

# ***SEDNA AIRE***

***THE WORLDS FIRST SOLAR ABSORPTION AIR CONDITIONER***



***ENVIRONMENTALLY FRIENDLY***

**R407c**

## **INSTALLATION AND SERVICING MANUAL**

***For Technical Personnel Use Only***

### **MODELS**

**SCD 9 SPS / SP 9 C**  
**SCD 12 SPS / SP 12 C**  
**SCD 18 SPS / SP 18 C**  
**SCD 24 SPS / SP 24 C**  
**SCD 36 SPS / SP 36 C**  
**SCD 48 SPS / SP 48 C**  
**SCD 60 SPS / SP 60 C**

# **CONCEALED DUCTED**

## **WARNING**



**This service and installation information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service this product. Products powered by electricity should be serviced or repaired only by an experienced professional technician. Any attempt to service or repair this product by anyone else could result in injury or death.**

# **CONTENTS**

- 1. TECHNICAL SPECIFICATIONS**
- 2. DIMENSIONS**
- 3. WIRING DIAGRAMS**
- 4. REFRIGERANT DIAGRAM**
- 5. INSTALLATION INFORMATION**
- 6. SERVICING AND MAINTENANCE**
- 7. TROUBLESHOOTING GUIDE**
- 8. PARTS LIST**

# **TECHNICAL SPECIFICATIONS**

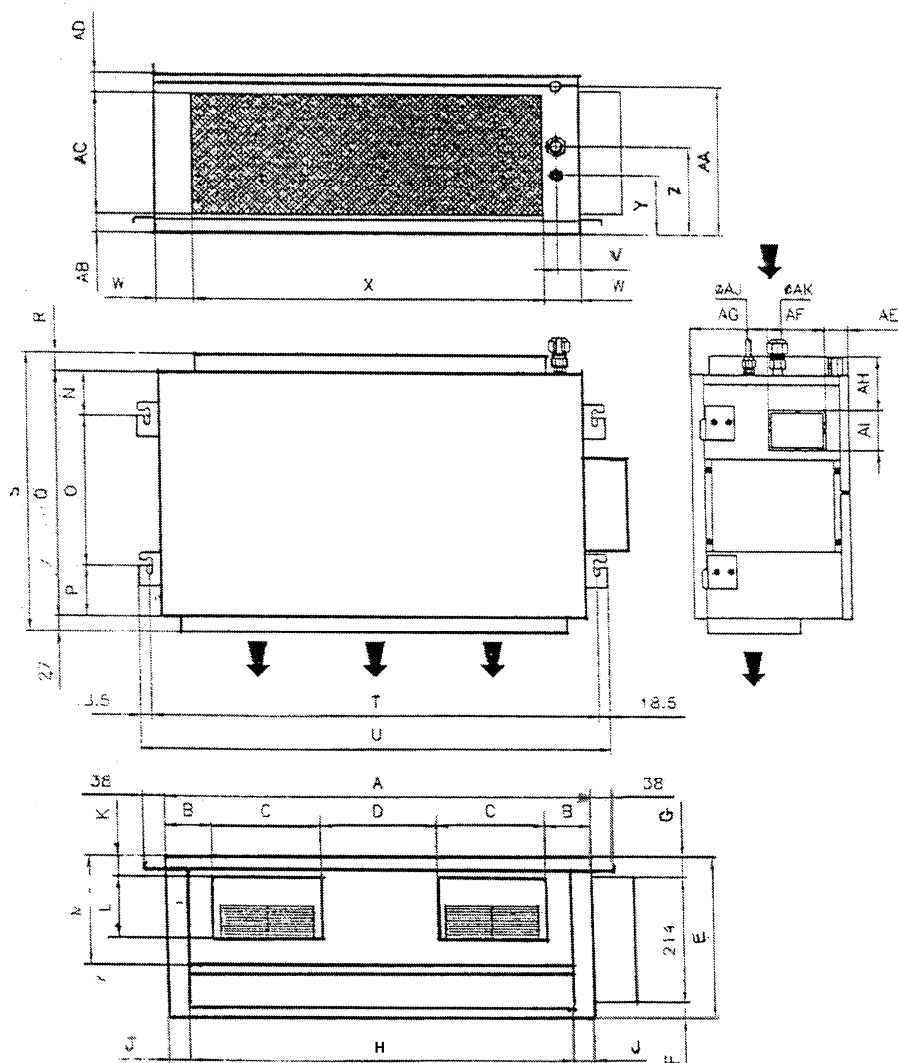


# **DIMENSIONS**

# DIMENSIONS

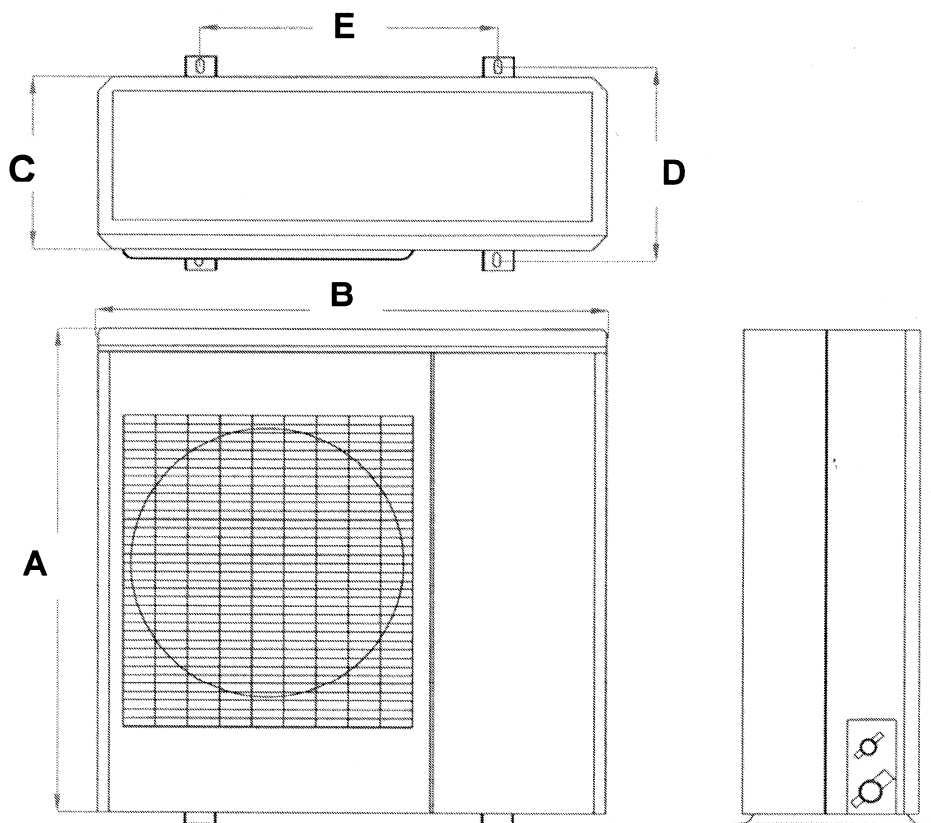
## INDOOR DIMENSIONS

Model	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S
SCD12SP, SCD18SP, SCD24SP	742	86	185	200	267	26	27	858	42	24	105	175	66	307	82	455	27	509
SCD36SP	790	60	230	210	319	76	27	716	37	55	105	205	58	385	82	525	27	579
SCD48SP	790	60	230	210	339	98	25	716	37	39	136	210	54	512	86	652	27	706
SCD60SP	992	124.5	232	279	339	98	25	919	36.5	39	136	210	54	512	86	652	27	706
Model	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK
SCD12SP, SCD18SP, SCD24SP	781	818	34	64	615	117	157	245	22	209	36	39	101	127	105	68	Ø3/8"	Ø5/8"
SCD36SP	829	866	39	76	638	167	217	298	23	255	39	41	150	126	85	119	Ø3/8"	Ø5/8"
SCD48SP	829	866	39	76	638	180	230	320	24	270	43	48	150	139	128	101	Ø3/8"	Ø3/4"
SCD60SP	1031	1068	39	76	840	180	230	320	24	270	43	48	150	139	128	101	Ø1/2"	Ø3/4"



# DIMENSIONS

## OUTDOOR DIMENSIONS

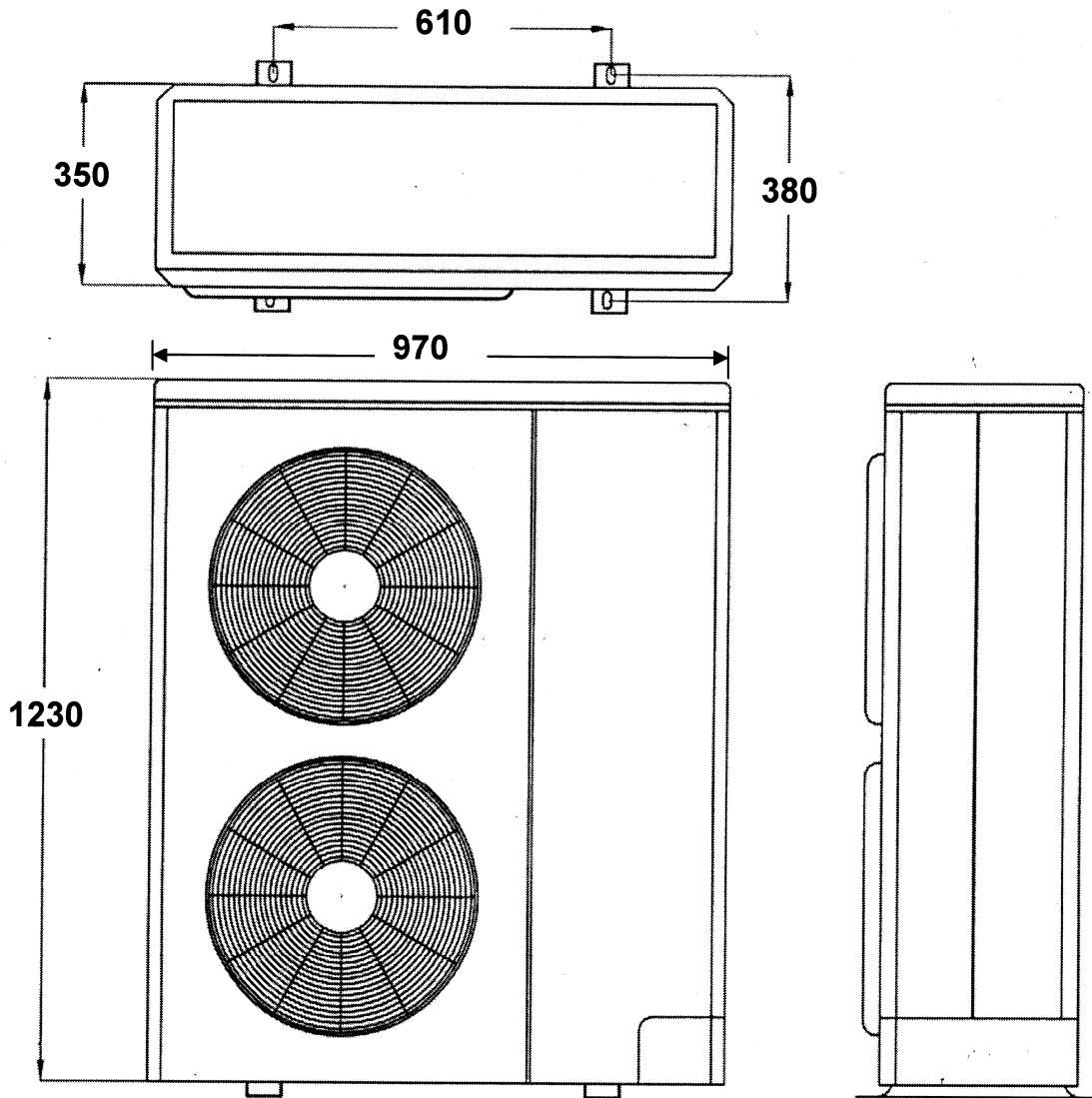


Dim (mm)	Model				
	SCD12SPS	SCD18SPS	SCD24SPS	SCD36SPS	SCD48SPS
<b>A</b>	540	610	700	850	1000
<b>B</b>	795	850	880	990	1000
<b>C</b>	275	300	280	330	350
<b>D</b>	295	320	310	350	370
<b>E</b>	510	510	590	510	700



# DIMENSIONS

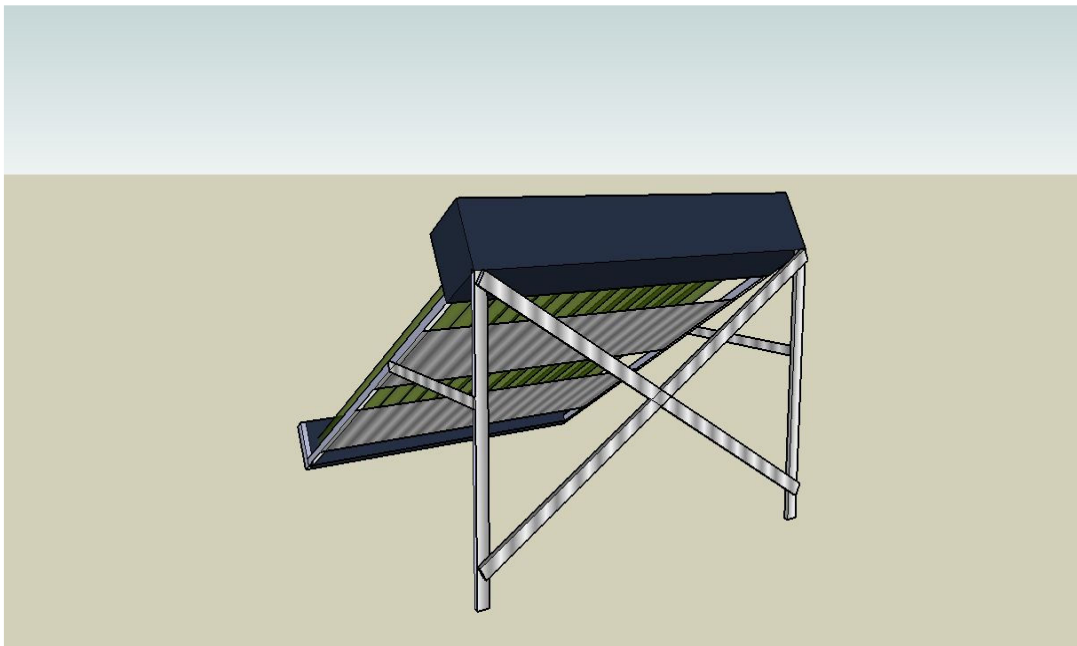
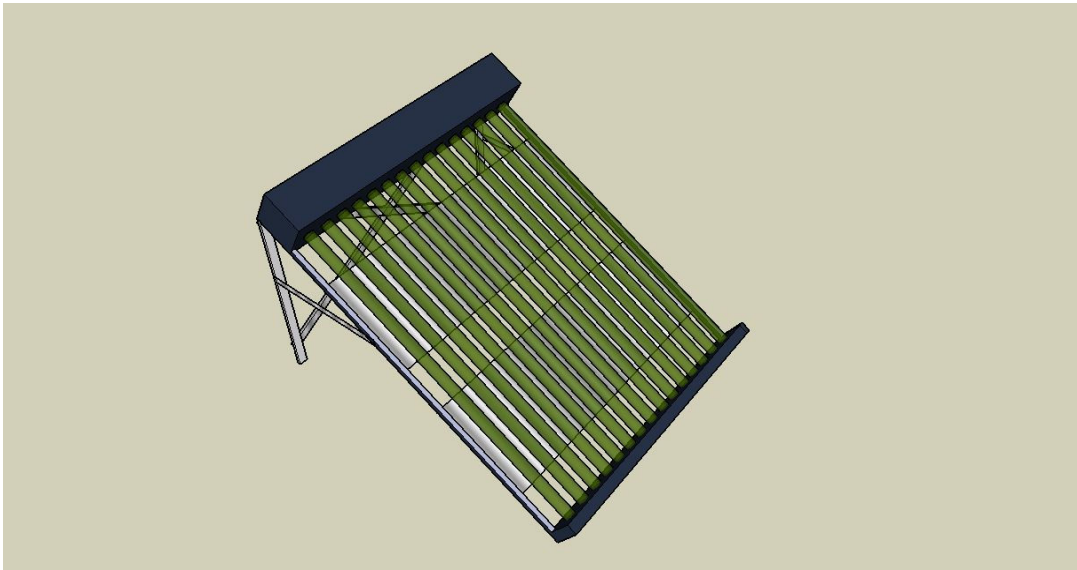
## OUTDOOR DIMENSIONS (SCD60SPS)



# DIMENSIONS

## SOLAR PANEL

MODELS	HEIGHT	WIDTH	DEPTH
PANEL	179CM	244CM	26CM
TUBES	163CM	29CM	26CM

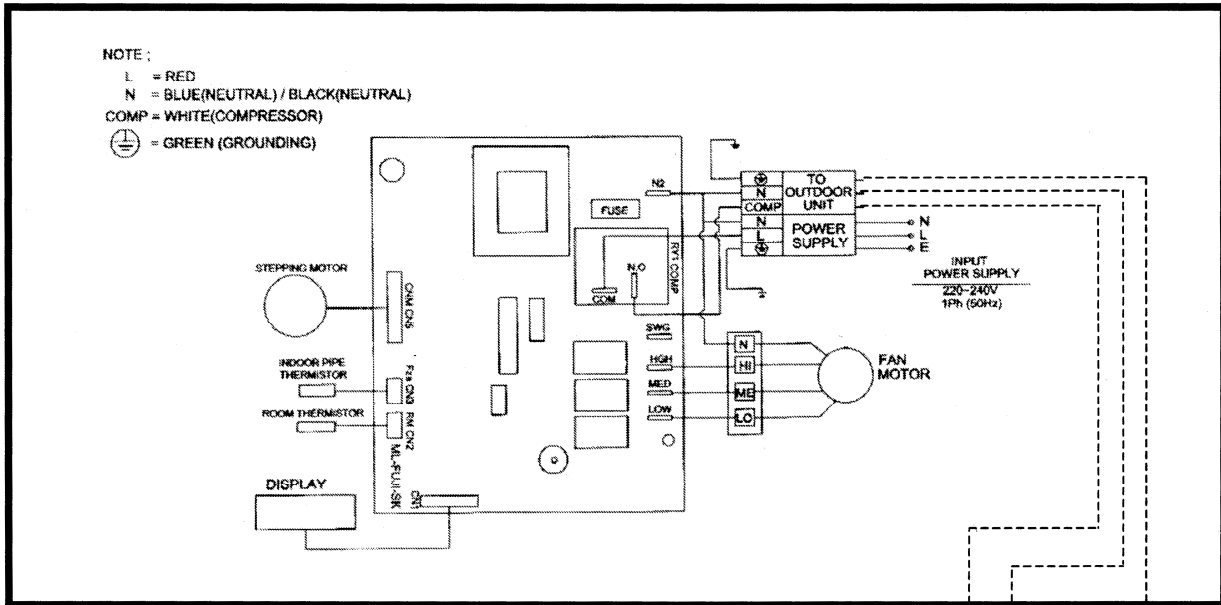


# WIRING DIAGRAMS

# WIRING DIAGRAMS

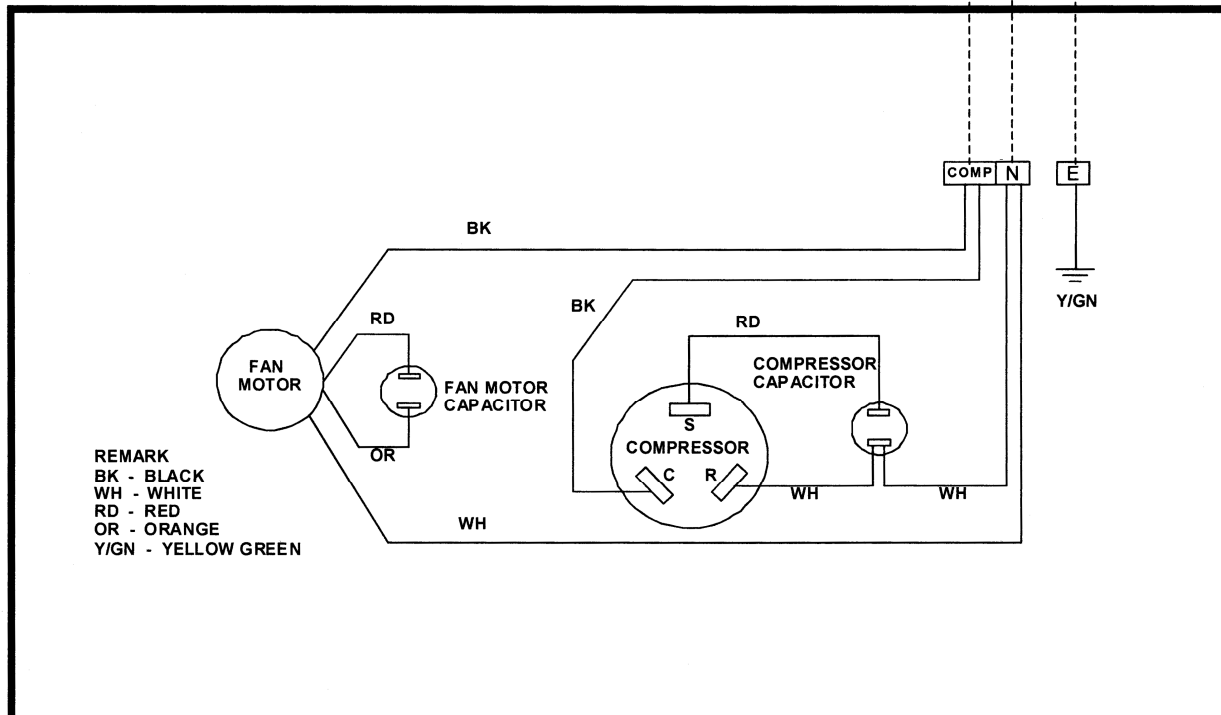
## INDOOR UNIT

**MODEL :** SCD12SPS / SCD18SPS / SCD24SPS



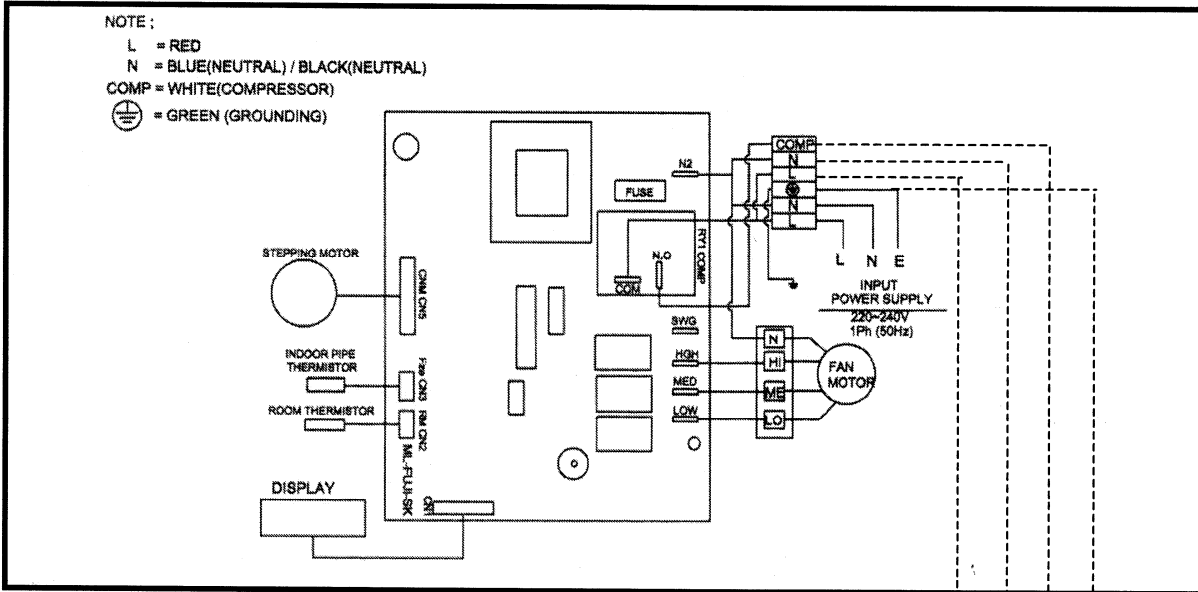
## OUTDOOR UNIT

**MODEL :** SP12C / SP18C / SP24C

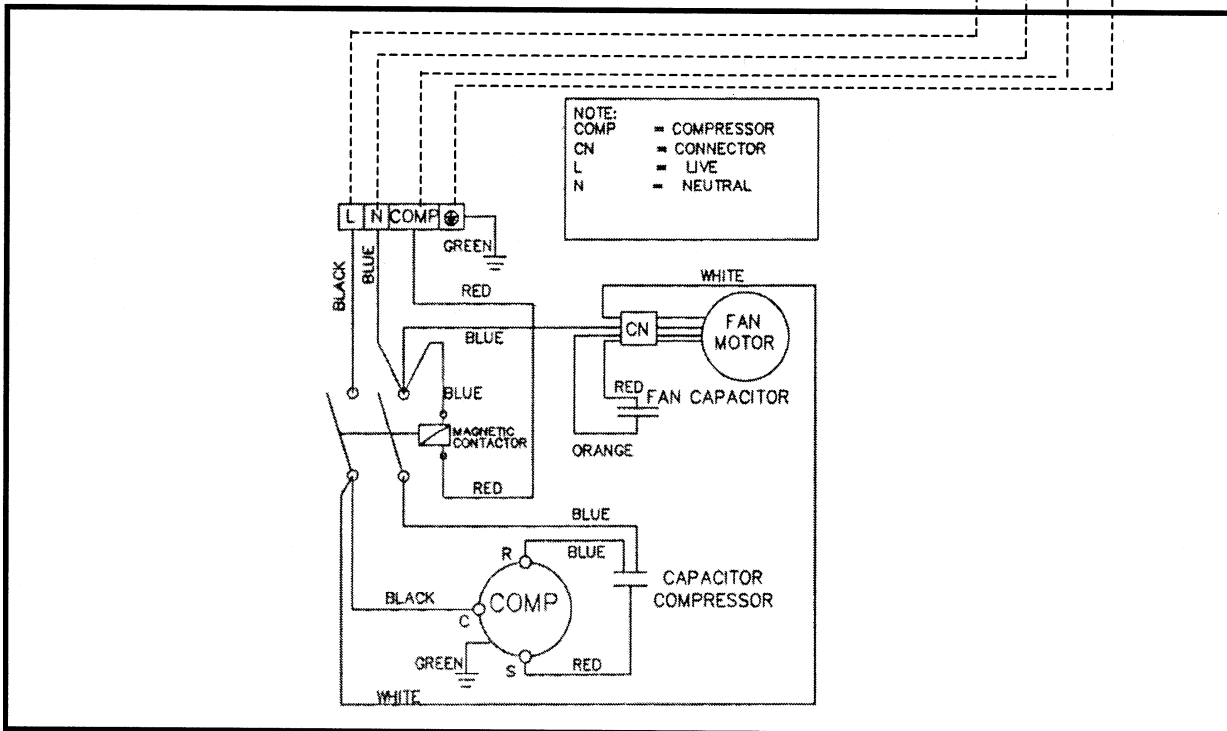


# WIRING DIAGRAMS

**INDOOR UNIT : SCD36SPS / SCD48SPS**

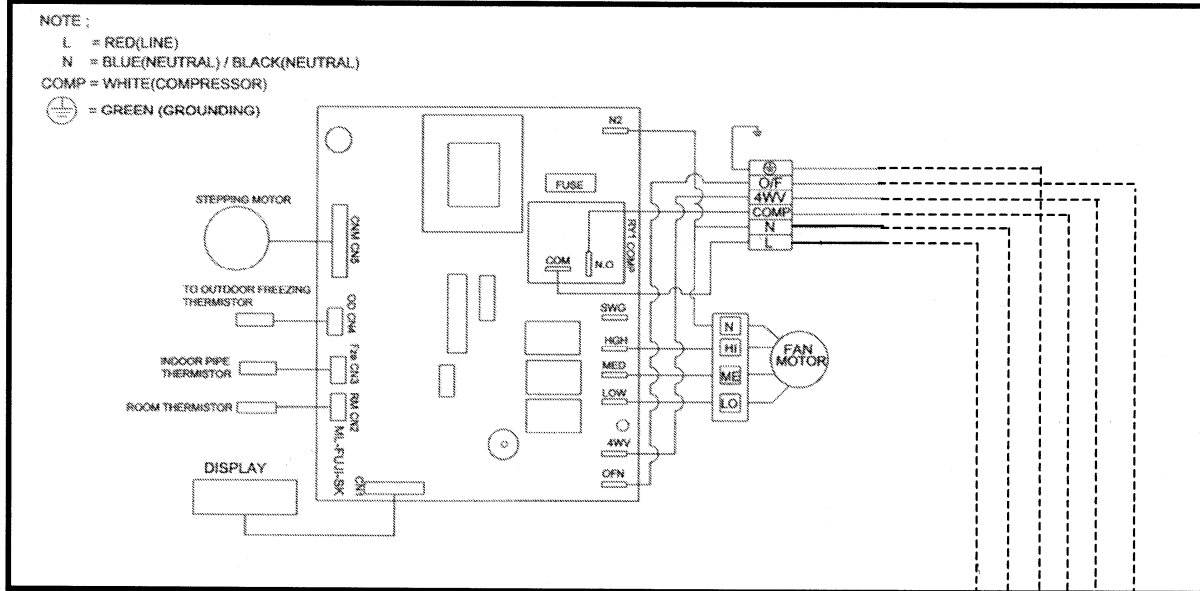


**OUTDOOR UNIT : SP36C / SP48C**

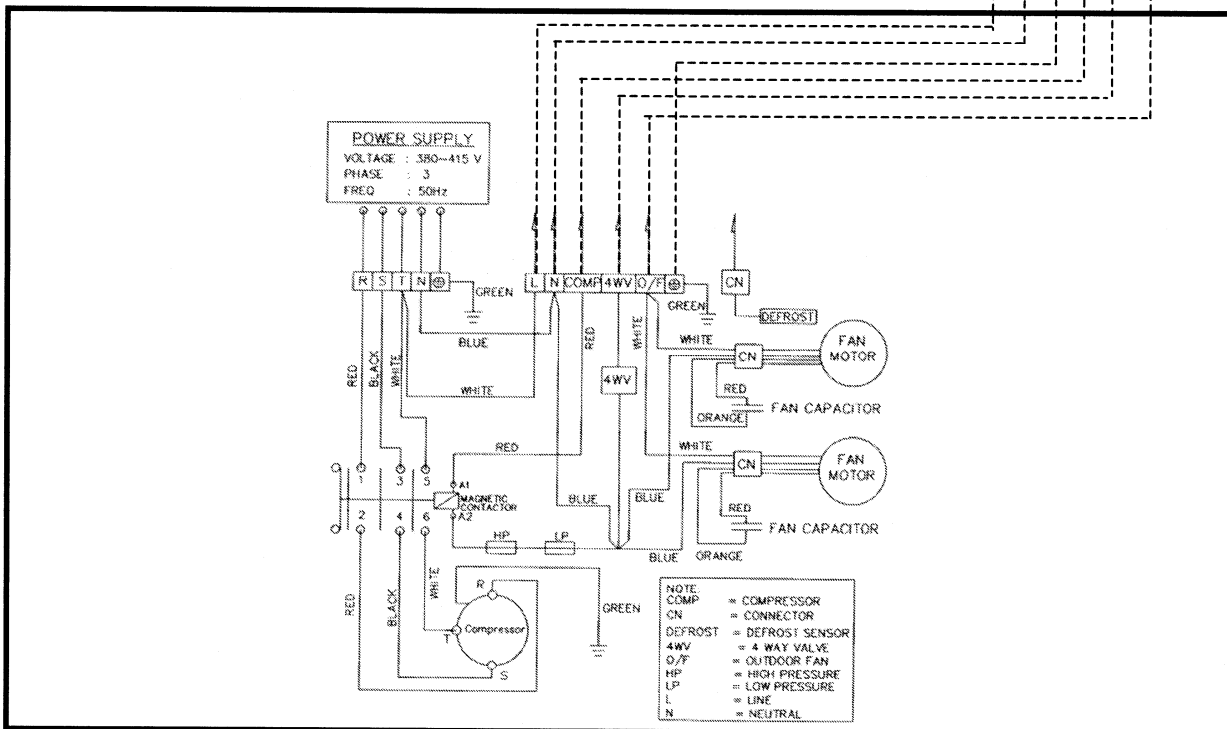


# WIRING DIAGRAMS

## INDOOR UNIT : SCD60SPS

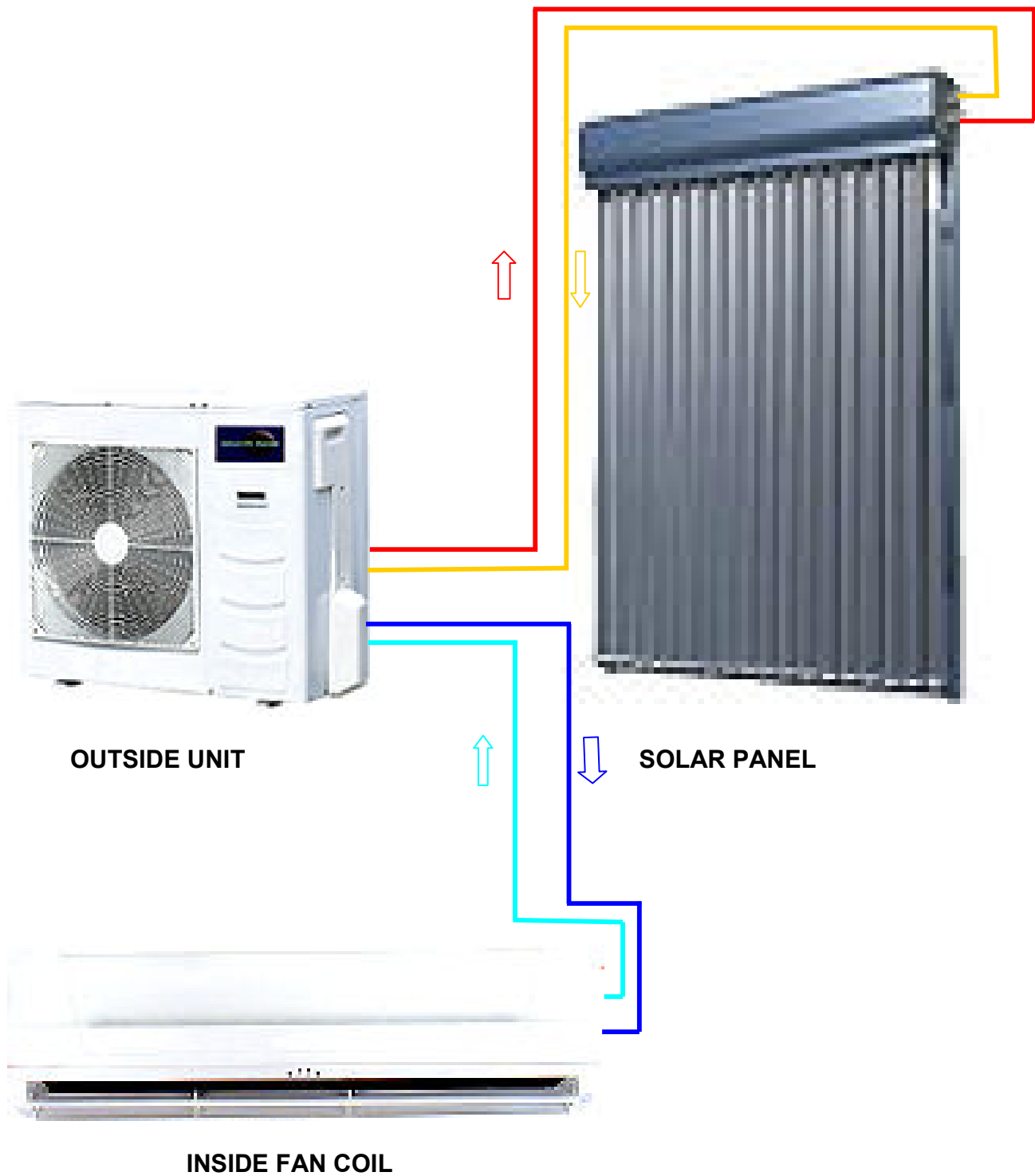


## OUTDOOR UNIT : SP60C



# REFRIGERANT DIAGRAM

# REFRIGERANT DIAGRAM





# **INSTALLATION INFORMATION**

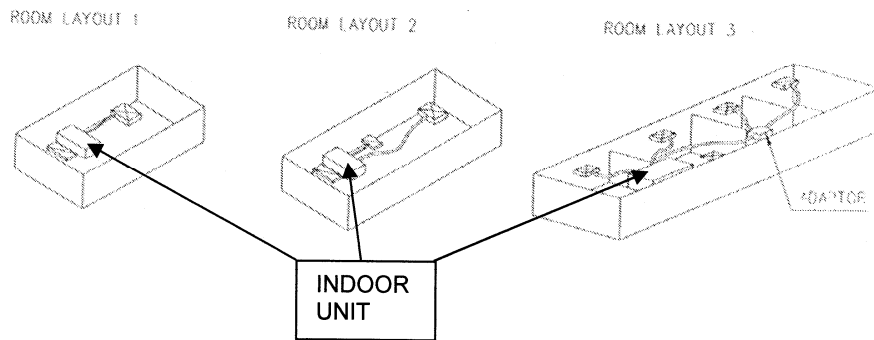
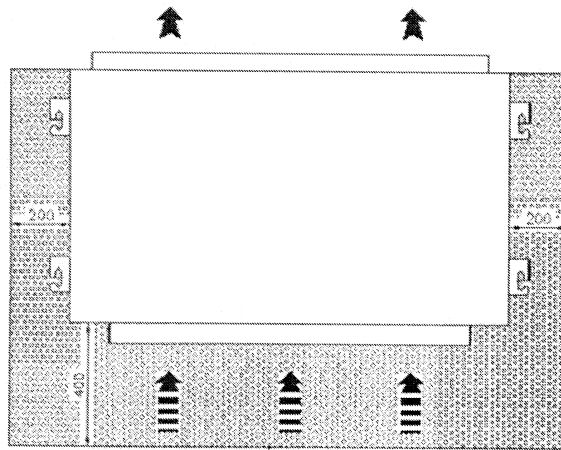
# INSTALLATION INFORMATION

Make sure that all unit panels are fixed in place before moving. Raise and set the unit down carefully.

## Location for Installation:

Whichever is the chosen method of installing the unit, it is necessary to take the following into account:

- Location should be able to support the unit operating weight.
- Allow sufficient space for service and air flow around the unit.
- Select a location free of dust or foreign matter which may cause coil clogging.
- Consult local rules and standards which govern the installation of air-conditioning equipment.
- Vibration absorbers should be provided throughout the installation to prevent noise from being transmitted.



# SELECT THE BEST LOCATION

## Indoor Unit Installation:

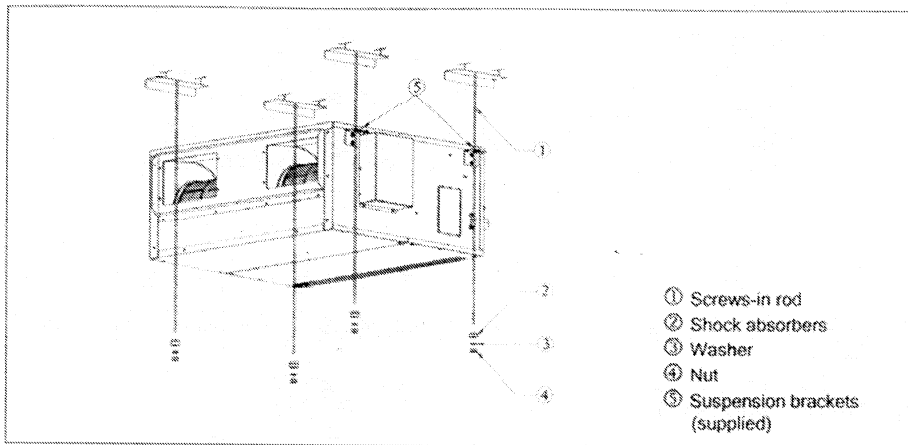
Fix the suspension brackets to the unit (2 each side) into existing slots, using the screws supplied.

Insert 4 M8 threaded rods into the ceiling. Introduce the other end of the rods through the slots of the unit suspension brackets.

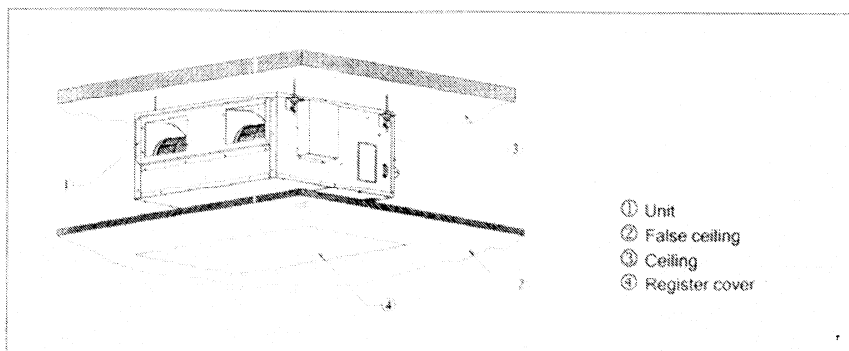
Position the shock absorbers, add washers and screw the nuts down until the unit is correctly supported.

If there is sufficient space, a rubber or neoprene sheet can be placed between the ceiling and the unit.

**IMPORTANT:** The unit must be perfectly leveled.



Once all these operations have been completed, the false ceiling to hide the unit may be installed, but a register cover must be left below for future maintenance. Grills of an adequate size should be incorporated in the unit for return air suction.



# SELECT THE BEST LOCATION

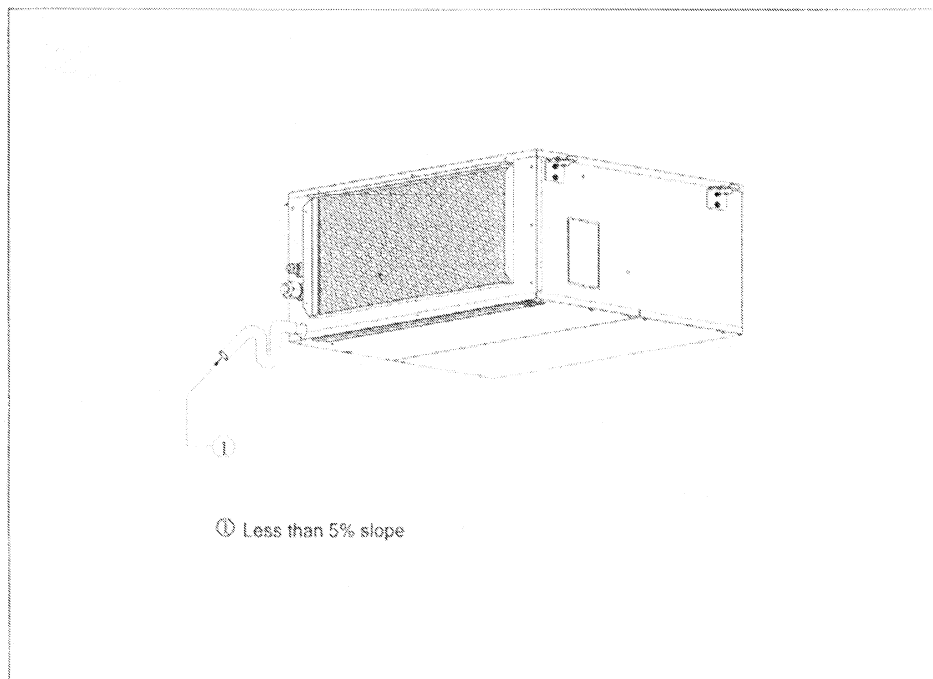
## Condensate Drainage

All units are provided with an internal condensate drainage pan which incorporates a 25mm external  $\varnothing$  drainage tube. A tube for evacuating condensates must therefore be provided.

The recommendations below must be followed in all cases:

- Use galvanized steel, copper or plastic piping. Do not use ordinary garden hose.
- Use a material that guarantees perfect water tightness on the drainage pipe.
- If rigid material has been used for the drainage, it is necessary to provide some kind of elastic coupling in the drainage line to absorb possible vibrations.
- The drainage line should always be below the connection itself, and should be also slope to facilitate drainage.
- If the temperature below freezing are expected in the unit surroundings, the drain tube should be protected against the possible formation of ice. To do so, a heating wire should be installed in the drain connection, which should be independent from the unit power supply, and come into operation before the temperature drops below the freezing point.

Warning: No drill holes should be made in the base of the unit, since the drain pipes may be perforated.



# SELECT THE INSTALLATION LOCATION

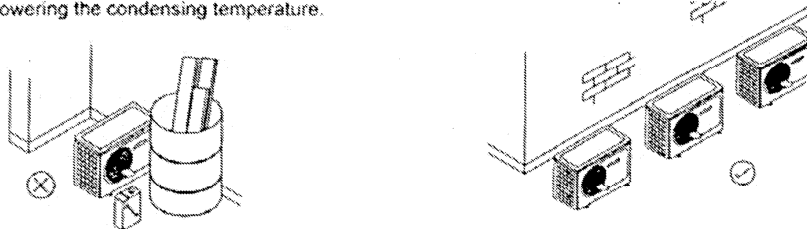
## Installation of Outdoor Unit

As condensing temperature rises, evaporating temperature rises and cooling capacity drops. In order to achieve maximum cooling capacity, the location selected for outdoor unit should fulfill the following requirements:

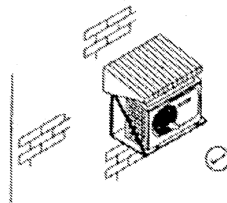
- Install the condensing (outdoor) unit in away such that hot air distributed by the outdoor condensing unit cannot be drawn in again (as in the case of short circuit of hot discharge air). Allow sufficient space for maintenance around the unit.



- Ensure that there is no obstruction of airflow into or out of the unit. Remove obstacles which block air intake or discharge.
- The location must be well ventilated, so that the unit can draw in and distribute plenty of air thus lowering the condensing temperature.



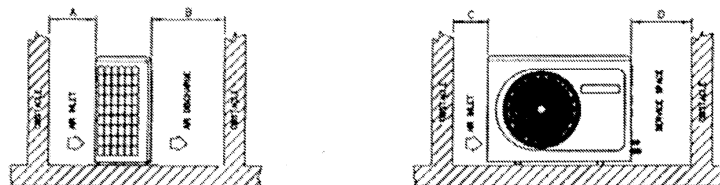
- A place capable of bearing the weight of the outdoor unit and isolating noise and vibration.
- A place protected from direct sunlight. Otherwise use an awning for protection, if necessary.



- The location must not be susceptible to dust or oil mist.

### INSTALLATION CLEARANCE

- Outdoor units must be installed such that there is no short circuit of the hot discharge air or obstruction to smooth airflow. Select the coolest possible place where intake air should not be hotter than the outside temperature (max. 45°C)



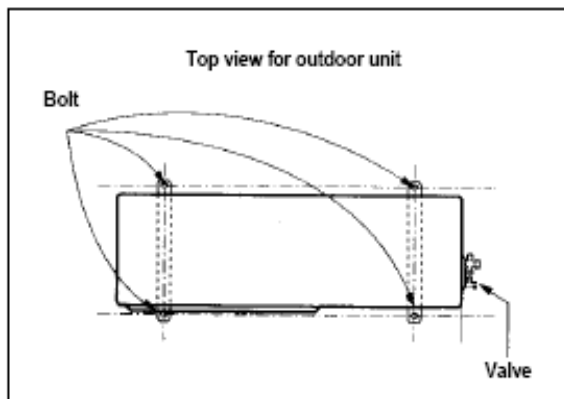
Minimum distance	A	B	C	D
MODEL(2.0HP,2.5HP,3.0HP,3.5HP)	150mm	1000mm	150mm	500mm
MODEL(4.0HP,5.0HP & 6.0HP)	300mm	1000mm	300mm	500mm

# INSTALLATION OUTDOOR/SOLAR UNIT

## 1. Outdoor Unit Installation

After selecting the best location, start installation according to indoor / outdoor unit installation diagram.

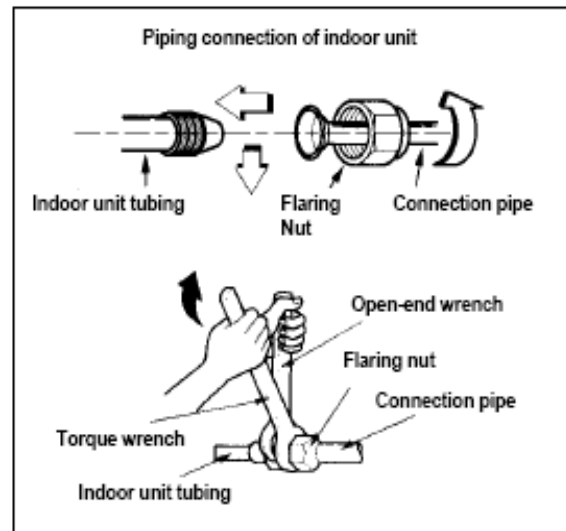
- A. Fix the unit on concrete or rigid frame firmly and horizontally by bolt and nut.
- B. When installing at roof, please consider strong wind. Please fasten the installation stand firmly with bolt / nut



## 2. Connecting the Piping

### A. Connect the piping to indoor unit

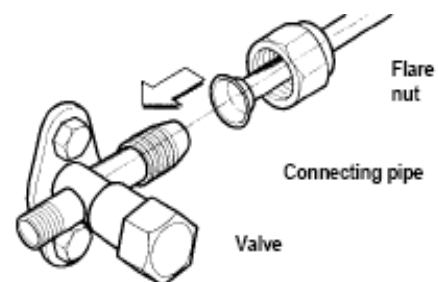
- Please make flare after inserting flare nut.
- Please refer to Cutting and flaring column.
- Locate at joint portion of tube assembly in case of using long piping.
- Align the center of piping and sufficiently tighten the flare nut with fingers.
- Further tighten the flare nut with torque wrench to the specified torque as stated in the table.



### B. Connect the piping to outdoor and solar unit

- Align the center of piping and sufficiently tighten the flare nut with fingers.
- Further tighten the flare nut with torque wrench to the specified torque as stated in the table.

### Outdoor and Solar piping connection



Outside Diameter		Torque
mm	inch	
6.35	1/4	1.8
9.52	3/8	4.2
12.7	1/2	5.5
15.88	5/8	6.6

# INSTALLATION OUTDOOR/SOLAR UNIT

## 3. Vacuuming the System

Step 1: Assembly of the Solar Collector **MUST** be carried out in the early morning or in a cool, dry area; this is to avoid scalding to the installers.

Step 2: Install the double rubber seals into the main medium tank taking care not to damage the seal.

Step 3: Slide the Vacuum tubes over the copper u-tubes taking care not to scratch or damage the vacuum tubes, seat the vacuum tubes into the main medium tank, and secure the tail end to the collector frame by using the tail stock ring and plastic nut. Note: Keep stock ring nut loosely in place until medium is installed.

Step 4: Vacuum Solar panel to 30 inch mercury and hold vacuum 24 hours, before the introduction of the solar medium into the panel. Failure to do so **will void the warranty**, if damage occurs to the air conditioner.

Step 5: Installation of the solar panel should face the East with the variation from 10 to 15 degrees to East-West.

Step 6: Fix the solar collector firmly to the building to guarantee the integrity of the system. Attach the building lightning cable to the solar collector.

Step 7: Fill system with 12/1 absorption medium supplied with solar collector;  
Note: Some systems are pre-charged and will not be supplied with medium.

Step 8: Fill the balance of the Solar Collector with Distilled water, allow distilled water to reach ambient air temperature before introduction into the solar tank. Failure to do so may result in damage to the solar tubes.

Step 9: Attach 3/8 or 1/2 copper lines to the inlet and outlet connections of the solar collector and also to the 1st and 2nd service valves located at the back of the condensing unit.

Step 10: Vacuum system to 30 inch mercury and hold vacuum 24 hours.

Step 11: Refer to nameplate for proper electrical current requirements, and then connect power to a properly grounded power supply. Minimum circuit ampacity should be at least 125% of the amperage shown in the design data section for appropriate model. No other equipment should be connected to this circuit to prevent overloading. Use of an extension cord is not recommended. Electrical circuit should be fused with slow blow or HACR circuit breaker.

# INSTALLATION OUTDOOR/SOLAR UNIT

Step 12: Operate the air conditioner for five (5) to ten (10) minutes. No excessive noise or vibration should be evident during this run period. The condenser blower (ambient air), the evaporator blower (inside unit), and the compressor should be running.

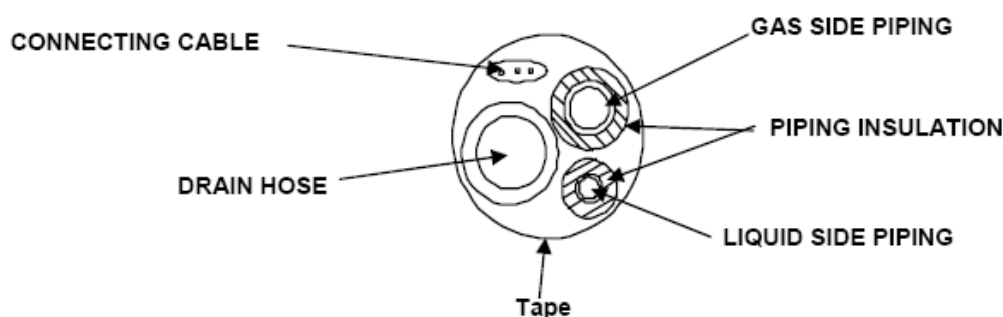
Step 13: Charge system slowly with refrigerant 407c until operating pressures are achieved.

Step 14: Allow the solar collector to charge for 5 days and readjust refrigerant levels as required.



# INSULATING THE PIPING

- Please carry out insulation at pipe connection portion as mention in indoor / outdoor unit installation diagram. Please wrap the insulated piping end to prevent water from going inside the piping.
- If drain hose or connecting piping is in the room (where dew may form), please increase the insulation by using POLY - E FOAM with thickness 6 mm or above.
- For connecting piping (gas and liquid) should have individual insulation.
- Wrap the piping, the drain hose and the connecting cable with tape.



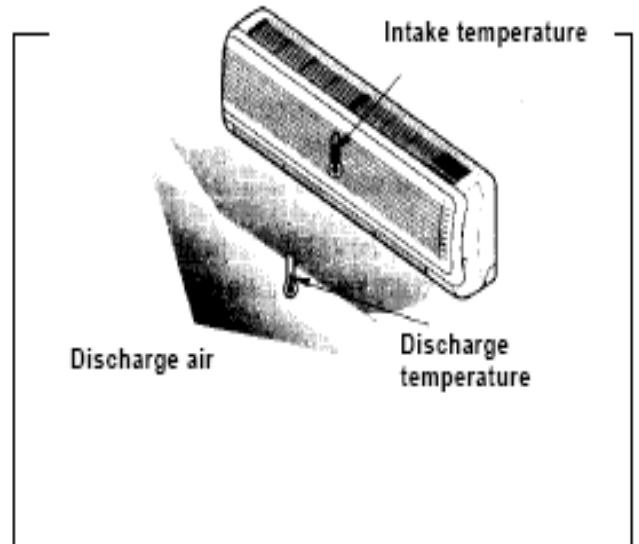
## CAUTION

Before connecting power supply cable to air conditioner:

1. Specification of power source.
2. The screws which fasten the wiring in the casing of electrical fitting are liable to come loose from vibration to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened.(If they are loose ,it could give rise to burn-out of the wires.)
3. Never fail to have an individual power specialized for the air conditioner. As for the method of wiring, be guided by the circuit diagram pasted on the inside of control box cover.
4. Provide a circuit breaker switch between power source and the unit.
5. Confirm that electrical capacity is sufficient.
6. Confirm that the cable thickness is as specified in power sources specification.
7. Never fail to equip a leakage breaker where it is wet or moist.
8. For secure connect Grounding cable to terminal first and then other cable (live, neutral).For disconnect cable , Grounding cable should disconnect lastly.
9. Connect the wires to the terminal on the control board individually according to the outdoor unit connection. Ensure that the color of the wires of outdoor unit and the terminal NO ('L','N','E','COMP') are the same as the indoor unit.

# EVALUATING THE PERFORMANCE

- Operate the unit at cooling operation mode for 15 minutes or more.
- Measure the temperature of the intake and discharge air.
- Ensure the difference between the intake temperature and the discharge one is more 8°C



# **SERVICING AND MAINTENANCE**

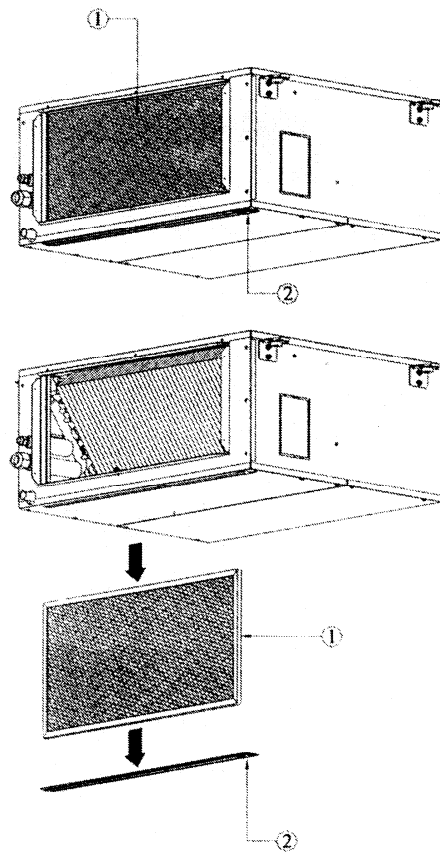
# SERVICING AND MAINTENANCE

## ATTENTION:

Before performing any service or maintenance operations, turns OFF the main power switch.

In order to obtain maximum performance, special attention should be paid to the following points:

- Inspect and clean the outdoor unit, especially the heat exchanger coil.
- Ensure that all rubber and insulating joints are in good condition.
- Check and clean condenser drain pan of the indoor unit; the same check must be made for the heat pump outdoor units.
- Check tightness of electric connections.
- Clean or replace the air filter of the indoor unit.

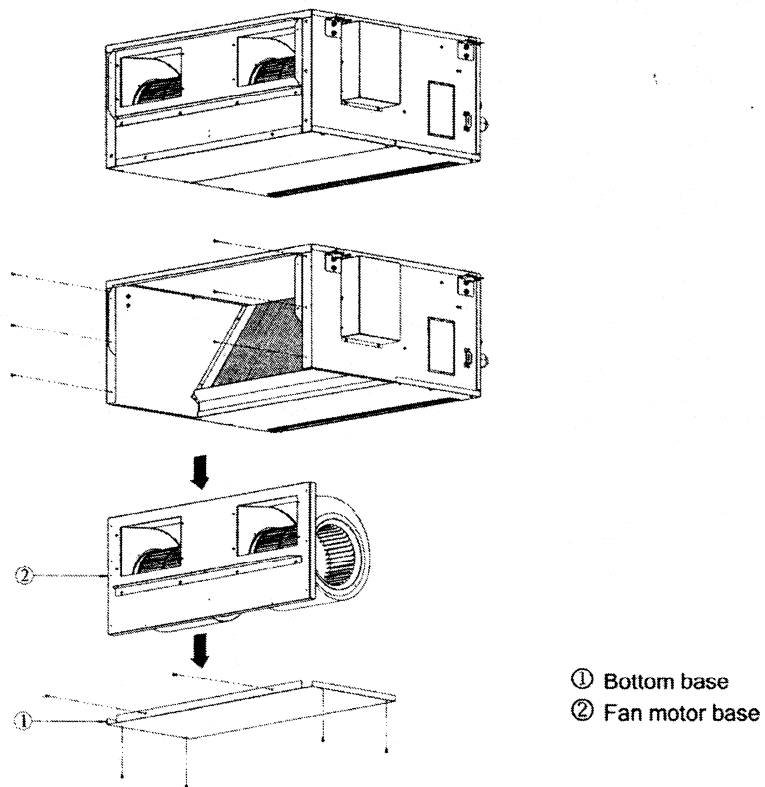


- ① Air filter
- ② Filter closing

# SERVICING AND MAINTENANCE

How to service motor:

- Unscrew the bottom base (6 screws).
- Remove the bottom base.
- Unscrew the 6 side screws at the front outlet panel (3 each side).
- Remove the fan motor base by sliding downward.



# SERVICING AND MAINTENANCE

- The unit is designed to give a long life operation with minimum maintenance required. However, it should be regularly checked and the following items should be given due attention.

Components	Maintenance procedure	Recommended Schedule
Air Filters (Indoor Unit)	<ol style="list-style-type: none"> <li>1. Clean with a vacuum cleaner or by tapping lightly on a hard surface and then washing in lukewarm water (below 40°C) with neutral soap.</li> <li>2. Rinse well to dry before re-installing.</li> <li>3. Note: Never use petrol, thinner, benzene or other volatile chemicals, which may cause plastic surface to deform.</li> </ol>	<p>Every 2 weeks. More frequently if required.</p>
Indoor Unit	<ol style="list-style-type: none"> <li>1. Clean away dirt or dust on grille or panel by wiping with a soft cloth soaked in lukewarm (or cold) water or neutral detergent solution.</li> <li>2. Note: Never use petrol, thinner, benzene or other volatile chemicals, which may cause plastic surface to deform.</li> </ol>	<p>Every 2 weeks. More frequently if required.</p>
Condensate Drain Pan and Hose/Pipe	<ol style="list-style-type: none"> <li>1. Check and clean</li> </ol>	<p>Every 3 months</p>
Indoor Fan	<ol style="list-style-type: none"> <li>1. Check for unusual noise</li> </ol>	<p>If necessary</p>
Indoor and Outdoor coil	<ol style="list-style-type: none"> <li>1. Check and remove dirt, which are clogged between fins.</li> <li>2. Check and remove obstacles which hinder airflow in and out of indoor / outdoor unit.</li> </ol>	<p>Every month.</p>
Electrical	<ol style="list-style-type: none"> <li>1. Check current, voltage and wiring.</li> <li>2. Check faulty contacts caused by loose connections, foreign matter, etc.</li> </ol>	<p>Every 2 months.</p>
Compressor	<ol style="list-style-type: none"> <li>1. No maintenance needed if refrigerant circuit remains sealed. However check for refrigerant leak at joints and fittings.</li> <li>2. Compressor oil is factory charged. Not necessary to add oil if circuit remains sealed.</li> </ol>	<p>Every 6 months.  No maintenance required.</p>
Fan Motor Lubrication	<ol style="list-style-type: none"> <li>1. All motor pre-lubricated and sealed at factory.</li> </ol>	<p>No maintenance required.</p>

## PRE-SEASON INSPECTION

Operate for 15 minutes.  
If the difference in temperature between the air outlet vent and the air intake vent is 8°C or more when cooling, the unit is normal.

Are the air outlet vents and air intake vents obstructed?  
If they are, cooling performance will drop and cause problem.

Is the drain hose cracked or crushed?  
If it is, leaks will result

Are the remote control batteries in good condition?  
If display is faint or no display is visible, the batteries should be replace

## WHEN NOT USING FOR LONG PERIODS OF TIME

Operate the air conditioner for 2 to 3 hours.

- Type of operation: cooling
- Temperature setting: 30°C

For air conditioners with a power plug, stop operation and pull out the power plug.

Remove the batteries from the remote control.

# **TROUBLESHOOTING GUIDE**



# TROUBLESHOOTING GUIDE

When any air-conditioner malfunction is noted, immediately switch off the power supply to the unit, and contact the local dealer, if necessary. Some simple troubleshooting tips are given below:

FAULT	CAUSE
1. Fan does not work 3 minutes after starting	<ul style="list-style-type: none"> <li>• Protection against the frequent starting. Wait 3 or 4 minutes</li> </ul>
2. The air conditioning unit does not work	<ul style="list-style-type: none"> <li>• Power failure or you must be replaced the fuse.</li> <li>• The power plug is disconnected.</li> <li>• Possibility of making a programming error in the controller.</li> <li>• If the fault persist after these verifications, contact your installer.</li> </ul>
3. The air conditioning unit does not blow sufficiently	<ul style="list-style-type: none"> <li>• The air filter is dirty.</li> <li>• The doors or windows are open.</li> <li>• The air entrance and exit are clogged.</li> <li>• The regulate temperature is not high enough.</li> </ul>
4. The remote control light is deficient	<ul style="list-style-type: none"> <li>• The batteries are discharge.</li> <li>• The batteries are not correctly inserted.</li> <li>• The assembly is not good.</li> </ul>
5. Air discharge flow has a bad odor	<ul style="list-style-type: none"> <li>• This odor can be caused by cigarette smoke particles, perfume, sweat, which stick to the coil.</li> <li>• Check if there is any moisture on the walls, garment, other.</li> <li>• Check the drain pan.</li> </ul>
6. Condensation on the air grille of indoor unit	<ul style="list-style-type: none"> <li>• This is due to air humidity after a long time of operation.</li> <li>• The unit has a lower temperature point, increase the point and operate at high speed.</li> </ul>
7. The water flow of air conditioning unit	<ul style="list-style-type: none"> <li>• Check the condensate evacuation.</li> </ul>
8. The air conditioning unit are noisy	<ul style="list-style-type: none"> <li>• "Air flow noise" : refrigerant fluid admission in evaporator.</li> </ul>

# TROUBLESHOOTING GUIDE

## 1. Relationship between the condition of the air conditioner and the pressure and electric current.

Condition of the air conditioner	Cooling Mode		
	Low Pressure	High Pressure	Electric current during operation
Insufficient refrigerant (gas leakage)	↓	↓	↓
Clogged capillary tube or strainer	↓	↓	↓
Short circuit in the indoor unit	↓	↓	↓
Heat radiation deficiency of the outdoor unit	↑	↑	↑
Inefficient compressor	↑	↓	↓

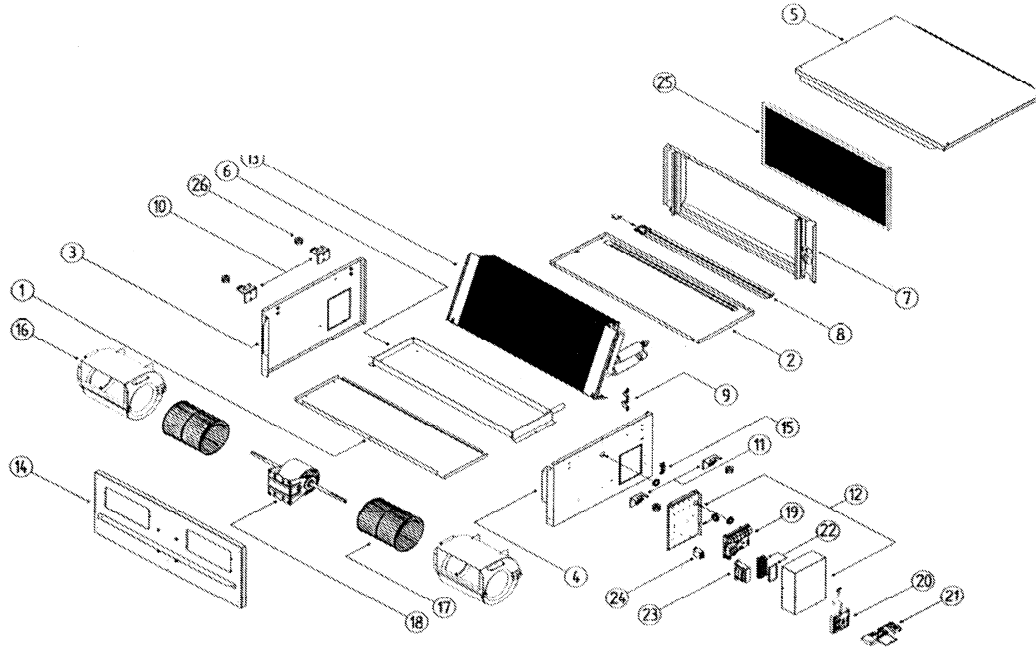
\* Carry out the measurement of pressure, electric current and temperature 15 minutes after an operation is started.

## 2. Diagnosis methods of a malfunction of a compressor.

Nature of fault	Symptom
Insufficient compressing of a compressor	<ul style="list-style-type: none"> <li>• Electric current during operation become approximately 20% lower than the normal value.</li> <li>• The discharge tube of the compressor becomes abnormally hot (normally 70°C to 90°C)</li> <li>• The difference between high pressure and low pressure becomes almost zero.</li> </ul>
Locked compressor	<ul style="list-style-type: none"> <li>• Electric current reaches a high level abnormally, and the value exceeds the limit of an ammeter. In some cases, a breaker turns off.</li> <li>• The compressor is a humming sound.</li> </ul>

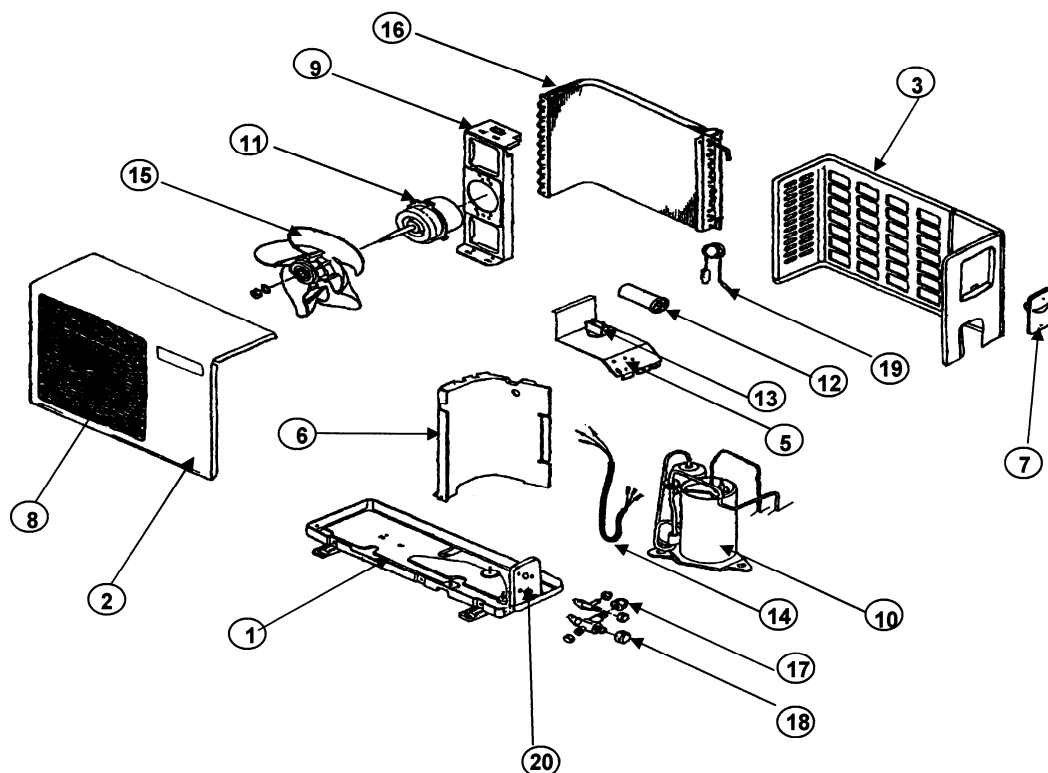
# **PARTS LIST**

# PARTS LIST



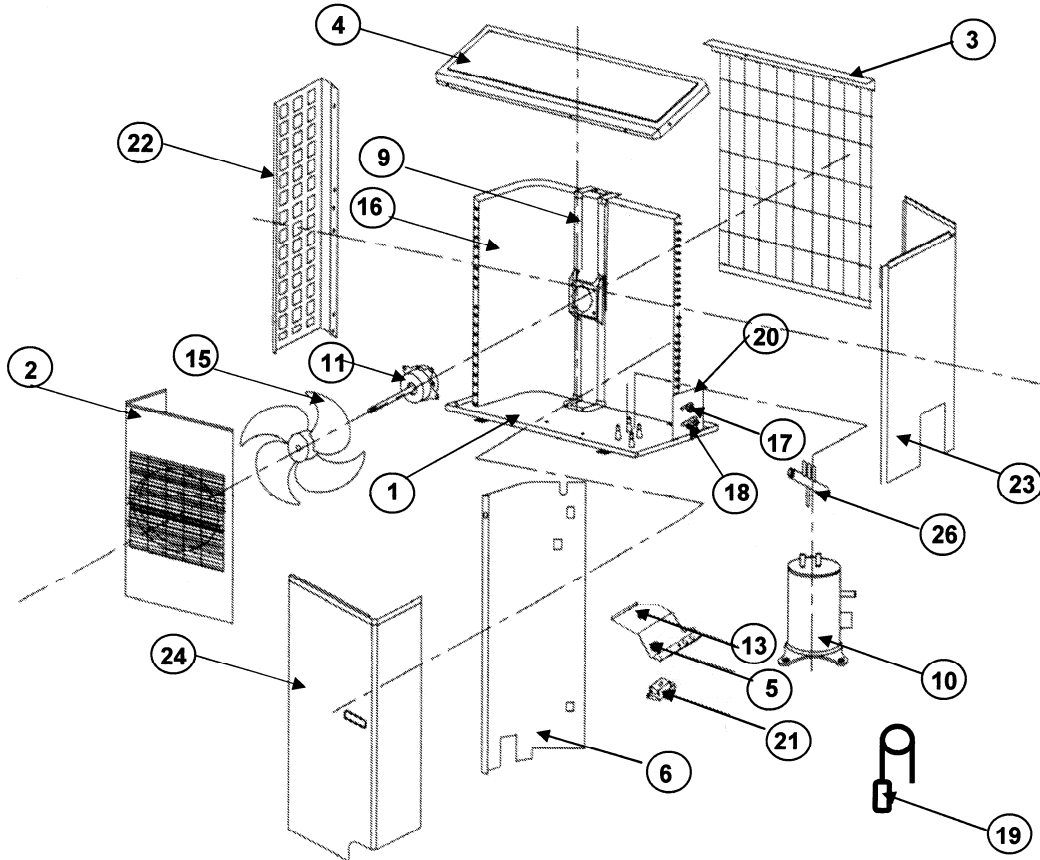
NO	PART DESCRIPTION	NO	PART DESCRIPTION
1	CASING BASE	17	WIRE CLAMP
2	FRONT PANEL	18	TERMINAL BLOCK
3	DRAIN PAN	19	-
4	MOTOR TRAY	20	CONTROL BOARD(PCB)
5	FRONT CABINET(SET)	21	HANDSET OR REMOTE CONTROL
6	SIDE PANEL(LEFT)	22	STEPPING MOTOR
7	SIDE PANEL(RIGHT)	23	EVAPORATOR
8	BLOWER WHEEL	24	FRONT RETURN AIR GRILL
9	BLOWER HOUSING	25	FRONT FILTER
10	FAN MOTOR	26	SIDE FILTER
11	CONTROL BOX	27	DISPLAY,RECEIVER
12	CONTROL BOX COVER	28	RETURN GRILL LOCK
13	LEFT MOUNTING BRACKET	29	DRAIN PIPE
14	RIGHT MOUNTING BRACKET	30	WIRE FOR CONTROL
15	CLAMP PLATE		
16	PIPING CLAMP		

# PARTS LIST



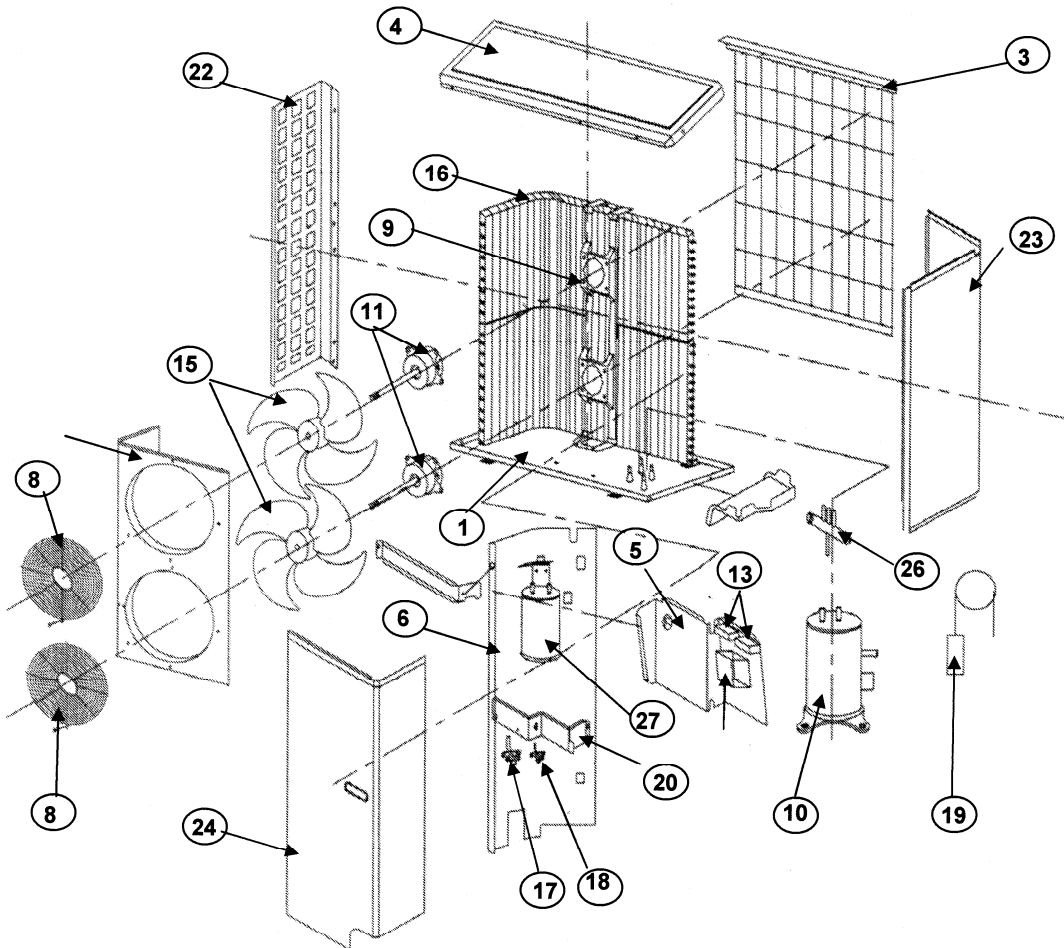
NO	PART DESCRIPTION	NO	PART DESCRIPTION
1	CASING, BASE	14	WIRE ASS'Y,COMPRESSOR
2	CASING,FRONT	15	PROPELLER FAN
3	CASING,BACK	16	CONDENSER COIL ASS'Y
4	DEFROST SENSOR(HEAT PUMP MODEL)	17	SERVICE VALVE,LIQUID
5	ELECTRICAL COMPARTMENT	18	SERVICE VALVE,GAS
6	PARTITION PLATE	19	CAPILLARY TUBE
7	HOLDER,TERMINAL COVER	20	VALVE PLATE
8	FAN GRILLE	21	CHECK VALVE (HEAT PUMP MODEL)
9	BRACKET, FAN MOTOR	22	4 WAYS VALVE (HEAT PUMP MODEL)
10	COMPRESSOR		
11	FAN MOTOR		
12	CAPACITOR,COMPRESSOR		
13	CAPACITOR,FAN MOTOR		

# PARTS LIST



NO	PART DESCRIPTION	NO	PART DESCRIPTION
1	CASING, BASE	16	CONDENSER COIL ASS'Y
2	CASING, FRONT	17	SERVICE VALVE, LIQUID
3	CASING, BACK	18	SERVICE VALVE, GAS
4	TOP CASING	19	CAPILLARY TUBE
5	ELECTRICAL COMPARTMENT	20	VALVE PLATE
6	PARTITION PLATE	21	CONTACTOR
7	HOLDER, TERMINAL COVER	22	CASING, LEFT
8	FAN GRILLE	23	CASING, RIGHT(BACK)
9	BRACKET, FAN MOTOR	24	CASING, RIGHT(FRONT)
10	COMPRESSOR	25	CHECK VALVE (HEAT PUMP MODEL)
11	FAN MOTOR	26	4 WAYS VALVE (HEAT PUMP MODEL)
12	CAPACITOR, COMPRESSOR		
13	CAPACITOR, FAN MOTOR		
14	WIRE ASS'y, COMPRESSOR		
15	PROPELLER FAN		

# PARTS LIST



NO	PART DESCRIPTION	NO	PART DESCRIPTION
1	CASING, BASE	16	CONDENSER COIL ASS'Y
2	CASING, FRONT	17	SERVICE VALVE, LIQUID
3	CASING, BACK	18	SERVICE VALVE, GAS
4	TOP CASING	19	CAPILLARY TUBE
5	ELECTRICAL COMPARTMENT	20	VALVE PLATE
6	PARTITION PLATE	21	CONTACTOR
7	HOLDER, TERMINAL COVER	22	CASING, LEFT
8	FAN GRILLE	23	CASING, RIGHT (BACK)
9	BRACKET, FAN MOTOR	24	CASING, RIGHT (FRONT)
10	COMPRESSOR	25	CHECK VALVE (HEAT PUMP MODEL)
11	FAN MOTOR	26	4 WAYS VALVE (HEAT PUMP MODEL)
12	CAPACITOR, COMPRESSOR	27	SUB ACCUMULATOR
13	CAPACITOR, FAN MOTOR		
14	WIRE ASS'y, COMPRESSOR		
15	PROPELLER FAN		