

# Haier

Domestic air conditioner

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## SERVICE MANUAL

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Model

HW-07LM03

HW-09LM03

HW-12LM03

### ● Feature

- Four side air flowing
- Auto Right/Left Swing
- Sliding chassis design

# 1. Product Code Illumination and Series introduction

## 1). Model code rule description

Model identification:

$$\frac{H}{A} \quad \frac{W}{B} - \frac{\quad}{C} \quad \frac{\quad}{D \quad E} \quad \frac{\quad}{F}$$

A: Abbreviation of Haier

B: Abbreviation of Window

C: Nominal cooling capacity (BTU/h) with the first two numbers based on one thousand unit.

D: Function code

C - Cooling only

H - Heating pump

E - Electric aided heating

E: Developing sequence

F: The type of power supply

### Examples:

HW-07/09/12LM03

It represents window air conditioner. Cooling capacity is 7000/9000/12000 BTU/h and the power supply is 220V / 50Hz.

## 2). Standard situation/conditions

No.	Operating condition	Indoor air state		outdoor air state	
		D.B.	W.B.	D.B.	W.B.
1	Nominal cooling	32	23	43	26
2	Nominal heating	/	/	/	/
3	Nominal electrical Heating	/	/	/	/

## 3) Brief introduction of window air conditioner series

1. Temperature set knob can adjust the temperature of the air in room
2. Function set knob can control the fan speed as well as the cooling speed.
3. Vent helps you to exhaust any stale unwanted air in the room and draw fresh outside air in the room.

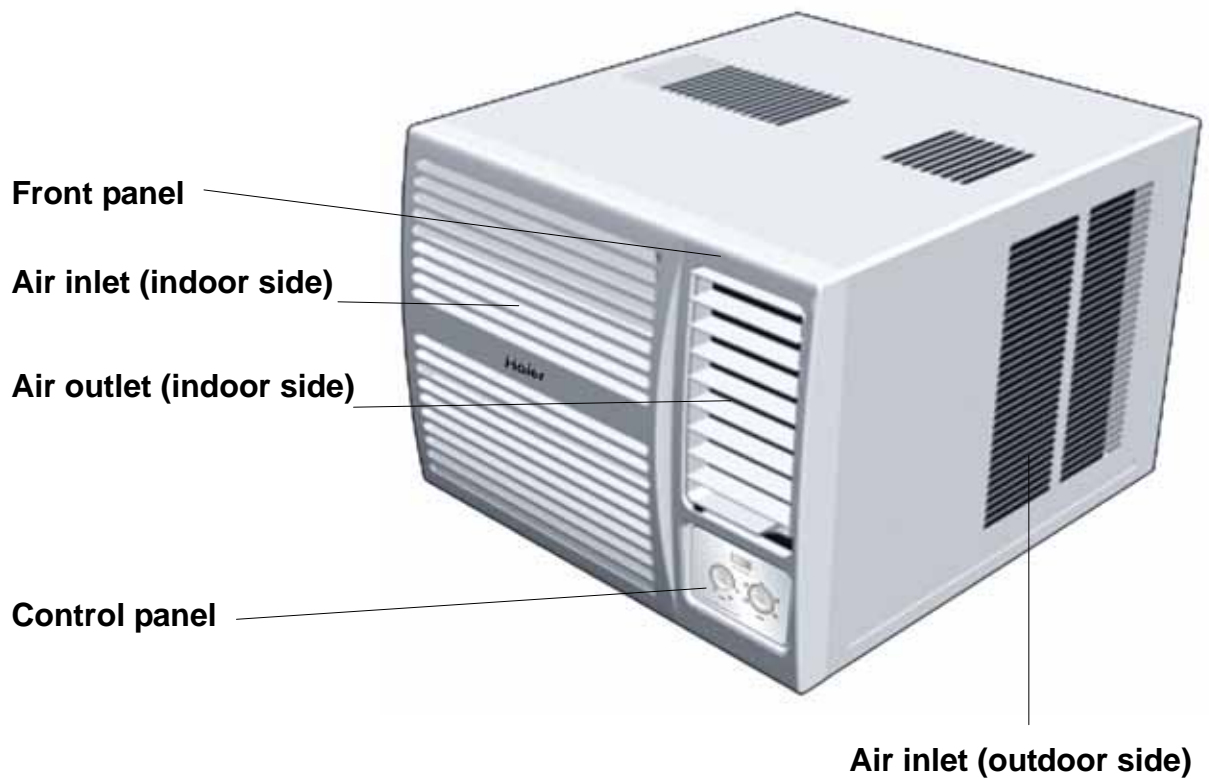
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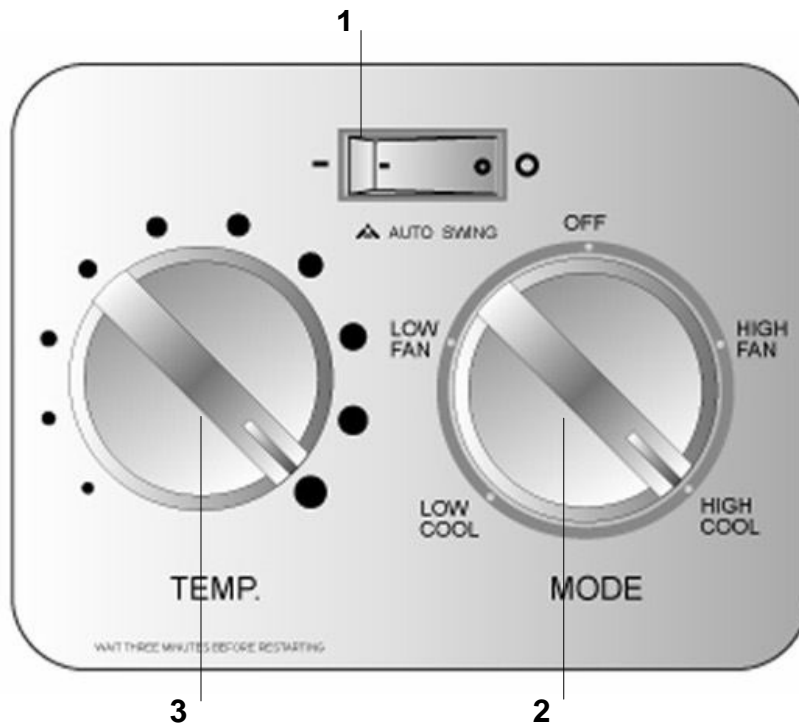
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## 2. Specification

Item		Unit	HW-07LM03	HW-09LM03	HW-12LM03	
Cooling capacity		BTU/h	2100	2500	3500	
Heating capacity		BTU/h	/	/	/	
Power supply			1, 220, 50	1, 220, 50	1, 220, 50	
Cooling	Power input	W	750	1000	1250	
	Running current	A	3.6	4.8	6.5	
	EER	BTU/(hW)	2.8	2.5	2.8	
Heating	Power input	W	/	/	/	
	Running current	A	/	/	/	
	COP	BTU/(hW)	/	/	/	
Sound Level	Indoor side	dB(A)	54/52	54/52	54/52	
	Outdoor side	dB(A)	57/54	57/54	58/56	
Dimension	Net	mm	486x468x352	486x468x352	560x602x380	
	Package	mm	565x568x447	565x568x447	595x685x460	
Weight	Net	Kg	27	27	33	
	Gross	Kg	32	32	38	
Compressor	Manufacture		RUICHI	RUICHI	RUICHI	
	Type		44R193AE-AJSC	44R233CF-AJSC	48R313AK-5JSE	
	Oil Charge	ml	270	270	370	
Pressure	Heating side	MPa	2.65	2.65	2.65	
	Cooling side	MPa	0.65	0.65	0.65	
Refrigerant	Model		R22	R22	R22	
	Charge	g	410	380	385	
Fan	Type	Indoor unit		Centrifugal fan	Centrifugal fan	Centrifugal fan
		Outdoor unit		Axial fan	Axial fan	Axial fan
	Fan Speed	High	r/min	1000	1000	890
		Low	r/min	920	920	820
Air volume		m <sup>3</sup>	360	360	450	
Moisture removal		10 <sup>-3</sup> m <sup>3</sup> /h	0.8	1.0	1.2	
Exchanging pipe type/diameter		mm	/	/	/	
Fin material			/	/	/	

## 3. Main components and accessories' name





### 1.Auto swing switch

When the switch is set to " — ", and vertical louvers will swing from side to side, delivering gentle air thus making you feel very comfortable. When it is set to " O ", the indicator goes out, and the vertical louvers stop at any position.

### 2.Mode selection switch

Mode selection switch controls the fan motor speed and cooling speed.

- <1> When set to " HIGH FAN", fan motor runs at high speed to blow out strong air.
- <2> When set to "LOW FAN", fan motor runs at low speed to blow out gentle air.
- <3> When set to "LOW COOL", air conditioner will start cooling at low speed, blowing out gentle air.
- <4> When set to "HIGH COOL", air conditioner will start speedy cooling, blowing out strong air.
- <5> When set to "OFF", air conditioner stops running.

### 3.Thermostat switch

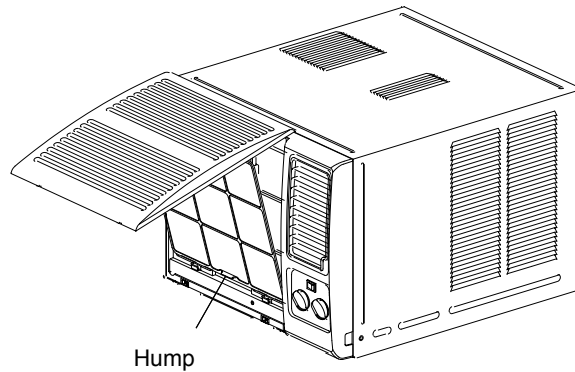
This switch controls the preset indoor temperature to make the air conditioner start or stop automatically, so as to reduce power consumption and operate the system both comfortably and economically.

### Air filter cleaning (before cleaning, turn off the power)

When dirt accumulates on air filter, air circulation will be blocked, which causes poor cooling. It is advisable to clean air filter every two weeks for longer operation.

#### Take out the air filter

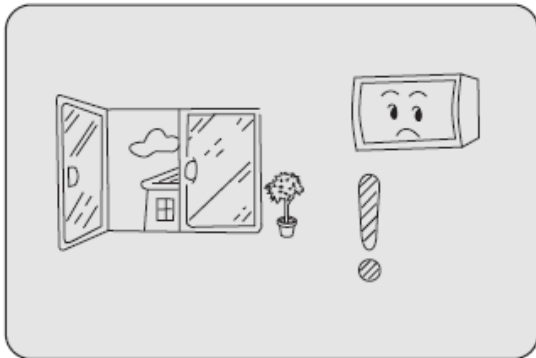
1. Press the concave parts on both sides at the lower part of air inlet grille to open the air inlet grille.
2. Hold the hump of filter mesh with fingers (as illustrated) and take it out.



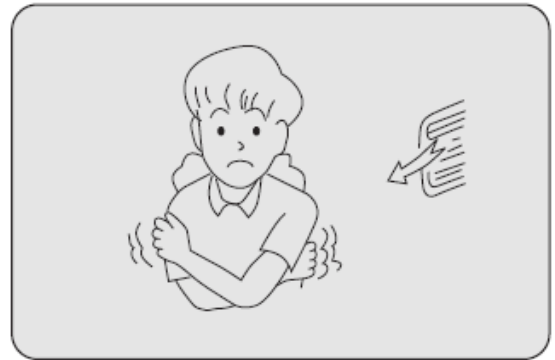
#### Air filter cleaning

1. Gently flap the dirt off the air filter.
2. Carefully wash air filter in warm water (below 40°C). To obtain better cleaning effect, soap water or neutral detergent may be used.
3. Flush air filter carefully with clean water after removing dirt. Let it dry completely.

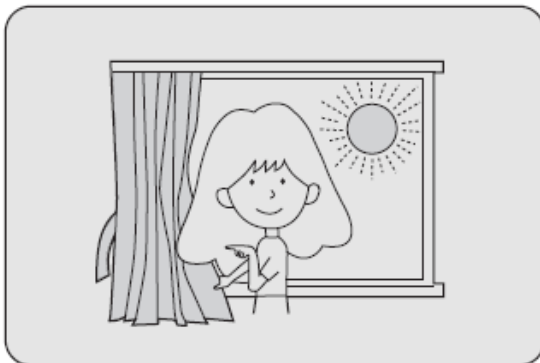




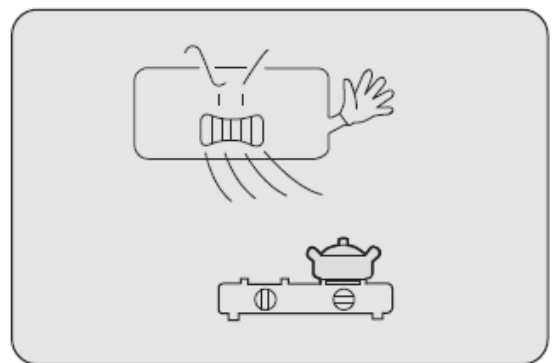
**Avoid opening doors and windows unless necessary.**



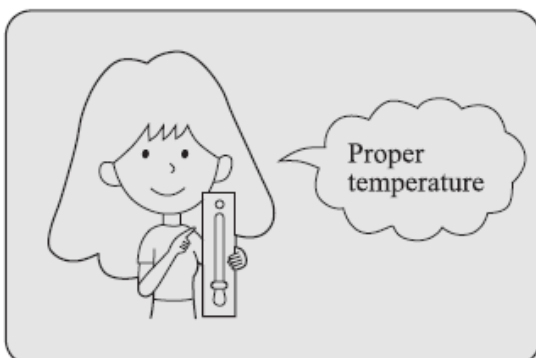
**Don't be exposed to cold air for a long time.**



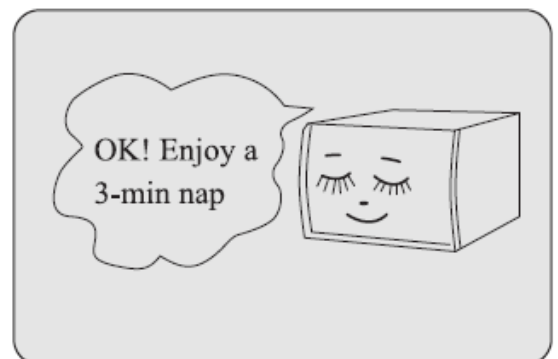
**Use curtain or blind  
Direct sunlight may reduce cooling effect, always use window curtain.**



**Keep heat source away from air conditioner.**



**Set temp. a little bit higher before going to bed.**



**After unit stops, don't restart it until 3 minutes have elapsed.**



### Disposal of the condensed water

Generally there are two methods available on disposal of the condensed water:

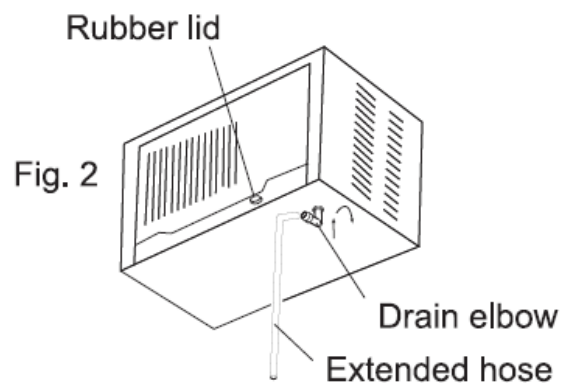
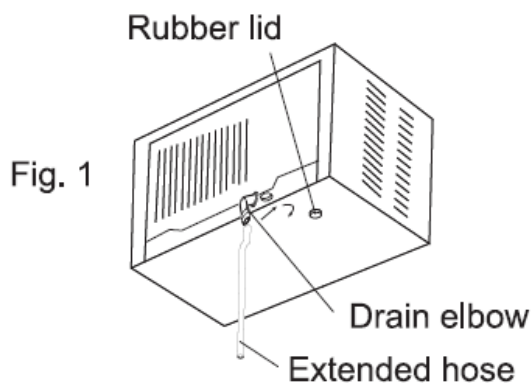
1. Block the bottom plate hole of the conditioner with rubber lid, install drain elbows on the back hole and let the condensing water flow from the back hole of the conditioner. (See Fig.1)

In this method, the accumulated condensed water in the bottom plate is hit by the fan onto the heat exchanger, and evaporated and blown out from the machine. It can cool the heat exchanger radiator more quickly, and improve the energy efficiency of the conditioner. But the hitting noise by the fan at the outdoor side is relatively large.

2. Block the back hole of the conditioner with rubber lid and install drain elbow to the bottom hole, which can make the condensed water flow out from the bottom plate. (See Fig.2)





This method can reduce the hitting noise by the fan at the outdoor side.

If necessary the above two methods can both have extra pipe added on the drain elbow (available on the market).



**Note:**

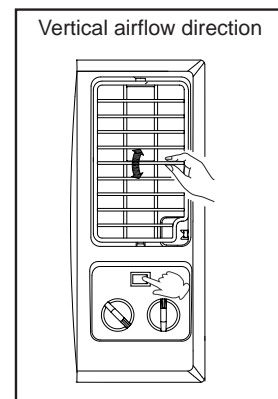
When install drain elbow, adjust the direction of the drain elbow to make it be in line with the hole in the rear of unit; Insert the drain tube into hole and twist 90°.

<p>Before cleaning please pull of the power plug.</p> 	<p>Do not clean the machine with following material in order to decrease pollution: petrol, detergent.</p> 
<p>Do not pour water on the machine to prevent electric shock or mechanical trouble.</p> 	<p>Hot water above 40 may cause discoloration of the shell or deformation.</p> 

## Operation Guide

### Airflow Direction Vane

- The Vertical Airflow Direction Vane is manually controlled by positioning the vane to discharge the air upward, downward or straight out.
- The horizontal air direction is adjusted by setting the AUTO SWING switch to the ON position.



### Note:

- It is advisable not to keep vertical flap at downward position for a long time in COOL or FAN mode, otherwise, condensate water might occur.
- Don't move the horizontal flap with hand in order to avoid the vertical flap abnormal, using the remote controller to adjust the move of vertical flap.



### CAUTION

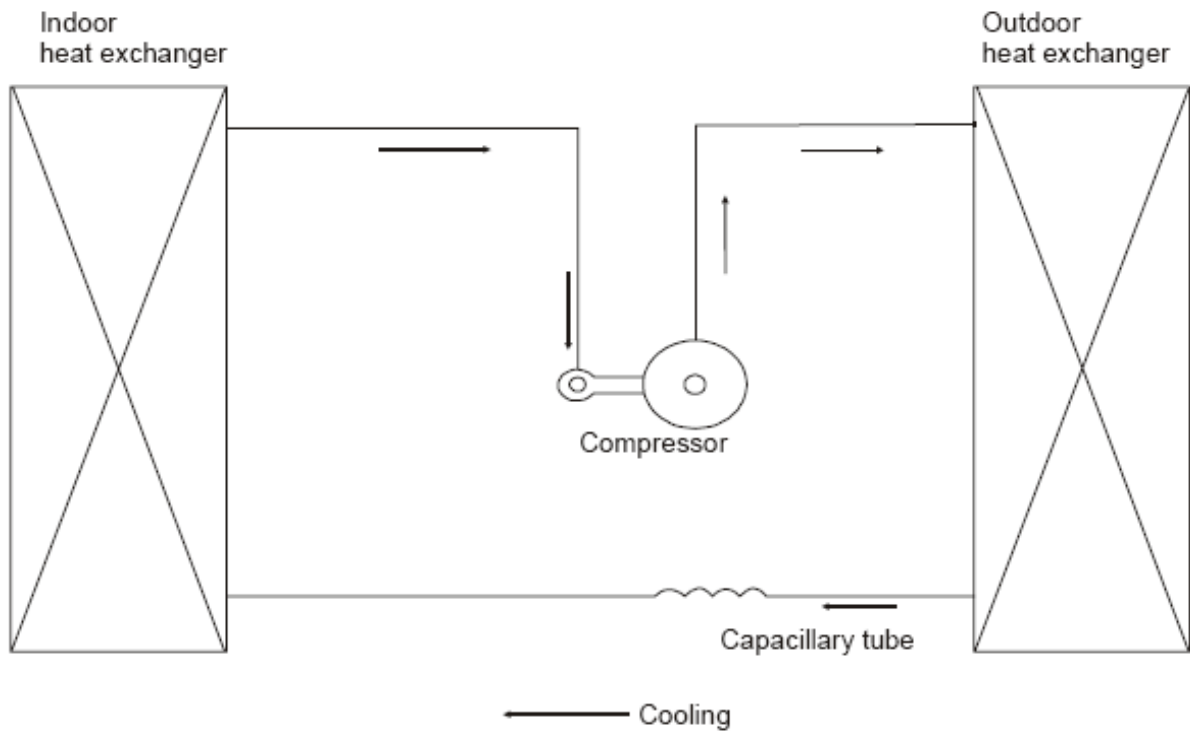
- In cooling mode, after you turn thermostat switch counter-clockwise, do not turn it back until at least 3 minutes have elapsed. Otherwise, the fuse may blow due to overload. Do not exceed the selection range.

## 5. Trouble shooting

Before sending to repair, please first check the following:

Phenomenon	Reason
Switch on the machine but it does not work immediately.	If the machine is started after stop, it will need about 3 minutes to re-start so as to prevent fuse from break.
Switch on the machine but it does not work.	<ol style="list-style-type: none"><li>1. Is the power on?</li><li>2. Is the fuse broken?</li><li>3. Is plug firmly inserted?</li></ol>
The cooling effect is not good.	<ol style="list-style-type: none"><li>1. Is the air inlet or outlet entrance blocked?</li><li>2. Is there direct sunlight in cooling?</li><li>3. Are the doors and windows closed?</li><li>4. In cooling are there too many heating sources?</li><li>5. Is the filter too dirty (generally it should be washed every two weeks)?</li></ol>

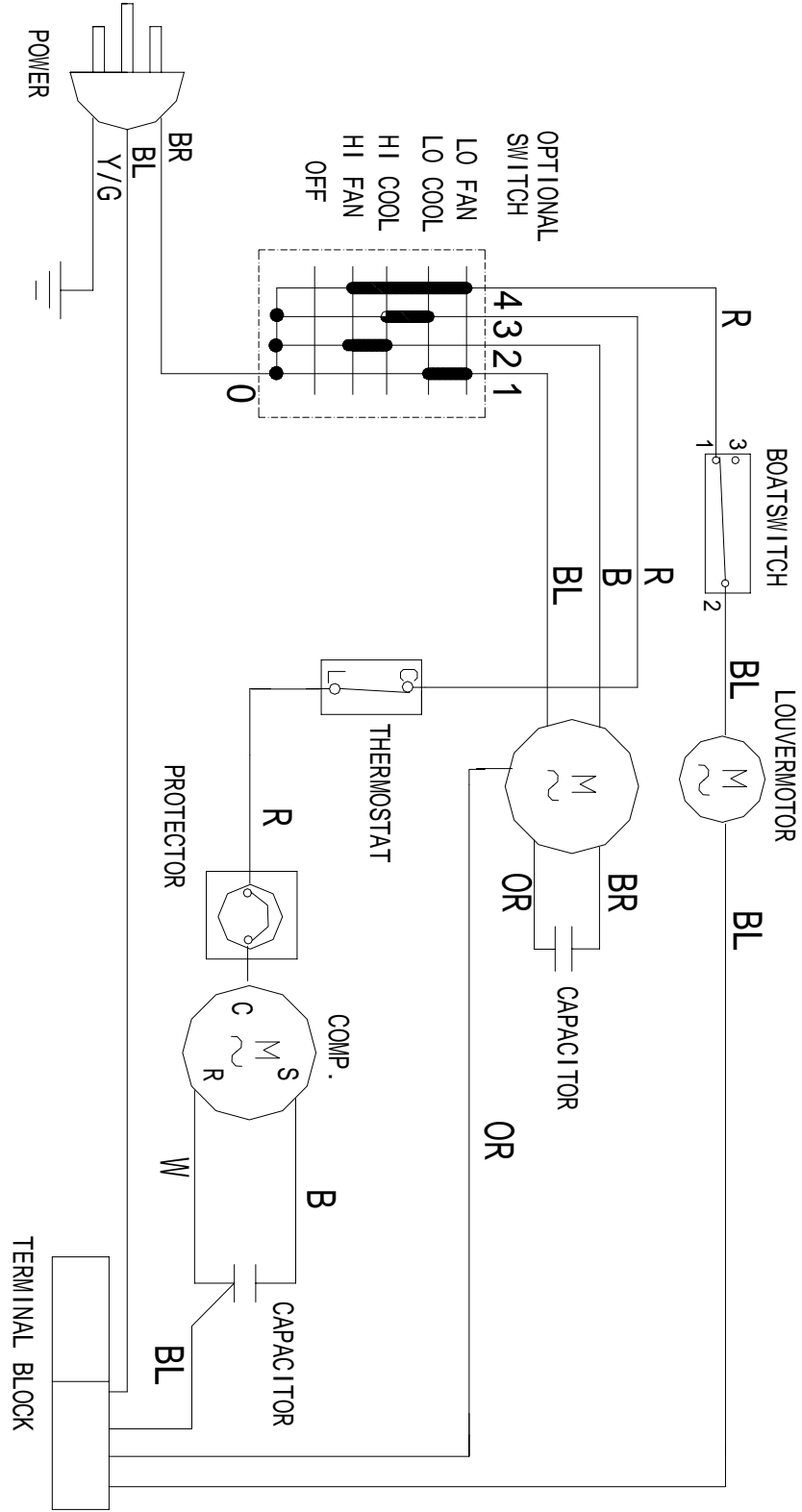
## 6. System flow chart



## 7. Wiring diagram

### WIRING DIAGRAM

0010511509



R: RED      OR: ORANGE  
 B: BLACK   BR: BROWN  
 BL: BLUE   W: WHITE  
 Y/G: YELLOW/GREEN

NOTE: 1. Because of different compressor, the dotted part may not be used.

## 8. Installation and repairing

### Selection of the installation position

1. The air-conditioner is better installed in shadow or in a place with short period of sunshine. In case the air-conditioner is installed at the point exposed directly to the sunshine, it should be protected from the direct sunlight as possible in order to avoid the long time of direct sunlight otherwise its performance will be lowered. (As illustrated in Fig. 1)

2. For the convenience of operation, it is recommended that air-conditioner be installed at least at the height of 760-1300 mm above the floor and no obstacles before it for a free airflow.

3. The shutters at both sides and the top of air-conditioner should be protruded outdoors free from being blocked by wall, window, etc.

4. The back of air-conditioner should be kept over 500mm from the obstacles (for example, wall, etc.) (As illustrated in Fig. 2)

5. To have an efficient drainage, the back part of the air-conditioner should be inclined downward by 5-10mm (As illustrated in Fig. 3).

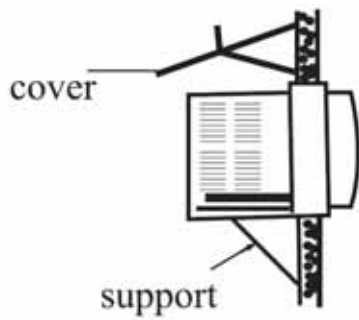


fig.1

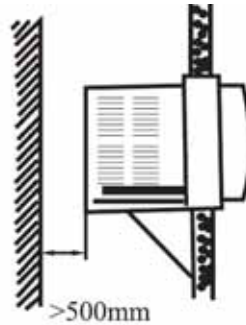


fig.2

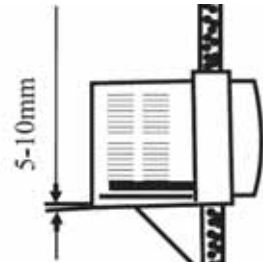


fig.3

**The enclosed accessories of the conditioner are:**

Name	Manual	Outlet pipe fitting	Sealed gasket	Drain pan	Screw
Figure					
Quantity	1	1	1	1	2

**1. Make the wall hole or window hole (see Fig. 4)**

Model	A	B
HW-07/09LM03	350mm	450mm
HW-12LM03	380mm	600mm

**2. Fix the prefabricated iron frame to stable**

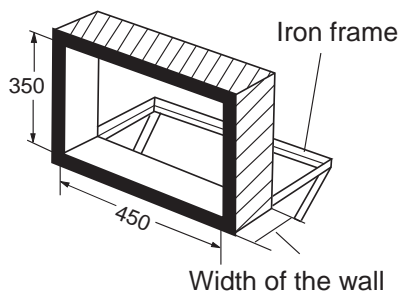


Fig. 4

### Installation of air-conditioner

1. Make the wall hole or window hole (see Fig.5).

2. Fix the prefabricated iron frame to stable position by expansible screws.

3. Take out the conditioner and accessories from the package .

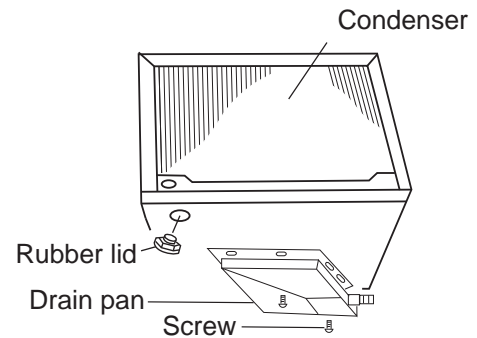


Fig. 5

4. Cooling-only type air-conditioner: before dispatched from the factory, the drip hole at the bottom plate has been blocked by rubber lid in the accessories. If the surrounding humidity is high, should assemble drainage bend in the drainage hole at the back of bottom plate and connect the drainage tube as illustrated in Fig. 6. If the user doesn't need to retain the condensate in the bottom plate, can remove the rubber lid on the bottom and as illustrated in Fig. 5, assemble the attached drain pan on the bottom of the air-conditioner, and connect drainage tube at the water outlet hole on the drain pan.

5. If you need to lead the condensed water to indicated position, please purchase a piece of plastic pipe , set it on the outlet pipe fitting and tie it tightly.

6. After installation of all the accessories, put the whole machine on the iron frame. If there's water outlet flexible pipe, lead the pipe to needed position(see Fig.7).

7. Fill any distance between the wall hole and the machine body with flexible sponge rubber strip to prevent the entering of outer noise and the leaking of the coolness.

8. After installation of the conditioner, insert the power plug into the outlet and perform test-run.

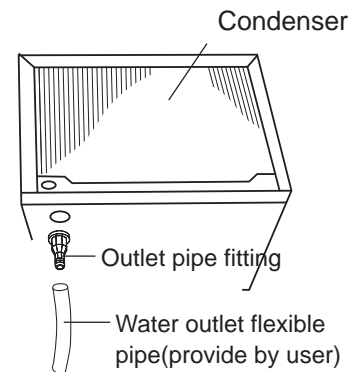


Fig.6

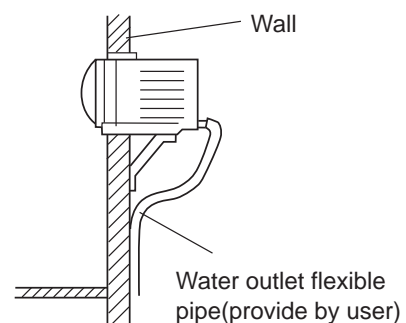
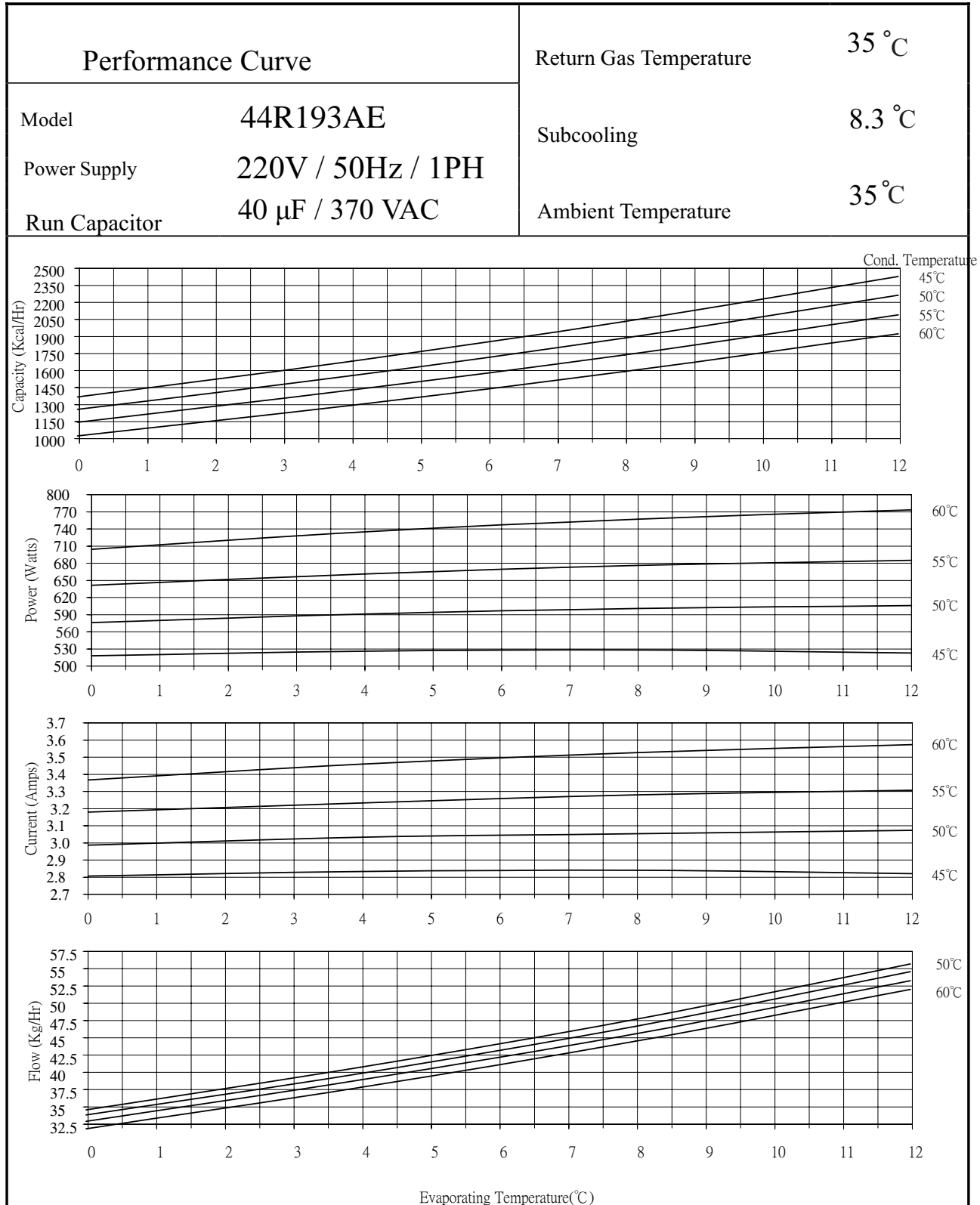


Fig.7



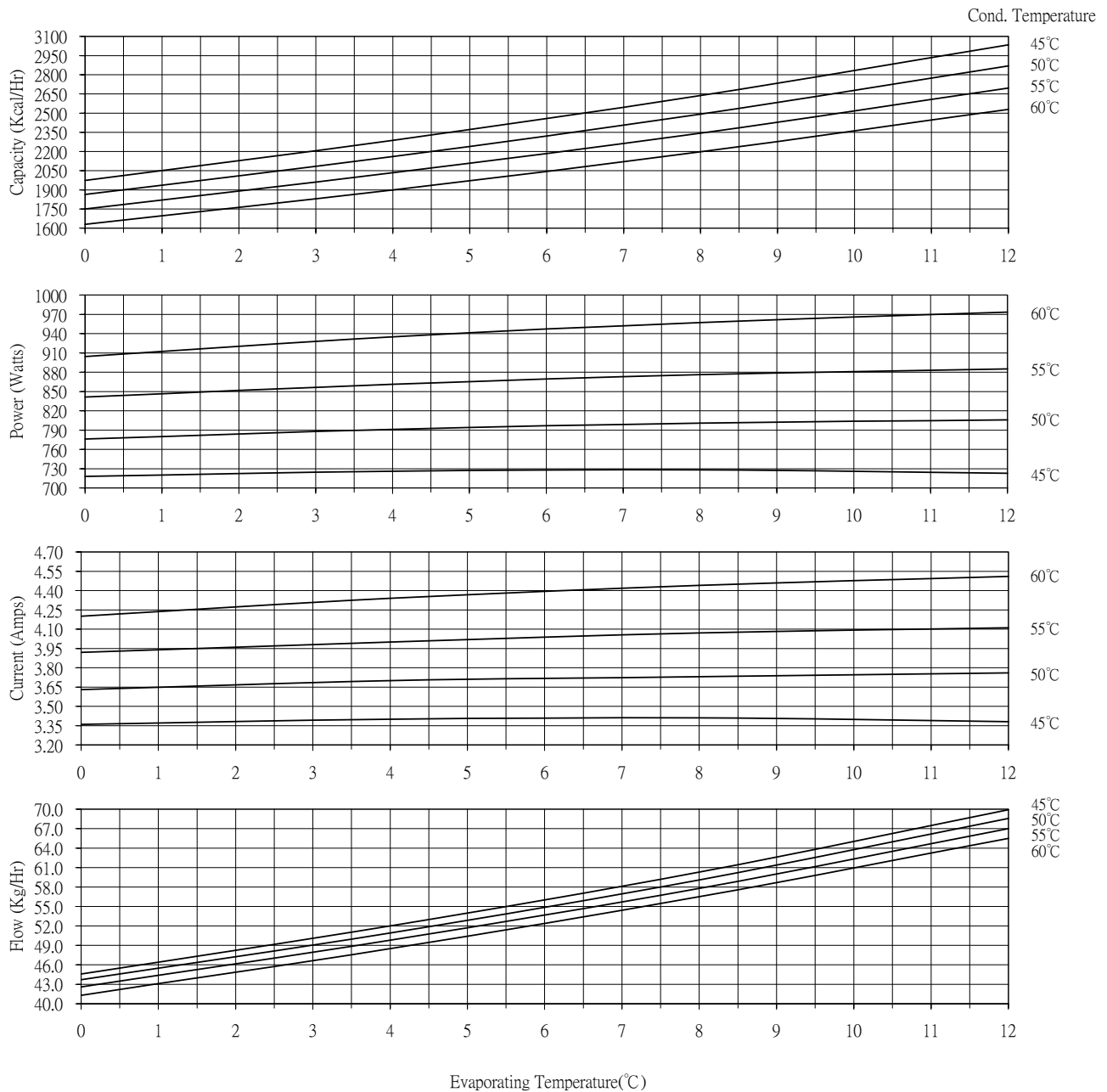
### 8. Compressor performance diagram

#### HW-07LM03



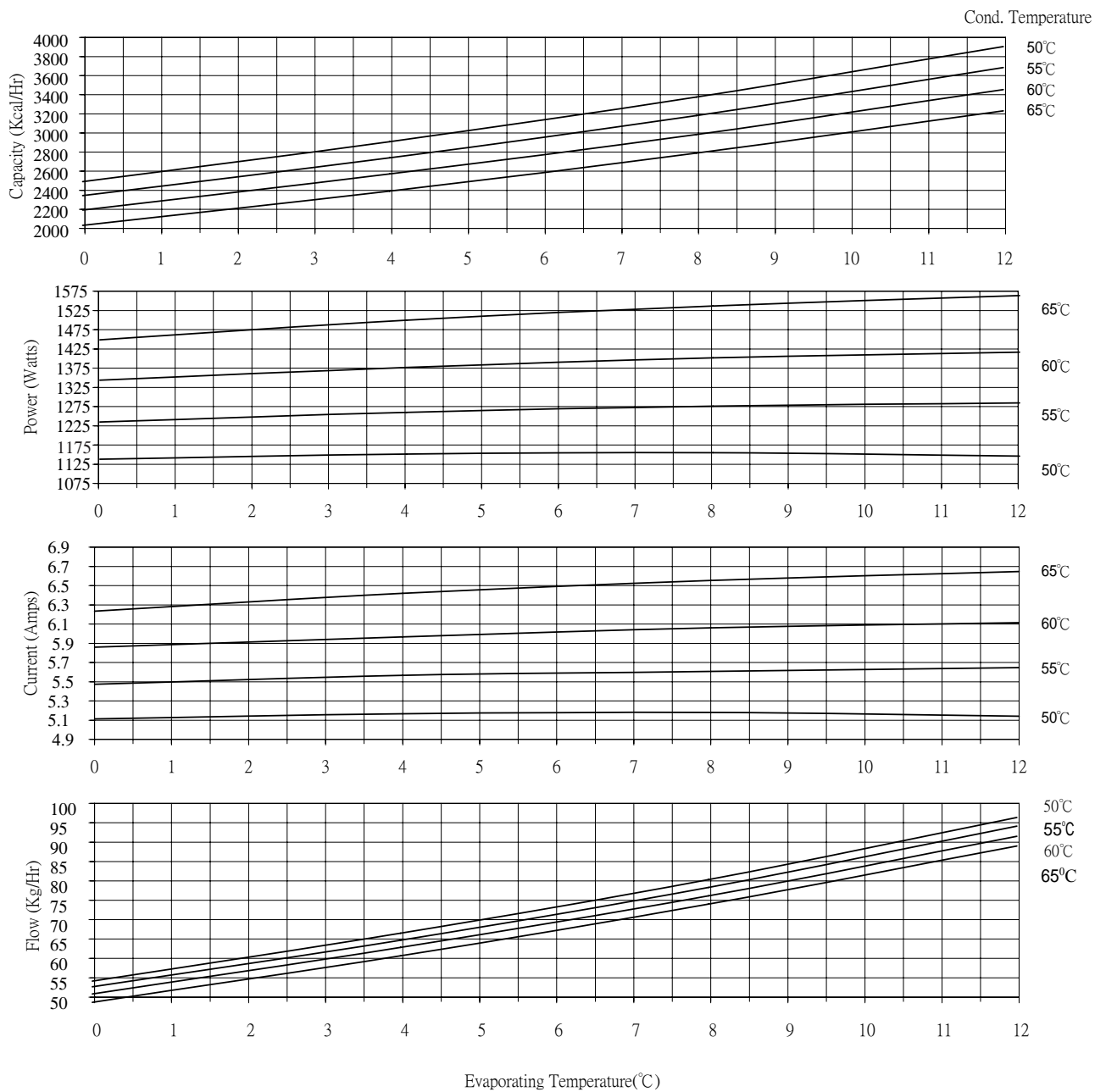
### HW-09LM03

Appendix 3. Performance Curve		Return Gas Temperature	35°C
Model	44R233C	Subcooling	8.3°C
Power Supply	220V / 50Hz / 1PH	Ambient Temperature	35°C
Run Capacitor	25 μF / 370 VAC		



### HW-12LM03

Appendix 3. Performance Curve		Return Gas Temperature	35°C
Model	44R313A	Subcooling	8.3°C
Power Supply	220V / 50Hz / 1PH	Ambient Temperature	35°C
Run Capacitor	30 μF / 370 VAC		



# Sincere Forever



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