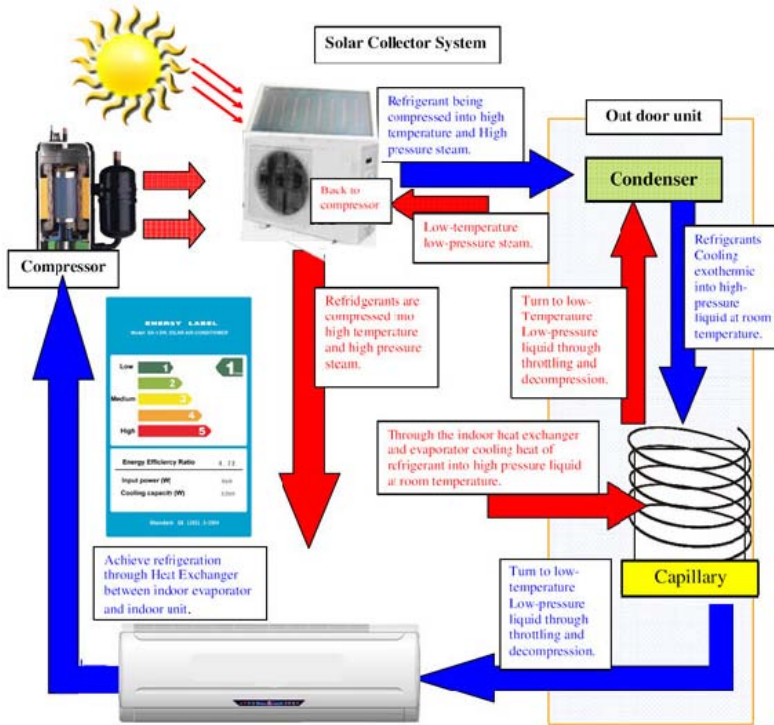


Frequently Asked Questions (FAQ) / CoolSolar Series Air Conditioner

1. Working principle of the CoolSolar Air Conditioner

The CoolSolar Series Air Conditioning system is a system that utilizes the sun as a heat source to assist the energy needed to drive the cooling process of a typical air conditioning system which in turn reduces the electrical consumption required to run the compressor. CoolSolar Air Conditioning System is similar to a regular A/C in that the refrigeration takes place by evaporating liquid with a very low boiling point. In both cases, when a liquid evaporates or boils, it takes some heat away with it, and can continue to do so either until the liquid is all boiled, or until everything has become so cold that the sub-zero boiling point has been reached.

The difference between the two is how the gas is changed back into a liquid so that it may be used again. A regular air conditioning system uses a compressor to increase the pressure on the gas, forcing it to become a liquid again through the use of the condenser coil. The change of state of the refrigerant, starts to take place approximately 2/3rd's of the way down the condenser. The CoolSolar Air Conditioning System uses a different method. It uses the solar heat from the sun to



superheat the refrigerant which enables the refrigerant to begin changing state at the top 2/3rd's of the condenser coil. By using this method it reduces the superheat of compression required to achieve the cooling process in the conventional cooling systems as well as utilizing more of the condenser cooling face of the coil. The conventional air conditioning system is only able to change a portion of the gas into a liquid state so as when the refrigerant enters into the metering device it is a saturated vapor. The Solar A/C process allows more of the refrigerant to change

state back into a liquid faster as well as allowing the transformation of more liquid into the metering device. The CoolSolar A/C could save about 30-45% electricity for cooling and more than 50% for heating.

2. How much energy can be saved by CoolSolar compared to normal Air Conditioner?

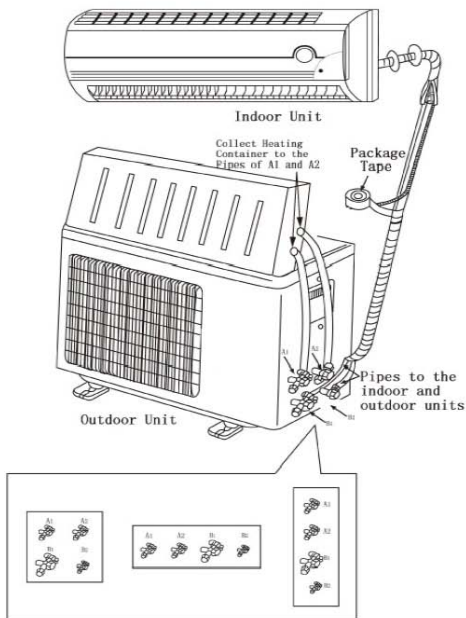
Comparison between Normal A/C and CoolSolar A/C for savings

| Product | BTU | Cooling (W) | Power (W) | EER | Savings Rate |
|-----------------------|--------|-------------|-----------|------|--------------|
| Normal AC Unit | 24,000 | 7200 | 2900 | 2.5 | |
| CoolSolar 72GW Series | 24,000 | 7200 | 2000 | 3.6 | 31.03% |
| Normal AC Unit | 18,000 | 5200 | 2080 | 2.5 | |
| CoolSolar 52GW Series | 18,000 | 5200 | 1400 | 3.71 | 32.69% |
| Normal AC Unit | 12,000 | 3500 | 1400 | 2.5 | |
| CoolSolar 72GW Series | 12,000 | 3500 | 900 | 3.89 | 35.71% |

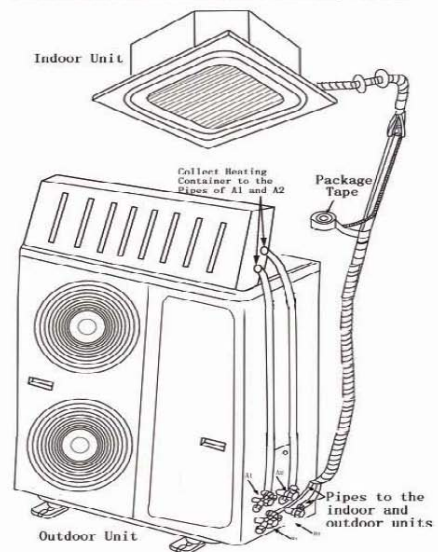
3. Can the Solar A/C be installed Do-It-Yourselfer

It is recommended to consult a local professional when installing any CoolSolar Series products. The installation method of solar air conditioner is similar to normal air conditioner. The standard distance between outdoor unit and indoor unit is 10-15 meters. The maximum is up to 30 meters. The standard distance between outdoor unit and solar panel is 1.5-3 meters. The outdoor panel will need to be facing South in the USA. The detailed installation guide will be provided and the installation diagrams are as below:

Solar Powered Air-conditioner Installing Picture



Solar Powered Air-conditioner Installing Picture





4. Is the CoolSolar Series powered 100% by solar?

NO. The CoolSolar air conditioner is not 100% powered by solar power. It is our powered by electricity and solar power as ancillary for electricity saving purpose. The CoolSolar A/C could save 30%-45% electricity for cooling and 50% for heating. The CoolSolar A/C has no inverter and storage battery to exchange the solar to electricity.

5. How does the CoolSolar Series work at night and/or in cloudy & rainy day?

The CoolSolar Series does not need sunlight to operate. It can work in any weather condition. The solar panel will absorb and store the heat energy got from sunshine at daytime. The solar A/C keeps working and saving at night. 4-5 hrs sunshine will have the A/C works and saves for more than 15hrs.

6. What is Energy Efficiency Ratio (EER) of Air Conditioner and how to calculate EER?

The EER is one of the most important indexes to value how well and how energy efficient the Air Conditioner is. EER is the steady-state rate of heat energy removal (i.e. cooling capacity) by the product divided by the steady-state rate of energy input to the product measured in watts. (cooling capacity w/ input power w) The higher the EER, the more efficient the air conditioner is. Take the FWE-35GW 12,000 btu Solar A/C as example, the cooling capacity of which is 3500 W and input power is 920W. We get EER (3.8) by dividing cooling capacity 3500 W by input power 920w. The EER 3.8 for cooling comparing to the normal A/C's EER 2.5 means energy saving rate of the CoolSolar A/C is 34%. SEER is used widely to value the energy saving efficiency in some countries, the formula to change EER to SEER is: $EER \times 4.2 = SEER$

7. Can we provide supply power selection for your customers in your country?

We can provide the CoolSolar Series with your requested power supply and frequency, for example: 110 volts/60 HZ and 220/380 volts/50 HZ.

8. What is the starting current for our solar air conditioner?

The starting current is usually 1.5 times of stable current, so the solar A/C could be powered by a generator in case it will be used in some places where grid power is not available and generators are used to supply power.

9. What is the different between convertible frequency air conditioner with solar air conditioner?

Convertible frequency air conditioner could save electricity but this saving will only begin after several hours operation of the A/C and its save rate is about 15% in average. The energy saving rate of a CoolSolar air conditioner is much higher about 35-45% saving for cooling and more than 50% for heating.

10. What are the savings compared with normal air conditioner?

If a normal air conditioner of 18000 BTU is used for average 8 hours per day, its input power is 2,080w. The electricity consumption would be 16.64 KWH/ day. The CoolSolar air conditioner can save about 40% of electricity which means it could save 6.66 KWH per day and the total saving amount is 200 KWH per month. Suppose the price of electricity is \$0.5/KWH, then the total saved money would be \$100 in one month.