



OPERATING MANUAL  
BEDIENUNGSANLEITUNG  
MODE D'EMPLOI  
MANUAL DE FUNCIONAMIENTO  
MANUALE DI ISTRUZIONI  
ΕΓΧΕΙΡΙΔΙΟ ΛΕΙΤΟΥΡΓΙΑΣ  
使用説明書  
РУКОВОДСТВО ПО ЭКСПЛУАТАЦИИ  
MANUAL DE INSTRUÇÕES

# OPERATING MANUAL

**AIR CONDITIONER**

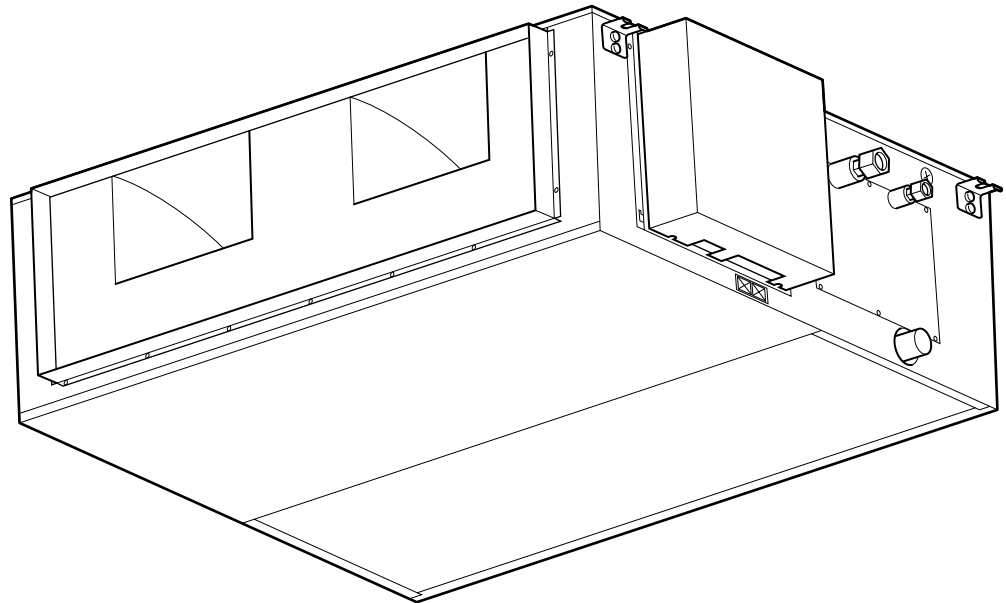
**DUCT TYPE**  
**(HIGH STATIC PRESSURE)**

Indoor Unit

**AR□36HF**

**AR□45HF**

**AR□60HF**



English

Deutsch

Français

Español

Italiano

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中國語

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Português

KEEP THIS OPERATION MANUAL  
FOR FUTURE REFERENCE

FUJITSU GENERAL LIMITED




P/N9369312014

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## SAFETY PRECAUTIONS

- Before using the appliance, read these "PRECAUTIONS" thoroughly and operate in the correct way.
- The instructions in this section all relate to safety; be sure to maintain safe operating conditions.
- "DANGER", "WARNING" and "CAUTION" have the following meanings in these instructions:

 <b>DANGER!</b>	This mark indicates procedures which, if improperly performed, are most likely to result in the death of or serious injury to the user or service personnel.
 <b>WARNING!</b>	This mark indicates procedures which, if improperly performed, might lead to the death or serious injury of the user.
 <b>CAUTION!</b>	This mark indicates procedures which, if improperly performed, might possibly result in personal harm to the user, or damage to property.

### **DANGER!**

- Do not attempt to install this air conditioner by yourself.
- This unit contains no user-serviceable parts. Always consult authorized service personnel for repairs.
- When moving, consult authorized service personnel for disconnection and installation of the unit.
- Do not become over-exposed to cold air by staying in the direct path of the airflow of the air conditioner for extended periods of time.
- Do not insert fingers or objects into the outlet port or intake grilles.
- Do not start and stop air conditioner operation by turning off the electrical breaker and so on.
- In the event of a malfunction (burning smell, etc.), immediately stop operation, turn off the electrical breaker, and consult authorized service personnel.

### **CAUTION!**

- Provide occasional ventilation during use.
- Do not direct air flow at fireplaces or heating apparatus.
- Do not climb on, or place objects on, the air conditioner.
- Do not hang objects from the indoor unit.
- Do not set flower vases or water containers on top of air conditioners.
- Do not expose the air conditioner directly to water.
- Do not operate the air conditioner with wet hands.
- Turn off power source when not using the unit for extended periods.
- Always turn off the electrical breaker whenever cleaning the air conditioner or the air filter.
- Connection valves become hot during Heating; handle with care.
- Check the condition of the installation stand for damage.
- Do not place animals or plants in the direct path of the air flow.
- When restarting after a long period of disuse in the winter, do:  
Turn the power switch on at least 12 hours before starting the unit.
- Do not drink the water drained from the air conditioner.
- Do not use in applications involving the storage of foods, plants or animals, precision equipment, or art works.
- Do not apply any heavy pressure to radiator fins.
- Operate only with air filters installed.
- Do not block or cover the intake grille and outlet port.
- Ensure that any electronic equipment is at least one metre away from either the indoor or outdoor units.
- Avoid installing the air conditioner near a fireplace or other heating apparatus.
- When installing the indoor and outdoor unit, take precautions to prevent access to infants.
- Do not use inflammable gases near the air conditioner.

# NAME OF PARTS

Fig. 1

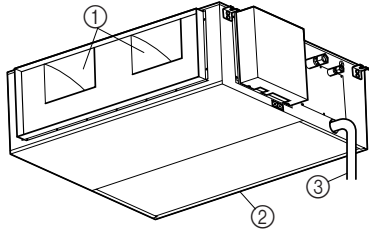


Fig. 1 Indoor Unit

- ① Outlet Port
- ② Intake Port
- ③ Drain Hose

Fig. 2

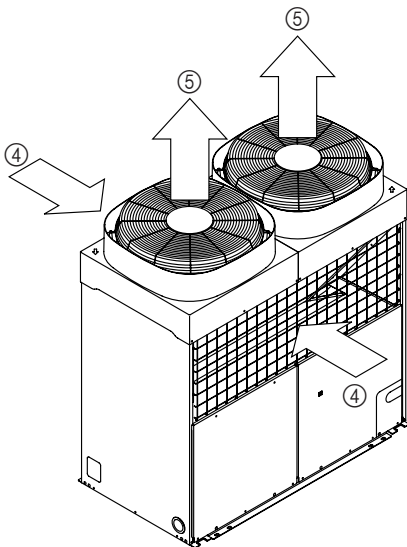


Fig. 2 Outdoor Unit

- ④ Intake Port
- ⑤ Outlet Port

Electrical Breaker



Fig. 3

This breaker is installed during the electrical installation.

# CLEANING AND CARE

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- When used for extended periods, the unit may accumulate dirt inside, reducing its performance. We recommend that the unit be inspected regularly, in addition to your own cleaning and care. For more information, consult authorized service personnel.
- When cleaning the unit's body, do not use water hotter than 40 °C, harsh abrasive cleansers, or volatile agents like benzene or thinner.
- Do not expose the unit body to liquid insecticides or hairsprays.
- If the unit will not be operated for a period of one month or more, be sure to allow the inner parts of the unit to dry thoroughly, in advance, by operating the unit in fan mode for half a day.



## CAUTION!

- Before cleaning the unit, be sure to stop the unit and disconnect the power supply.
- Turn off the electrical breaker.
- A fan operates at high speed inside the unit, and personal injury could result.

### Installing the Air Filter

Be sure the filter is always installed in the inlet air grille of the indoor unit.



Filters can be purchased through your local dealer.

### Cleaning the Air Filter

If dirt is allowed to collect in the air filter, the airflow will be reduced, leading to reduced performance, and increased operation noise. Be sure to clean the filters regularly.

### How to Cleaning

Use a vacuum cleaner to remove dust and dirt from the air filter, or wash in a synthetic detergent. After washing, dry in a shaded place, then reinstall.

# TROUBLESHOOTING

Instructions relating to heating(\*) are applicable only to "HEAT & COOL MODEL" (Reverse Cycle).



In the event of a malfunction (burning smell, etc.), immediately stop operation, turn off the electrical breaker, and consult authorized service personnel.  
Merely turning off the unit's power switch will not completely disconnect the unit from the power source. Always be sure to turn off the electrical breaker to ensure that power is completely off.

Before requesting service, perform the following checks:

	Symptom	Problem	See Page
NORMAL FUNCTION	Doesn't operate immediately:	<ul style="list-style-type: none"> <li>● If the unit is stopped and then immediately started again, the compressor will not operate for about 3 minutes, in order to prevent fuse blowouts.</li> <li>● Whenever the electrical breaker is turned off then on again, the protection circuit will operate for about 3 minutes, preventing unit operation during that period.</li> </ul>	—
	Noise is heard:	<ul style="list-style-type: none"> <li>● During operation and immediately after stopping the unit, the sound of water flowing in the air conditioner's piping may be heard. Also, noise may be particularly noticeable for about 2 to 3 minutes after starting operation (sound of coolant flowing).</li> <li>● During operation, a slight squeaking sound may be heard. This is the result of minute expansion and contraction of the panel due to temperature changes.</li> </ul>	—
		*● During Heating operation, a sizzling sound may be heard occasional. This sound is produced by the Automatic Defrosting operation.	5
	Smells:	<ul style="list-style-type: none"> <li>● Some smell may be emitted from the indoor unit. This smell is the result of room smells (furniture, tobacco, etc.) which have been taken into the air conditioner.</li> </ul>	—
	Mist or steam are emitted:	<ul style="list-style-type: none"> <li>● During Cooling operation, a thin mist may be seen emitted from the indoor unit. This results from the sudden Cooling of room air by the air emitted from the air conditioner, resulting in condensation and misting.</li> </ul>	—
		*● During Heating operation, the outdoor unit's fan may stop, and steam may be seen rising from the unit. This is due to Automatic Defrosting operation.	5
	Airflow is weak or stops:	*● When Heating operation is started, fan speed is temporarily very low, to allow internal parts to warm up.	—
		*● During Heating operation, if the room temperature rises above the thermostat setting, the outdoor unit will stop, and the indoor unit will operate at very low fan speed. If you wish to warm the room further, set the thermostat for a higher setting.	
		*● During Heating operation, the unit will temporarily stop operation (between 2 and 16 minutes) as the Automatic Defrosting mode operates.	5
		● The fan may operate at very low speed when the unit is monitoring the room's temperature.	—
	● In the monitor AUTO operation, the fan will operate at very low speed.	—	
Water is produced from the outdoor unit:	*● During Heating operation, water may be produced from the outdoor unit due to Automatic Defrosting operation.	5	

# TROUBLESHOOTING

Instructions relating to heating (\*) are applicable only to "HEAT & COOL MODEL" (Reverse Cycle).

	Symptom	Items to check	See Page
CHECK ONCE MORE	Doesn't operate at all:	<ul style="list-style-type: none"> <li>● Has there been a power failure?</li> <li>● Has a fuse blown out, or a circuit breaker been tripped?</li> <li>● Is the main power switch set to the OFF position?</li> </ul>	—
	Poor Cooling (or *Heating) performance:	<ul style="list-style-type: none"> <li>● Is the timer operating?</li> <li>● Is the air filter dirty?</li> <li>● Are the air conditioner's intake grille or outlet port blocked?</li> <li>● Did you adjust the room temperature settings (thermostat) correctly?</li> <li>● Is there a window or door open?</li> <li>● In the case of Cooling operation, is a window allowing bright sunlight to enter? (Close the curtains.)</li> <li>● In the case of Cooling operation, are there heating apparatus and computers inside the room, or are there too many people in the room?</li> </ul>	—

If the problem persists after performing these checks, or if you notice burning smells, stop operation immediately, turn off the electrical breaker, and consult with authorized service personnel.

## OPERATING TIPS

Instructions relating to heating (\*) are applicable only to "HEAT & COOL MODEL" (Reverse Cycle).

### Operation and Performance

#### \*Heating Performance

- This air conditioner operates on the heat-pump principle, absorbing heat from outdoor air and transferring that heat indoors. As a result, the operating performance is reduced as outdoor air temperature drops. If you feel that insufficient heating performance is being produced, we recommend you use this air conditioner in conjunction with another kind of heating appliance.
- Heat-pump air conditioners heat your entire room by recirculating air throughout the room, with the result that some time may be required after first starting the air conditioner until the room is heated.

#### \*Cooling/Heating Priority (HEAT PUMP MODEL only)

- If another indoor unit in the same system is already operating in the cooling mode or dry mode, heating mode settings cannot be performed. (Operation in the cooling or dry mode will continue.)
- If another indoor unit in the same system is already operating in the heating mode, cooling mode or dry mode settings cannot be performed. (Operation in the cooling or dry mode will continue.)

#### \*Microcomputer-controlled Automatic Defrosting

When using the Heating mode under conditions of low outdoor temperature and high humidity, frost may form on the outdoor unit, resulting in reduced operating performance. In order to prevent this kind of reduced performance, this unit is equipped with a Microcomputer-controlled Automatic Defrosting function. If frost forms, the air conditioner will temporarily stop, and the defrosting circuit will operate briefly (for about 4 to 15 minutes).

#### Low Ambient Cooling

When the outdoor temperature drops, the outdoor unit's fans may switch to Low Speed, or one of the fans may stop intermittently.

#### Oil Recovery Operation

Periodically, the oil recovery operation is performed in order to return compressor oil to the outdoor unit. Operation is stopped during this oil recovery operation.

# OPERATING TIPS

Instructions relating to heating (\*) are applicable only to "HEAT & COOL MODEL" (Reverse Cycle).

## Temperature and Humidity Range

		Cooling/Dry Mode	*Heating Mode
Outdoor temperature	COOLING MODEL	About -5 to 52 °C	—
	HEAT & COOL MODEL HEAT RECOVERY MODEL (Reverse Cycle)	About -5 to 52 °C	About -15 to 21 °C
Indoor temperature		About 18 to 30 °C	About 16 to 30 °C
Indoor humidity		About 80 % or less If the unit is used for long periods under high-humidity conditions, condensation may form on the surface of the indoor unit, and drip onto the floor or other objects underneath.	—

- If the air conditioner is operated under higher temperature conditions than those listed, the built-in protection circuit may operate to prevent internal circuit damage. Also, during Cooling mode, if the unit is used under conditions of lower temperatures than those listed above, the heat-exchanger may freeze, leading to water leakage and other damage.
- Do not use this unit for any purposes other than the Cooling, (\*)Heating, Dehumidifying, and air-circulation of rooms in ordinary dwellings.

# SPECIFICATIONS

MODEL		AR□36HF	AR□45HF	AR□60HF
POWER		220-240 V~50 Hz		
COOLING CAPACITY	[kW]	10.3-10.5	12.4-12.7	16.4-17.0
HEATING CAPACITY	[kW]	10.5-10.7	13.4-13.7	17.0-17.6
<b>DIMENSIONS &amp; WEIGHT</b>				
HEIGHT	[mm]	400		
WIDTH	[mm]	1,250		
DEPTH	[mm]	800		
WEIGHT	[kg]	75		

- Acoustic Noise Information : The maximum sound pressure level is less than 70 dB (A) for both indoor unit and outdoor unit.  
According to IEC 704-1 and ISO 3744.