



OWNER'S MANUAL

RT-135

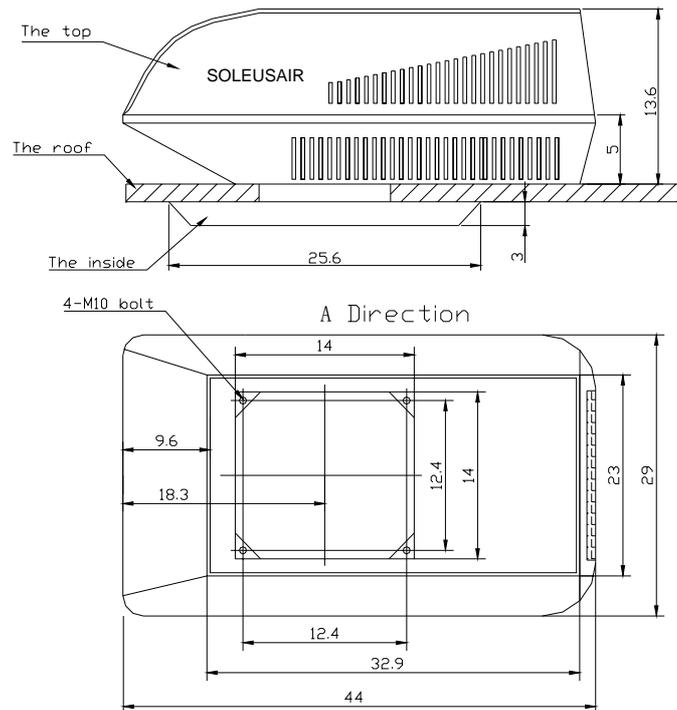
**Roof Top
Air Conditioner**

**Please read Owner's Manual carefully
before operating the unit.**

Main technical parameter of RT-135

Capability		Unit	Value
Operating Capabilities: Cooling	Cooling Capacity	Btu/h	13500
	Watts	W	1220
	Rated Full Load Current	A	11.2
Operating capabilities: Heating	Heating Capacity	Btu/h	14400
	Watts	W	1620
	Rated Full Load Current	A	14.8
Air Flow Volume		CFM	412/235
Power Supply			115VAC/60HZ/1Phase
Operational Range-Cooling		F	61 to 115
Operational Range-Heating		F	17 to 90
Noise Level	Inside The Room	dB(A)	51
	Outside The Room	dB(A)	62
Refrigerant / Amount		ounce	R22 / 42
Net Weight	Top Mount Unit	lbs	103.5
	Indoor Unit		7.5
Assembled Dimensions	Top Mount Unit	In	44(W) × 28 3/4(D) × 14 3/4 (H)
	Indoor Unit	In	21 1/2(W) × 20 1/2(D) × 3 1/4(H)

RT-135 series dimensions (Unit: In)



Use

RT-135 series air-condition have the capability of cooling / heating / ventilation and dehumidification and contain the character of resisting shake attrition and high-dependability. It can be used for applications such as RV units, trucks & vans, small-scale shipping vehicles & farm equipment.

Structure and character

Structure

This air conditioning is in the top of structure

Main components include evaporator, condenser, compressor, throttling device, air blower system, protection cover, tunnel and the control panel in main cabin.

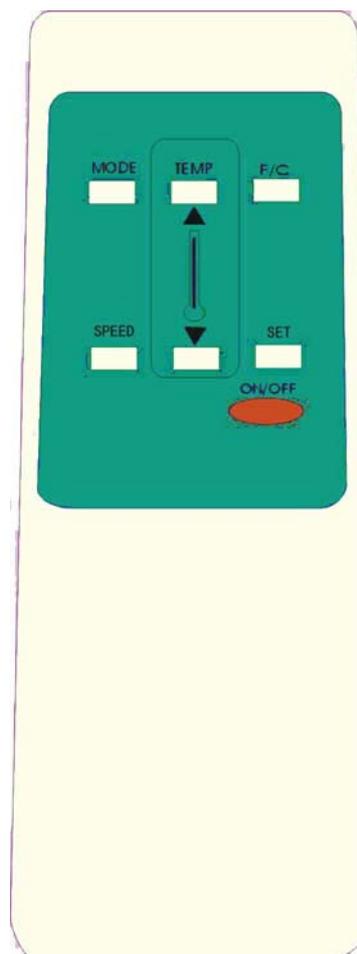
Character

- 1) Instant cooling/adjustable temperature: It can reduce the environment temperature in a short time in order of passenger's demand.
- 2) Continuously running in adverse condition.
- 3) Lengthy continuously running time in acid and alkali condition.
- 4) The Width & Height capability : The appearance and assembly size keep the same with present products on the market **and helps keep air flow fluent.**
- 5) Quiet operation: Improve comfortableness, **low noise.level.**
- 6) Delay start: With sudden loss of power and rapid reset, compressor is time delayed for 3 minutes for protection

Control panel



Remote device

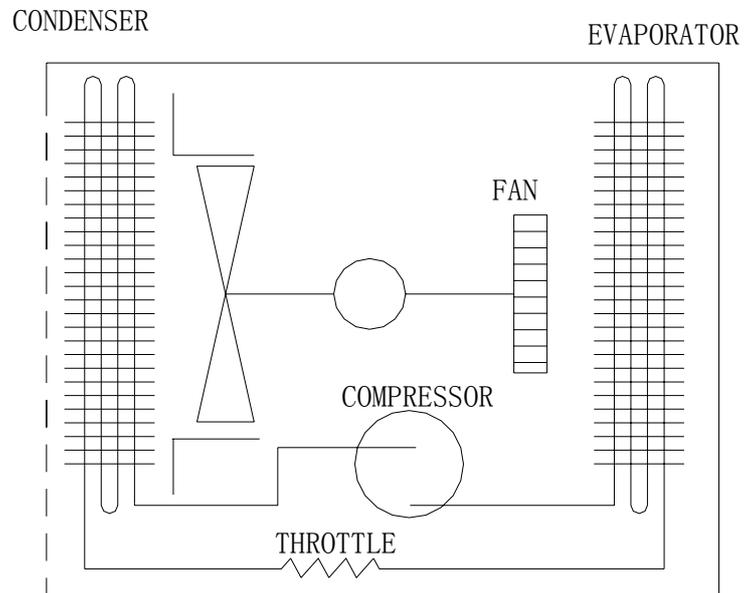


Operation through the control panel or remote device

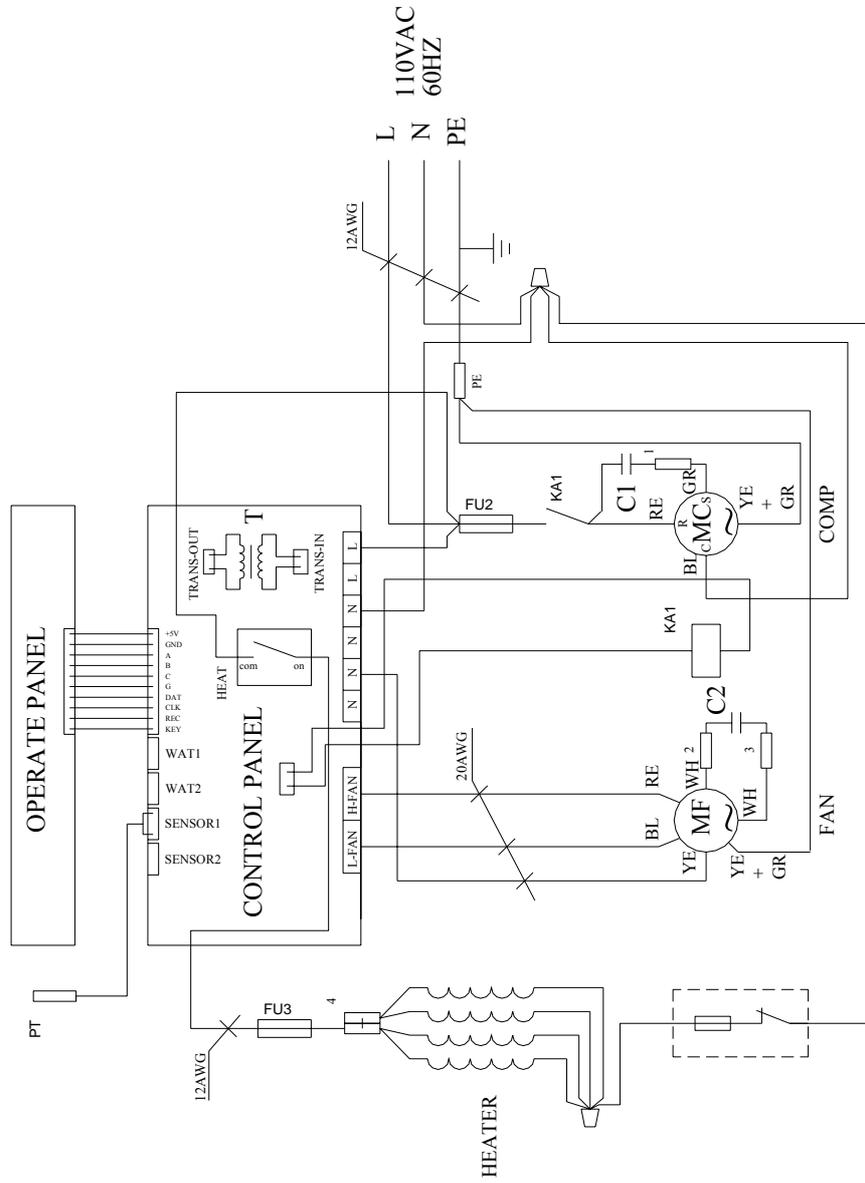
Through the control panel in the room, user can control all functions of the air-conditioner. The parts of control contain the following functions:

1. Switch
The air-conditioner can be started or stopped by the button "ON/OFF". The indicator lamp "POWER" in the upper left corner is lighted when air-conditioner is running.
2. Choose button "MODE"
This button confirms the working status of the air-conditioner.
You can switch it in: "FAN" state, "COOL" state and "HEAT" state.
3. Temperature setting button "TEMP"
Through buttons "▲" and "▼", you can increase and reduce the setting temperature in the room.
4. Fan speed switch button "SPEED"
You can switch fan speed in "HIGH" or "LOW".
5. Temperature showing "temperature"
In holding state, control panel shows present indoor temperature. The control panel shows temperature in setting state. If you don't press the "TEMP" key more than ten minutes, the control panel will be back awaiting state and show present indoor temperature.
6. Push "SPEED+MODE" (in the control panel) or "SET" (in the remote device) into setting state
In this state you can set parameter with "▲" and "▼".

The scheme of refrigeration system



Schematic circuit diagram



Cautions

1. In any case the compressor will restart 3 minutes after power failure
2. The air-conditioner adopts three core plugs: **Modification will void warranty**
3. Working voltage of the air-conditioner must keep within the range of 115VAC±10. If the voltage is too high or low will lead to damage of the compressor.
4. The normal working environment temperature of the air conditioner is: 0F to115F

Maintenance and Safeguard

It will keep at maximum performance ratings if you perform routine maintenance. After running for 90 days, you must clean up dust around the fins of the heat exchanger in order to keep refrigeration performance at optimum

TROUBLE SHOOT CHART

Problem	Possible Cause	Solution
Doesn't cool / heat	<ol style="list-style-type: none"> 1. The voltage of the power is lower than 97V 2. You are using an extension cord for the unit 3. The system leaks Fluorine 4. Button "ON/OFF" failure 5. Set the temperature to the abnormal position. 6. Compressor not working. 7. The sub cooling of compressor is protected and does not work 8. Capillary is blocked 	<p>Adjust the voltage range into normal demand.</p> <p>Do not use an extension cord.</p> <p>Call repair technician</p> <p>Replace button "ON/OFF".</p> <p>Refer to operation explanation.</p> <p>Turn off for ten minutes. Turn back on</p> <p>Call repair technician</p> <p>Call repair technician</p>
Inadequate cooling	<ol style="list-style-type: none"> 1. The evaporator and/or condenser are blocked by debris . 2. The doors and windows have opened frequently. 3. Heat load is too high. 4. Set temperature is in improper position. 5. Capillary is blocked. 6. The refrigeration system has failed. 	<p>Clean the evaporator and condenser.</p> <p>Reduce times that open the door.</p> <p>Installation of larger unit.</p> <p>Adjust the set value.</p> <p>Call repair technician</p> <p>Call repair technician</p>

No heat	<ol style="list-style-type: none"> 1. Power is off. 2. Set temperature is in improper position 3. Connector has fallen off. 4. Heater is defective 5. Fuse is open. 6. Control panel is not working. 	<p>Check the circuit Adjust the set value</p> <p>Tighten the plug. Change the heater. Change the fuse. Change the circuit panel.</p>
The fan doesn't operate	<ol style="list-style-type: none"> 1. Control panel is faulty. 2. The capacitor of fan defective. 3. Fan defective. 	<p>Change the panel. Change the capacitor.</p> <p>Change the fan.</p>
Unusual sound or heavy shaking	<ol style="list-style-type: none"> 1. Installation of the air-conditioner too gradient. 2. Fan touches with other hardware. 3. The connective pipelines collide with each other. 4. The part becomes flexible. 	<p>Check Installation.</p> <p>Adjust the fan position.</p> <p>Adjust the position between the pipelines.</p> <p>Tighten screws.</p>

Installation

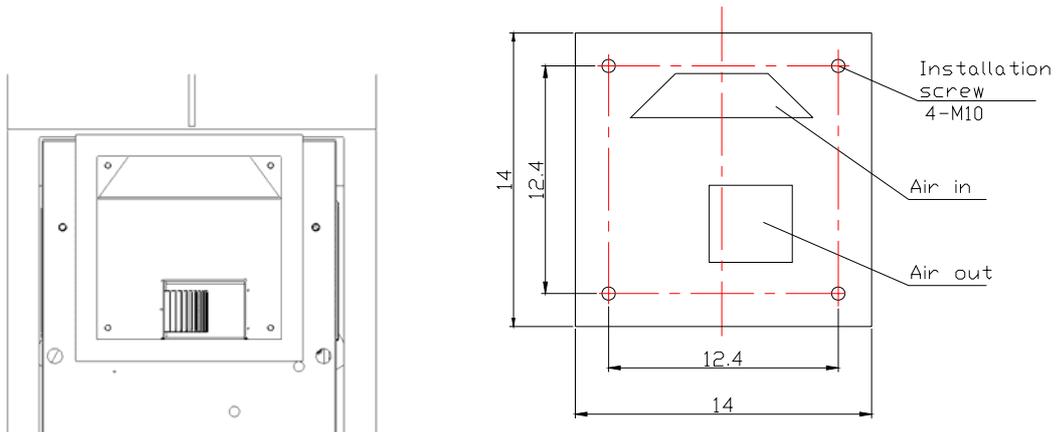
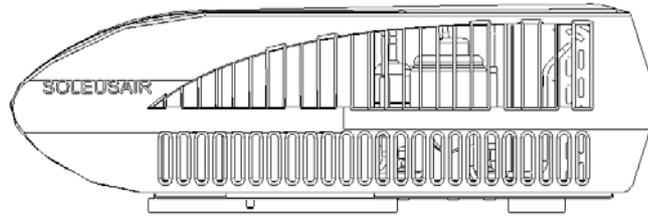
1. Installation preparation

If you need to install the air-conditioner on already existing roof vent, the measure of vent must reach 14×14 (in). If it is not enough of this measurement, you must extend this measurement. If it is larger than this measurement, you must make a wood frame for the vent to meet above measurement.

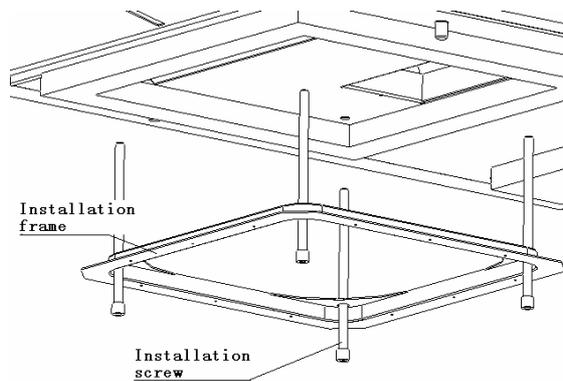
The gradient of install the platform must no more than 5° . If greater than 5° it can be influenced that condensation water of the air conditioner could overflow.

You must avoid any wire and any pipeline before incision.

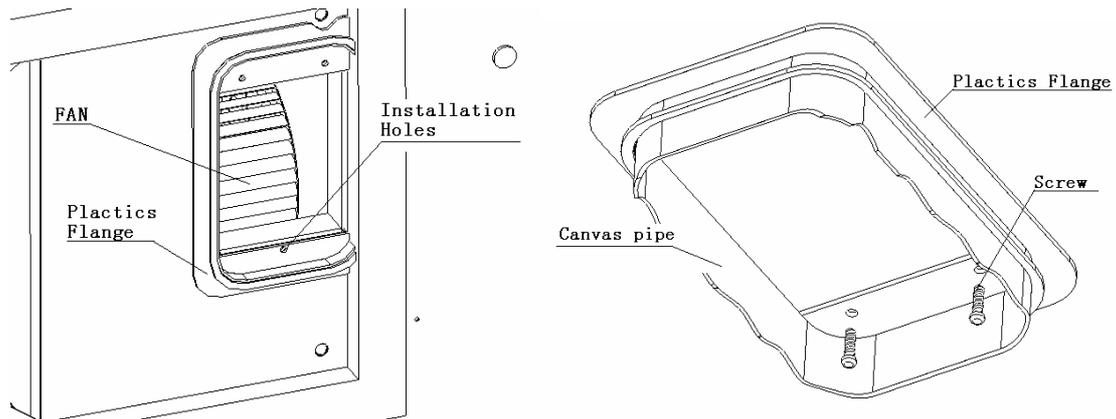
2. Please directly install the top of the air-conditioner on the placket and make windward face toward the front of the vehicle, condenser toward the back of the vehicle. Put the seal between air-conditioner and placket, and you can sight the four M10 install bores in the air-conditioner bottom. To those irregular coarse roofs you must have sealant seal up all gaps in order to prevent rainwater infiltrating into room.



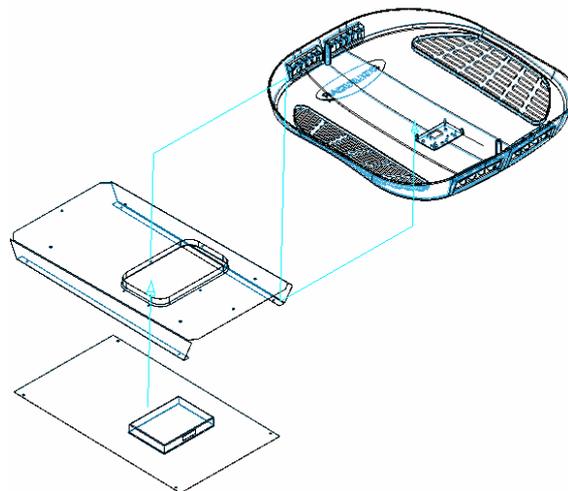
3. You must make mounting hole on indoor installation frame align with the hole on the top of the air-conditioner and tightly **connect** with 4-M10 special screw.



4. Install canvas-pipe
You must make the flange of the canvas-pipe align with air outlet of the top of air-conditioner and **connect** them with screw, gasket, spring gasket and nut.



5. Prepare installing of indoor equip: Disassemble the indoor equip.



6. **Install the indoor unit**

a) You must install the main of indoor tunnel and installation frame with four ST4.2X16 screw.

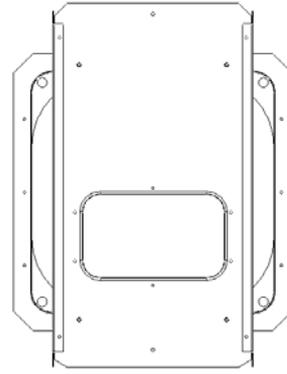
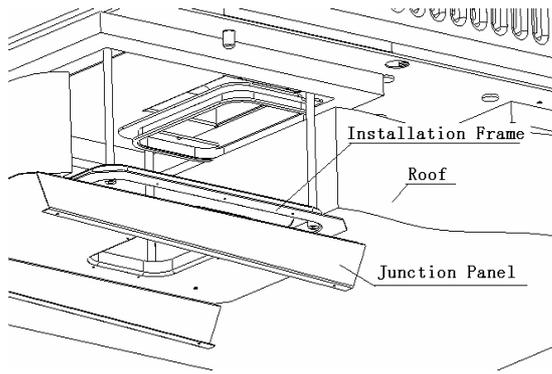
Caution: It can be rotated from $+90^\circ$ to -90° .

b) Installing the canvas **pipe underparts**

You must put into metal flange from canvas pipe under part and tightly nip main vent-pipe and **connect** with ST4.2X16 screw. The surplus part is cut out.

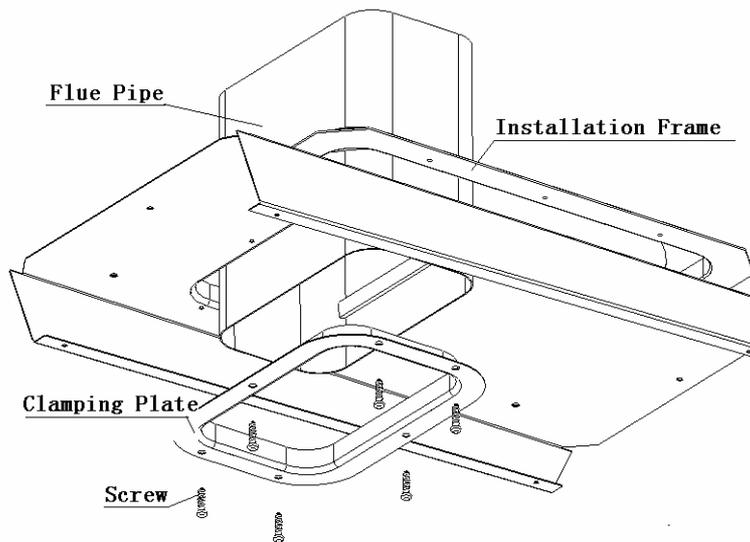
c) Install covers board of vent-pipe and indoor main cover board.

d) Connect indoor plastic and gold with two $M4 \times 10$ screws, gasket and spring gasket.

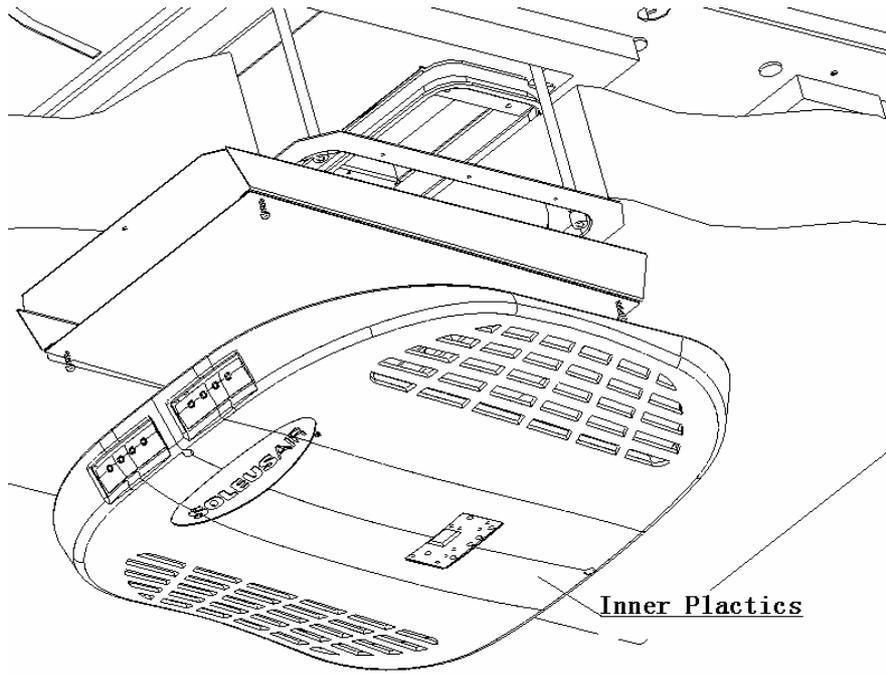


Check

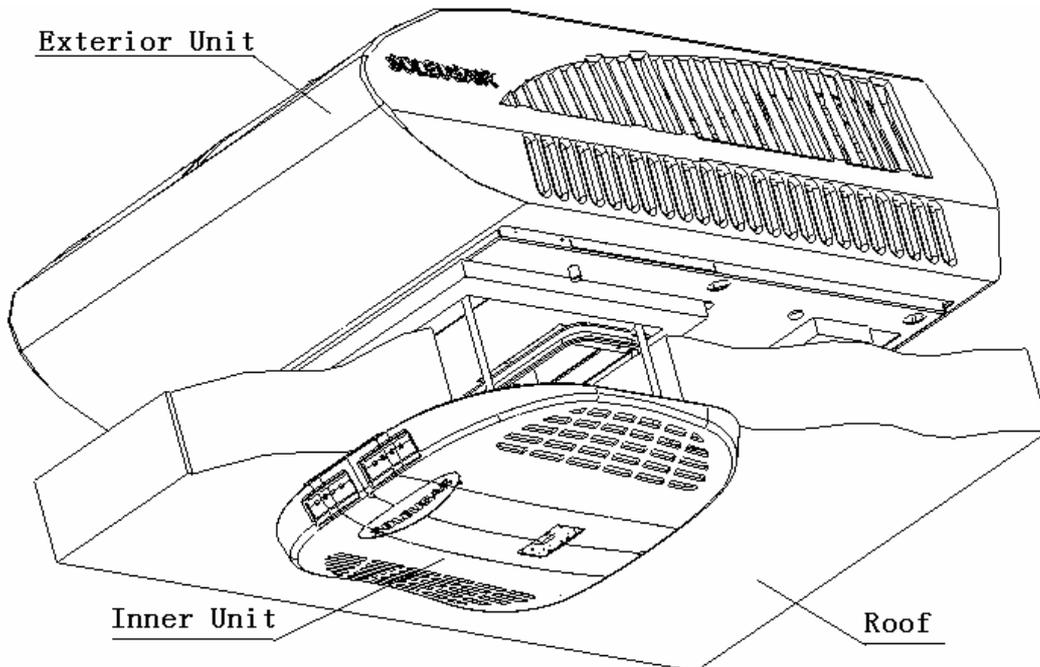
1. Check the complete installing manual to make sure unit is installed correctly and safe



2. Switch on the power, operate the air conditioner according to above methods. If it runs improperly, for example abnormal noise, running current too high or no temperature, please check owner's manual.



3. Clean up the installing rubbish and restore decoration to original decor.



Warranty

LIMITED WARRANTY

Soleus International Inc. warrants the accompanying Soleus Air RT-135 Roof Top Air Conditioner to be free of defects in material and workmanship for the applications specified in its operation instruction for the period of labor and parts specified below.

PARTS
5 YEARS FOR COMPRESSOR
1 YEAR FOR OTHER COMPONENTS

This warranty shall not apply to broken or marred cabinets, accessories, knobs, filters or routine maintenance. This warranty does not apply to uncrating, setup, installation, removal of the product for repair or reinstallation of the product after repair..

This warranty does not apply to repairs or replacements necessitated by any cause beyond the control of Soleus International including, but not limited to, any malfunction, defect or failure caused by or resulting from unauthorized service or parts, improper maintenance, operation contrary to furnished instructions, shipping or transit accidents, modification or repair by the user, abuse, misuse, neglect, accident, incorrect power line voltage, fire, flood or other Acts of God, or normal wear and tear.

Warranty service must be performed by a qualified HVAC contractor. Soleus maintains a centralized service network to provide parts and assist in resolving service problems if difficulties are encountered. Soleus agrees to provide service information, sell repair parts and reimburse the dealer / service agent for parts and services in accordance with Soleus International's Policies and Procedures. All labor charges must be pre approved in writing.

SOLEUS INTERNATIONAL MAINTAINS THAT ALL WARRANTIES, INCLUDING IMPLIED WARRANTY OR MERCHANTABILITY ARE LIMITED TO THE TERMS AND CONDITIONS SPECIFIED ABOVE. SOLEUS INTERNATIONAL DISCLAIMS ANY LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES AND IN NO EVENT SHALL SOLEUS INTERNATIONAL INC.'S LIABILITY EXCEED THE RETAIL VALUE OF THE AIR CONDITIONER.

FOR CUSTOMER SERVICES, WARRANTY CLAIM AND PARTS PURCHASING, CONTACT:

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