FUTUREWORLD ENERGY, INC

F.W.E CoolSolar Series - AC

Ceiling Cassette Air Conditioner

Key Features:

- EER of 3.8 - 4.2
- Accelerated ROI
- R-410A Refrigerant
- Three Models Available
  - Split
  - **Ceiling Cassette**
  - Cabinet
- Recessed
- Toshiba Compressor
- 18000 to 48000 BTU
- Super Quiet Operation
- 110 to 220VAC Available

Solar Assisted Air Conditioning

Residential and small commercial A/C units often make up 70% of the electrical power consumption of a building. Future World Energy's new CoolSolar A/C systems cover up to 30% to 45% of this demand by using a solar panel which is mounted next to the outdoor unit or on the roof of the building.

Working principle of FWE CoolSolar Series

The CoolSolar System 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 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. CoolSolar 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. Conventional air conditioning systems are only able to change a portion of the gas into a liquid state so 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.

FutureWorld Energy, Inc.
2675 S. Horseshoe Dr. Suite 401, Naples FL 34104, USA
Phone: +1 (239) 324 0000 email: info@FutureWorldEnergyInc.com

Tech parameter for R410 Cassette CoolSolar Series						
			FWE-52QW	FWE-72QW	FWE-120QW	FWE-140QW
Power			220V/50Hz	220V/50Hz	380V/50Hz	380V/50Hz
Capacity	Cooling	Btu/h	**18000**	**24000**	**41000**	**48000**
		W	5200	7200	12000	14000
	Heating	Btu/h	19000	26000	45000	52000
		W	5500	7700	13000	15000
Noise	Indoor	db(A)	＜52	＜52	＜55	＜55
	Outdoor	db(A)	＜60	＜60	＜65	＜65
Air Circulation		m^3/h	800	1150	1700	1700
Suitable Area		m^2	25-35	30-50	60-80	70-90
EER		w/w	3.85	3.91	3.75	3.7
cop		w/w	3.98	4.14	4	3.95
Input power	Cooling	W	1350	1840	3200	3780
	Heating	W	1380	1860	3250	3800
Rated Current	Cooling	A	6.14	8.36	14.54	17.18
	Heating	A	6.27	8.45	14.77	17.27
Size Indoor Unit	Net	mm	790*790*215	790*790*260	960*960*290	960*960*29
	Shipping	mm	855*885*285	855*885*305	1025*1025*345	1025*1025*345
Size Outdoor Unit	Net	mm	920*375*730	1000*410*960	980*370*1325	980*370*1325
	Shipping	mm	1025*395*890	1085*435*1060	1085*435*1430	1085*435*1430
Weight Indoor unit	Net/shipping	kg	28/34	30/37	65/73	68/75
Weight Outdoor unit	Net/shipping	kg	61/66	91/98	120/128	130/138
Size Solar Panel	Net/shipping	mm	1000*550*87	1000*550*87	1000*550*87	1000*550*87
Weight Solar Panel	Net/shipping	kg	14/16	14/16	14/16	14/16

FUTUREWORLD ENERGY, INC

FutureWorld Energy, Inc.
2675 S. Horseshoe Dr. Suite 401, Naples FL 34104, USA
Phone: +1 (239) 324 0000 email: info@FutureWorldEnergyInc.com