AT THE MOMENT.	
		COOL DRY	STOP	START SWINGING ① DOWNWARD ② UPWARD ③ DOWNWARD	
	DURING		DURING SWINGING	STOP AT THE MOMENT.	
	OPERATION	НЕАТ	STOP	START SWINGING ① DOWNWARD ② UPWARD ③ DOWNWARD	
			DURING SWINGING	STOP AT THE MOMENT.	
INTERNAL FAN ON (THFRMO ON)			TEMPORARY STOP	START SWING AGAIN.	
INTERNAL FAN OFF (THERMO. OFF)	DURING	DRY HEAT	DURING SWINGING	STOP SWINGING TEMPORARILY. (SWING MODE IS CLEARED IF SWING COMMAND IS TRANSMITTED DURING TEMPORARY STOP.)	
MAIN SWITCH ON	STOP	COOL DRY	STOP DURING ONE SWING	INITIALIZE © DOWNWARD © UPWARD	
MAIN SWITCH OFF	DURING	EACH MODE	STOP DURING SWINGING DURING INITIALIZING	ONE SWING (CLOSING AIR DEFLECTOR)  ① DOWNWARD ② UPWARD	INITIALIZE AT NEXT OPERATION.
			STOP	INITIALIZING CONDITION OF EACH MODE.	
CHANGE OF OPERATION	DURING OPERATION	EACH MODE	DURING SWINGING	STOP SWINGING AND MODE BECOMES INITIALIZING CONDITION.	

# SERVICE CALL Q & A

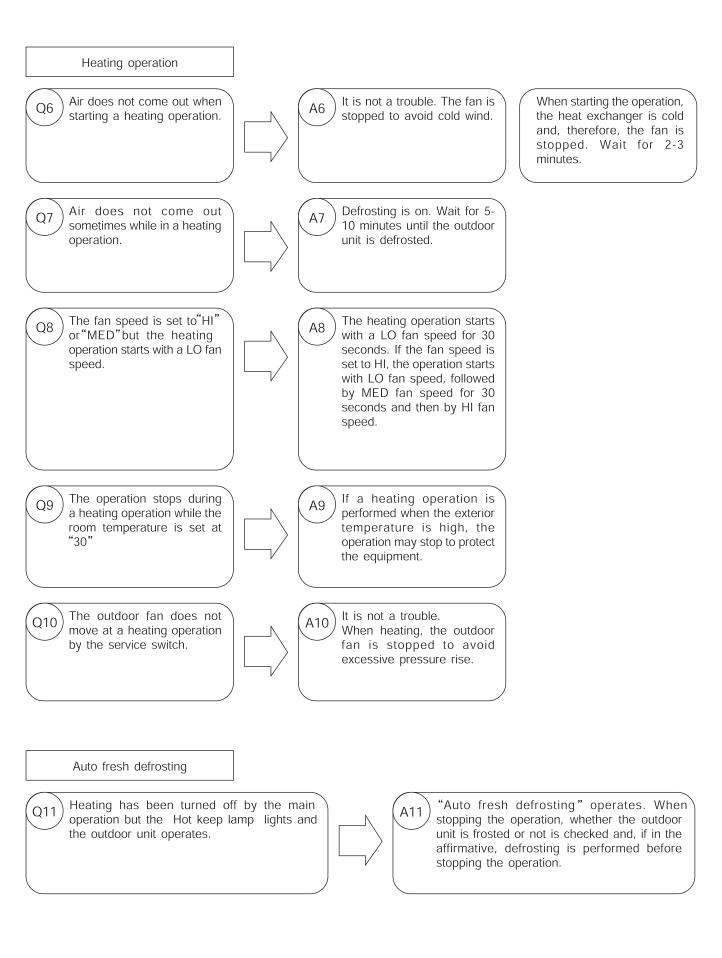
Cooling operation While cooling, the compres-Check whether frost sticks on Q1 sometimes the heat exchanger of indoor stops abruptly. unit or not. Wait for 3-4 minutes until the frost melts. Dehumidifying operation The fan speed does not The fan speed is always LO Q2 Α2 change during a dehumidifyat a dehumidifying operation. ing operation. Cold air comes out during a To improve the dehumidi-Q3 А3 dehumidifying operation. fication efficiency, LO fan speed operation is performed. Therefore the air is cold. This is not a trouble. At a dehumidifying operation, The operation does not stop Q4 the actual room temperature is even by raising the room compared with the room temtemperature setting of reperature setting when starting mote control at a dehumidithe operation and the operafying operation. tion is as follows. 1) When actual room temperature > room temperature setting. The operation is according to the room temperature setting on the remote controller. \* When actual room temperature < room temperature setting Regardless of the room temperature setting, the temperature is automatically set slightly lower than the room temperature. In this case, the status is as 2) and, therefore, the operation by the room temperature control is impossible. Press the stop button, set the room temperature to a new value and turn on the operation by the dehumidifying button. In the dehumidifying mode, This is the status in 2) of Α5 Q5 the temperature set by (A4). The temperature is set a little lower than the room remote controller is set slightly higher than the room temperature to carry out a temperature but dehumidifying operation as operation starts. far as possible.

If cooling is performed when

the room temperature is low,

frost may stick on the heat

exchanger of indoor unit.



Common, etc.				
Q12) There is a difference between the room temperature setting and actual room temperature.		A12	There may be a difference between the room temperature setting and actual room temperature on account of the room structure, air flow, etc. If there is a difference from the room temperature, adjust the set temperature to keep living space at a comfortable temperature.	
Q13 What will happen if the time setting is changed while in a timer operation?		A13	A timer operation is performed until the time after changing the time setting.	
	)			
Wireless remote controller	]			
			The room temperature is	
When the room temperature setting is "16", pressing the room temperature control button "V" causes no transmission. At "32", pressing "\Lambda" causes no transmission either.		A14	The room temperature is settable within the range of 16 - 32 and not beyond.	
	)			
Q15 In spite of timer "Preprogram", the time setting is extinguished.		A15	Isn't the time over the preprogrammed time? As soon as the preprogrammed time is reached, the time setting disappears.	When setting the current time, its indication blinks for approximately 3 minutes.
Q16 After selecting a "Dehumidifying" operation mode, the "fan" speed mode remains "LO" fan speed.		A16	At a "Dehumidifying" operation, the LO" fan speed is forcibly selected.	
	)			

# Timer-Lamp, break-down checking in blinking sign.

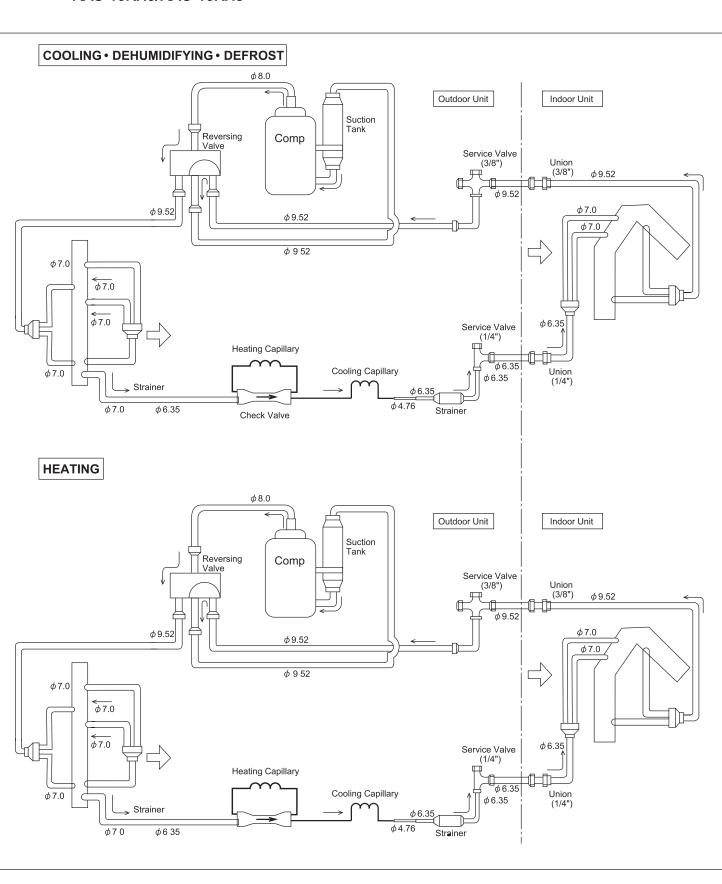
Check the break-down factor from the frequency of timer-lamp blinking.

No.	Mode of Timer-Lamp blinking	Indication Factor	Estimated Break-Down Part
1		4-way valve not working Inside temperature is low in heating operation time or inside temperature is high in cooling operation time.	<ul><li>(1) 4-way valve is not working.</li><li>(2) Heat-exchanger thermistor is in disconnection.</li></ul>
2		IC 401 Data read wrongly In case that data read from IC401 is wrong.	IC401 is not in order.
3		Heat exchanger thermistor error Heat exchanger thermistor open or short-circuit detected.	<ul><li>(1) Thermistor</li><li>(2) Indoor - control circuit board.</li></ul>
4		Room thermistor error Room thermistor error open or short-circuit detected.	<ul><li>(1) Thermistor</li><li>(2) Indoor - control circuit board.</li></ul>

<sup>(</sup> $\underline{\blacksquare}$  -- 0.5 second on, 0.5 second off.)

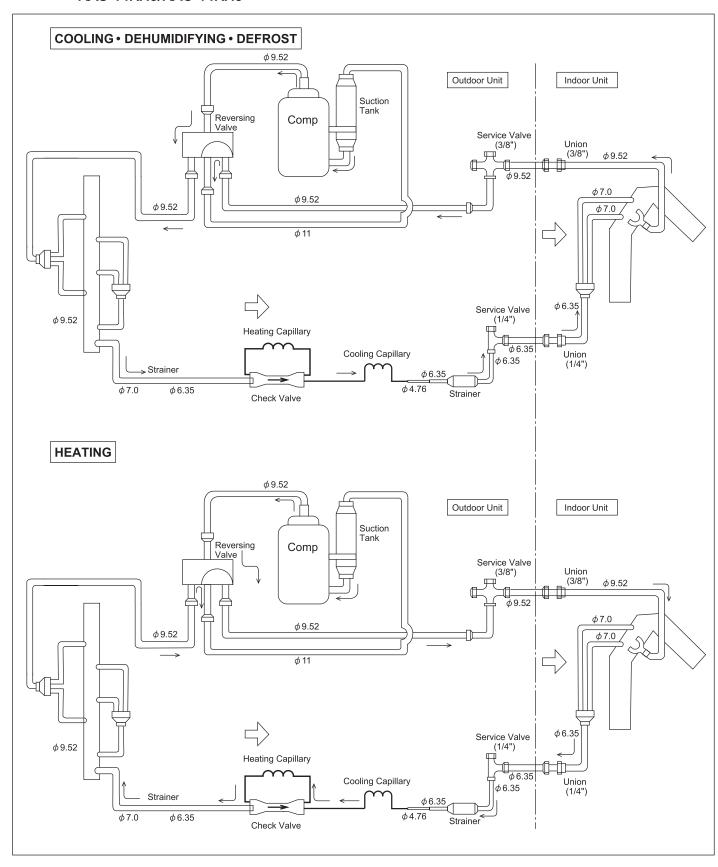
# **REFRIGERATION CYCLE**

# MODEL RAS-10GH5/RAC-10GH5 RAS-10KH3/RAC-10KH3



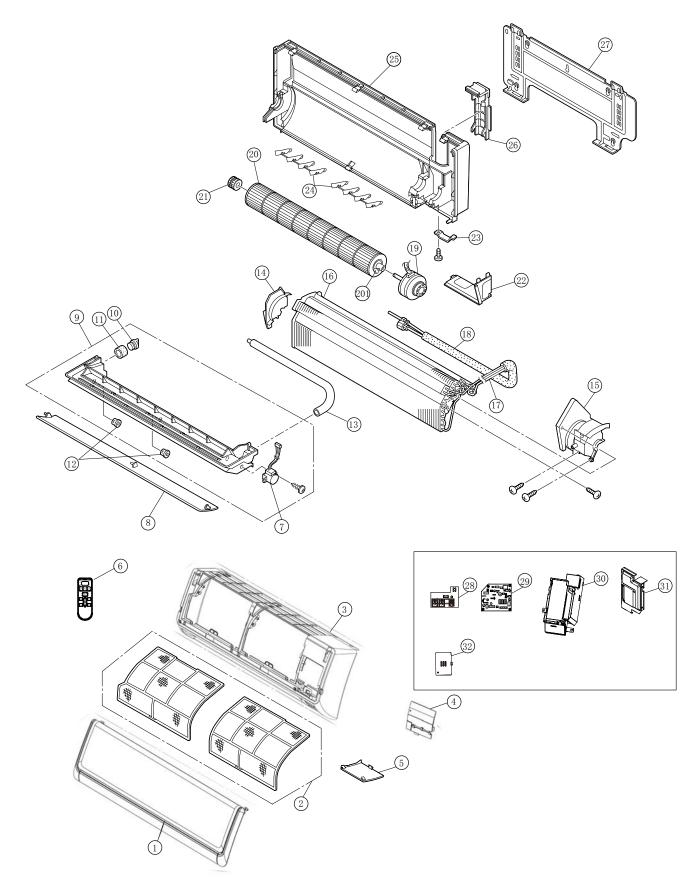
# **REFRIGERATION CYCLE**

### MODEL RAS-14GH5/RAC-14GH5 RAS-14KH3/RAC-14KH3



### PARTS LIST AND DIAGRAM

MODEL RAS-10GH5,RAS-14GH5,RAS-10KH3,RAS-14KH3



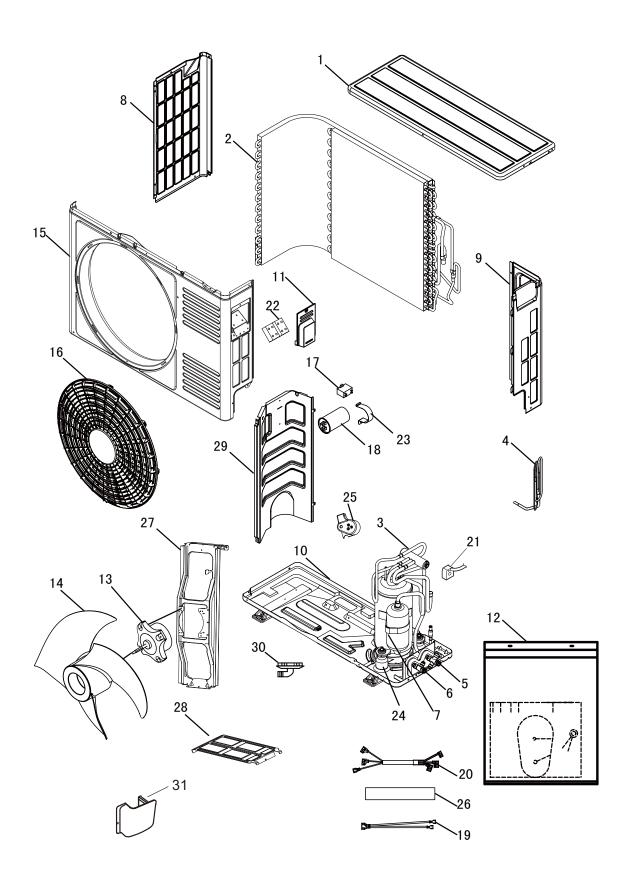
# MODEL RAS-10GH5,RAS-14GH5

NO	HHAW PA	RTS NO	Q'TY/	DADTS NAME
	RAS-10GH5	RAS-14GH5	UNIT	PARTS NAME
1	HWRAS-10G	H5 A08	1	FRONT PANEL ASS'Y
2	HWRAS-08B	Н3 902	1	AIR FILTER
3	HWRAS-10G	H5 A09	1	FRONT COVER ASS'Y
4	HWRAS-10G	H5 A10	1	ELECTRIC PARTS COVER2
5	HWRAS-08B	Н3 905	1	SE-COVER
6	HWRAS-08B	Н3 906	1	REMOTE CONTROL UNIT
7	HWRAS-08BH3 907	HWRAS-14BH4 901	1	STEPPING MOTOR
8	HWRAS-10GH5 A01		1	HORIZONTAL AIR DEFLECTOR
9	HWRAS-08BH5 901		1	DRAIN PAN ASS'Y
10	HWRAS-08BH3 910		1	DRAIN CAP
11	HWRAS-08BH3 911		1	FO-PIPE
12	HWRAS-08BH3 912		2	BUSH
13	HWRAS-08B	Н3 913	1	DRAINAGE PIPE
14	HWRAS-08B	H3 914	1	BEA-PIPE
15	HWRAS-08BH3 915	HWRAS-10GH5 A02	1	FAN MOTOR SUPPORT
16	HWRAS-10GH5 A03	HWRAS-14GH5 A01	1	EVAPORATOR ASS' Y
17	HWRAS-10GH5 A04	HWRAS-14GH5 A02	1	PIPING ASS'Y
18	HWRAS-08B	H3 918	1	FO-PIPE
19	HWRAS-08BH5 901	HWRAS-14GH5 A03	1	FAN MOTOR
20	HWRAS-08B	H3 920	1	TANGENTIAL AIR FLOW FAN
21	HWRAS-08B	H3 921	1	FAN SUPPORT ASS'Y
22	HWRAS-10G	H5 A05	1	S-COVER-R
23	HWRAS-08BH3 923		1	BAND
24	HWRAS-08BH3 924		2	VERTICAL AIR DEFLECTOR
25	HWRAS-08BH5 902		1	CABINET ASS'Y
26	HWRAS-10GH5 A06		1	UPPER COVER
27	HWRAS-08BH3 927		1	MOUNTING PLATE
28	HWRAS-10G	H5 A07	1	P. W. B. (INDICATION)
29	HWRAS-10GH5 A08	HWRAS-14GH5 A04	1	P. W. B. (MAIN)
30	HWRAS-08B	Н3 930	1	ELECTRIC PARTS COVER
31	HWRAS-08B	Н3 931	1	ELECTRIC PARTS PLATE
32	HWRAS-08B	Н3 932	1	COVER (TERMINAL)

# MODEL RAS-10KH3,RAS-14KH3

NO	HHAW PARTS NO		Q'TY/	PARTS NAME
INO	RAS-10KH3	RAS-14KH3	UNIT	PARTS NAIVIE
1	HWRAS-10G	H5 A08	1	FRONT PANEL ASS'Y
2	HWRAS-08B	H3 902	1	AIR FILTER
3	HWRAS-10G	H5 A09	1	FRONT COVER ASS' Y
4	HWRAS-100	H5 A10	1	ELECTRIC PARTS COVER2
5	HWRAS-10K	H3 A01		SE-COVER
6	HWRAS-08B	H3 906	1	REMOTE CONTROL UNIT
7	HWRAS-08BH3 907	HWRAS-14BH4 901	1	STEPPING MOTOR
8	HWRAS-10G	H5 A01	1	HORIZONTAL AIR DEFLECTOR
9	HWRAS-08B	H5 901	1	DRAIN PAN ASS'Y
10	HWRAS-08B	H3 910	1	DRAIN CAP
11	HWRAS-08B	H3 911	1	FO-PIPE
12	HWRAS-08B	H3 912	2	BUSH
13	HWRAS-08B	H3 913	1	DRAINAGE PIPE
14	HWRAS-08B	H3 914	1	BEA-PIPE
15	HWRAS-08BH3 915	HWRAS-10GH5 A02	1	FAN MOTOR SUPPORT
16	HWRAS-10GH5 A03	HWRAS-14GH5 A01	1	EVAPORATOR ASS' Y
17	HWRAS-10GH5 A04	HWRAS-14GH5 A02	1	PIPING ASS'Y
18	HWRAS-08B	H3 918	1	FO-PIPE
19	HWRAS-08BH5 901	HWRAS-14GH5 A03	1	FAN MOTOR
20	HWRAS-08B	H3 920	1	TANGENTIAL AIR FLOW FAN
21	HWRAS-08B	H3 921	1	FAN SUPPORT ASS'Y
22	HWRAS-10G	H5 A05	1	S-COVER-R
23	HWRAS-08B	H3 923	1	BAND
24	HWRAS-08B	H3 924	2	VERTICAL AIR DEFLECTOR
25	HWRAS-08BH5 902		1	CABINET ASS'Y
26	HWRAS-10GH5 A06		1	UPPER COVER
27	HWRAS-08BH3 927		1	MOUNTING PLATE
28	HWRAS-10G	H5 A07	1	P. W. B. (INDICATION)
29	HWRAS-10GH5 A08	HWRAS-14GH5 A04	1	P. W. B. (MAIN)
30	HWRAS-08B	H3 930	1	ELECTRIC PARTS COVER
31	HWRAS-08B	H3 931	1	ELECTRIC PARTS PLATE
32	HWRAS-08B	H3 932	1	COVER (TERMINAL)

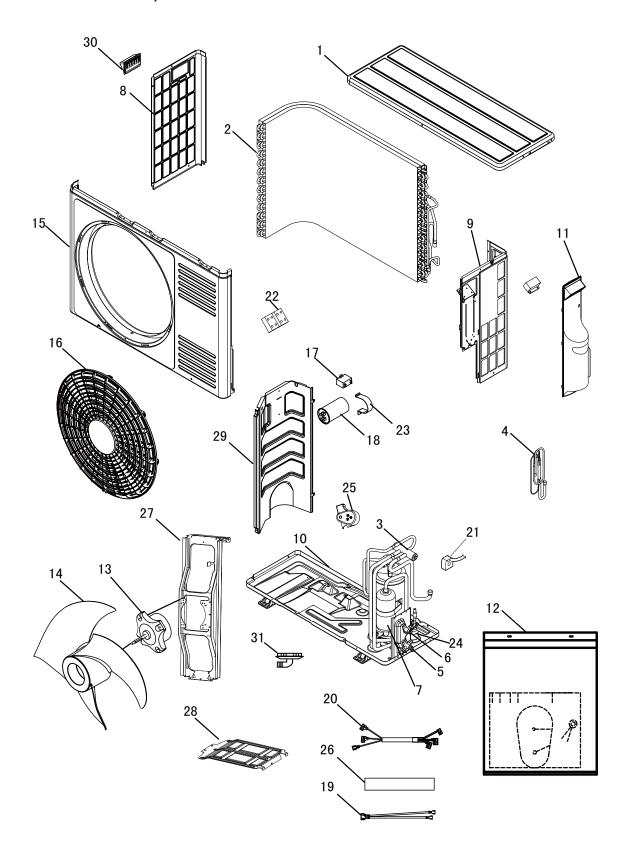
# MODEL RAC-10GH5,RAC-10KH3



# MODEL RAC-10GH5,RAC-10KH3

NO	HHAW PARTS NO	Q'TY /UNIT	PARTS NAME
	RAC-10GH5 RAC-10		
1	RAC-MES09HX001	1	TOP COVER
2	RAC-MES09HX002	1	CONDENSER
3	HWRAC-10GH5A01	1	REVERSING VALVE
4	HWRAC-10GH5A02	1	C-VALVE-AS
5	HWRAC-10GH5A03	1	UNION(3)
6	HWRAC-10GH5A04	1	UNION(2)
7	HWRAC-10GH5A05	1	COMPRESSOR
8	RAC-MES09HX008	1	SIDE COVER (L)
9	HWRAC-10GH5A06	1	SIDE COVER (R)
10	HWRAC-10GH5A07	1	BASE
11	RAC-MES09HX011	1	TERMINAL COVER
12	RAC-MES09HX012	1	SOUND PROOF COVER ASS'Y
13	HWRAC-10GH5A08	1	FAN MOTOR
14	RAC-MES09HX014	1	PROPELLER FAN
15	HWRAC-10GH5A09	1	FRONT COVER
16	RAC-MES09HX016	1	GRILL (PROPELLER. FAN)
17	HWRAC-10GH5A10	1	FAN MOTOR CAPACITOR
18	HWRAC-10GH5A11	1	COMPRESSOR CAPACITOR
19	RAC-MES09HX019	1	LEAD
20	RAC-MES09HX020	1	CONNECTING CORD(COMP)
21	HWRAC-10GH5A12	1	COIL (REVERS. VALVE)
22	HWRAC-10GH5A13	1	TERMINAL BOARD (4P)
23	RAC-MES09HX024	1	CAPACITOR SUPPORT
24	HWRAC-10GH5A14	1	COMPRESSOR RUBBER
25	HWRAC-10GH5A15	1	O. L. R COVER
26	HWRAC-10GH5A16	1	HEAT INSULATOR PIPE
27	HWRAC-10GH5A17	1	FAN MOTOR SUPPORT
28	HWRAC-10GH5A18	1	SUPPORT PLATE
29	RAC-MES09HX029	1	PARTITION
30	RAC-MES09HX030	1	DRAIN PIPE
31	RAC-E10CXK006	1	VALVE COVER

# MODEL RAC-14GH5,RAC-14KH3



# MODEL RAC-10GH5,RAC-10KH3

NO	HHAW PA	ARTS NO	Q'TY	PARTS NAME
	RAC-14GH5	RAC-14KH3	/UNIT	
1	RAC-MES14	HX001	1	TOP COVER
2	HWRAC-14G	H5A01	1	CONDENSER
3	HWRAC-14G	H5A02	1	REVERSING VALVE
4	HWRAC-14G	H5A03	1	ONEWAY-VALVE-AS
5	HWRAC-14G	H5A04	1	UNION(3)
6	HWRAC-14G	H5A05	1	UNION(2)
7	HWRAC-14G	H5A06	1	COMPRESSOR
8	RAC-MES14	НХ008	1	SIDE COVER (L)
9	RAC-MES14	НХ009	1	SIDE COVER (R)
10	RAC-MES14	HX010	1	BASE
11	RAC-MES14	HX011	1	SERVICE VALVE COVER
12	RAC-MES14	HX012	1	SOUND PROOF COVER ASS'Y
13	HWRAC-14G	H5A07	1	FAN MOTOR
14	RAC-MES14	HX014	1	PROPELLER FAN
15	RAC-MES14	HX015	1	FRONT COVER
16	RAC-E13CY	TK 004	1	GRILL (PROPELLER. FAN)
17	HWRAC-14G	H5A08	1	FAN MOTOR CAPACITOR
18	HWRAC-14G	H5A09	1	COMPRESSOR CAPACITOR
19	RAC-MES14	HX019	1	LEAD
20	RAC-MES14	HX020	1	CONNECTING CORD (COMP)
21	HWRAC-14G	H5A10	1	COIL (REVERS. VALVE)
22	HWRAC-14G	H5A11	1	TERMINAL BOARD (4P)
23	RAC-MES14	НХ023	1	CAPACITOR SUPPORT
24	RAC-MES14	HX024	1	COMPRESSOR RUBBER
25	RAC-MES14	HX025	1	O. L. R COVER
26	RAC-MES14	НХ026	1	HEAT INSULATOR PIPE
27	HWRAC-14G	H5A12	1	FAN MOTOR SUPPORT
28	HWRAC-14G	H5A13		SUPPORT PLATE
29	RAC-MES14	НХ028	1	PARTITION
30	RAC-MES14	HX029	1	HANDLE
31	RAC-MES14	НХ030	1	DRAIN PIPE

# МЕМО


# **MEMO**


# **HITACHI**