



Green-Energy-Products.com

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Solar Cooling

- ◆ **Unit Model Number: SWM12SP**
- ◆ Mini Split Solar Inverter
- ◆ **Rated Cooling Capacity: 12,000 Btu**
- ◆ Outdoor Operating Temperature Cool Mode 50 F to 113 F
- ◆ **SEER: 16**
- ◆ Moisture Removal: 3.17 pints per hour
- ◆ Power Supply Voltage/Phase/Hz: 220 Volt / 1PH /50/ 60Hz
- ◆ Running AMPS Cooling: **Variable Speed Range** 1.25A ~ 7.75A
- ◆ Fuse or Circuit Breaker Capacity: 20
- ◆ Rated Input Cooling: 270 ~ 830 Watts
- ◆ Operation Sound Indoor Unit: Hi 38 (dB-A) Low 32
- ◆ Operation Sound Outdoor Unit: 53 (dB-A)
- ◆ Refrigerant Type: R410a
- ◆ Indoor Unit Dimensions: Height: 10.65" Width: 32.2" Depth: 7.5"Weight: 22 lbs
- ◆ Outdoor Unit Dimensions: Height 21" Width: 29.75" Depth: 10"Weight: 92.5 lbs.



DC Inverter Solar Air Conditioners are the ultimate cooling and heating technology of the HVAC field. They are called "DC inverter" because the alternative current (AC) is converted to Direct Current (DC) then, direct current inverted back to alternative current with desired frequency. As known, the current supplied through the wall outlet has fixed frequency which is 50/60 Hertz. Different frequencies supplied to the compressor will result in different running speeds of the compressor.

Sedna Aire Inverter control systems use Pulse Amplitude Modulation (PAM) that is the most advanced and energy efficient method of inverting the current. DC Inverter solar air conditioners use special compressors that their speed could be changed by increasing or decreasing the frequency of the supplied power. Therefore, unlike conventional split Air Conditioners/Heat Pumps which cycle between on and off repeatedly, the DC Inverter control system will monitor the room temperature and adjust the compressor speed automatically. Conventional compressors turn on and off to maintain the room temperature at desired level. This will result compressor to draw tremendous energy each time it starts up. This will also reduce the life-span of the compressor and other components that are turning on and off. Once a conventional system is running, it runs at its maximum speed, consuming the maximum amount of energy in order to produce the maximum of cooling or heating to maintain the desired temperature. The system will then cycle between on and off in an effort to maintain this temperature. When a DC Inverter compressor initially starts up, it runs with a higher speed to bring the room temperature to desired level rapidly, Once the set temperature is reached, it slows down and adjusts its capacity just to counter the heat loss or heat gain of the building. By this way it will maintain a constant temperature.



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