

S.R.ELECTRONICS



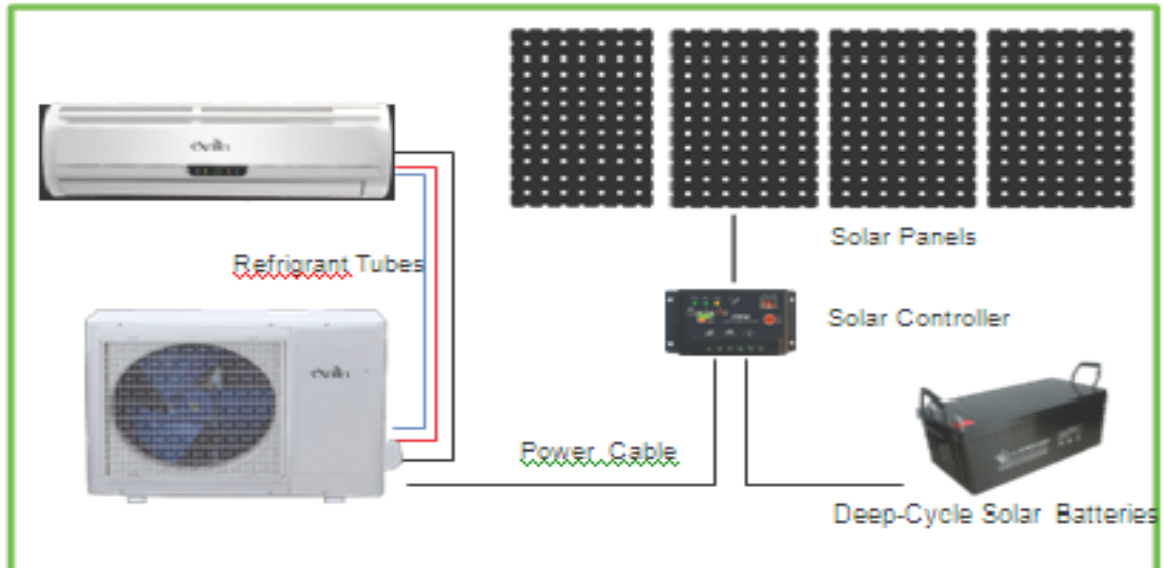
(SOLAR AIR CONDITIONER WITH COOLING & HEATING)



SAVE THE WORLD FROM GLOBAL WARMING

ALTEK ENERGY SAVER SOLAR AIR CONDITIONER (ALTEK ESAC)

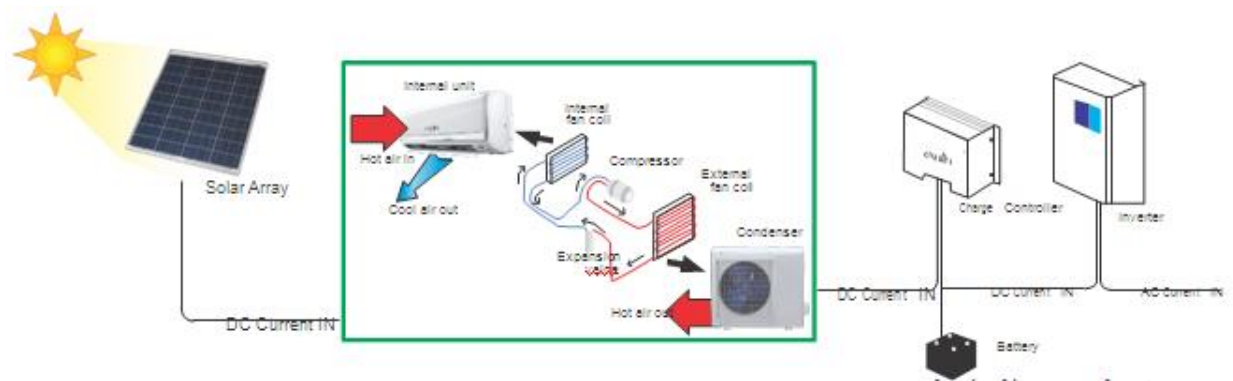
Solar air conditioning refers to an air conditioning (cooling) system that uses solar power as a primary energy source by converting solar energy to electricity. This makes the system very energy efficient and cost effective. ESAC works on a hybrid system which combines photovoltaic technology (PV) with direct current (DC). It automatically switches between solar and battery power as needed. In hybrid mode, this system charges its batteries when the sun is shining and when it isn't, the system runs on battery backup while charging its batteries by alternating current (AC) power.



ESAC works on: •Grid power •Solar Power •48V Battery •Inverter

HOW ALTEK ESAC SYSTEM WORKS

Air conditioners use refrigerant in a closed loop cycle that easily converts from a gas to a liquid and back again. This chemical is used to transfer heat from the air inside of a home to the outside air. The machine has three main parts. They are a compressor, a condenser and an evaporator.



KEY BENEFIT

ESAC is a very effective solution for those locations in India where climate is hot & humid and grid based electricity is scarce and unreliable due to frequent power cuts. Exalta solar air conditioner is designed to address these evident problems. ESAC runs on different alternative energy sources i.e. when it is working on solar PV it saves and reduces grid electricity demand, it is also very power efficient system and saves the electricity expenses of the consumer. ESAC is very environment friendly and it reduces grid power consumption by 30% because in India most of the grid power is generated by coal, solar system reduces the grid power demand and thus results in less carbon emission into the atmosphere.

QUALITY STANDARD AND CONFORMITY

We strongly believe in quality of the product and our solar air conditioning system has passed through manufacturing and functional requirement and conformity as per industry quality standards. With the help of our team's commitment and uncompromising dedication, we make sure that system performance and quality are excellent.

Each system is tested for Thermal efficiency of collector and complete system along with-

- Performance
- Usability
- Safety
- Reliability
- Carbon Emission
- Economy
- Rain water tightness
- Hail resistance
- Structural loads

Solar panels are MNRE, KEYMARK and DIN certified and tested, European conformity-CE



FREQUENTLY ASKED QUESTIONS

Q: Who should have solar air conditioner?



A: Anyone who is looking to replace their conventional AC with a greener and economical option. Solar power AC reduces energy consumption and runs directly on solar energy. Hybrid solar powered AC runs on direct solar power, Grid power and battery power.



Q: Is solar air conditioner costly?

A: Yes, It is costly as compared to medium sized conventional window air conditioner. It costs extra due to added cost of PV panels, Controller and battery system. But Solar AC running cost and adverse effect on environment is very less as compared to conventional AC, which is very encouraging to buy solar AC.



Q: Is solar air conditioner Economical?



A: Yes, Solar AC works on DC compressor and this helps in reducing grid power consumption by many folds and recovers the cost of solar AC system in near future. Hybrid system is also very economical. Ex: if you install a 3kw PV solar system, based on average amount of sunlight, approximately system would create 450Kwh. Which is about half of your monthly electricity consumption and it will save you approximately 5000 a month throughout the life of your solar panel system



Q: Which compressor is used in ALTEK ESAC?

A: Worlds best Mitsubishi DC compressor is used and it takes 120 Watt to start.

Q: How much power is required to run ALTEK ESAC directly on Solar?



A: 1000 Watt solar panel is required for running ALTEK ESAC directly on sun.

Q: Where ALTEK ESAC can be used?

A: The smaller ALTEK ESAC models are ideal for bedrooms and living rooms, where high temperatures and humidity can create discomfort during the summer. They are also suitable for home, offices, institutions and other facilities where computers, other electronic and electrical equipment dissipates heat and in rooms especially where ventilation is not proper or windows are kept locked for security reasons or to reduce noise and disturbance from outside.

ALTEK ESAC systems are used extensively in offices, Hotels, restaurants, clubs, and many other light commercial applications. They provide a low cost solution to problems of overheating in summer, and will also provide extremely efficient heating in winter through the heat pump operation.

Q: What is the reason behind ALTEK ESAC development and how is it economical?

A: The rising cost of energy and the need to reduce carbon emissions is the prime motivating factor behind the sophisticated development of high efficiency heating and cooling systems.

During development we have focused on developing a system which saves energy and low on carbon emission. In Air Conditioning Systems compressor uses most of the electricity. That is why ALTEK ESAC works on New High Efficiency DC MPPT Drive and Mitsubishi compressor which provides the required improvements in efficiencies for both colling and hearing operations.

**Technical Specification for ALTEK
ESAC 4 in 1 : AC-220V,
Direct Solar PV,
Inverter
48 V Direct Battery**

ALTEK ENERGY SAVER SOLAR AIR CONDITIONER

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ALTEK ESAC Model		1x	1x1	2x	3x
COOLING (nominal) range	kw	0.5 to 2.8	0.5 to 3.0	0.5 to 3.9	0.6 to 5.3
Cooling (max)	kw	2.70	2.91	3.78	5.14
Energy Label in Cooling		A	A	A	A
HEATING (nominal)max.	kw	0.5 to 4.6	0.5 to 5.0	0.5 to 5.1	0.6 to 7.9
C.O.P		5.45	5.08	4.20	3.61
Energy Label in heating		A	A	A	A
INDOOR UNIT dimensions	unit (mm)	298 x 840 x 258	298 x 840 x 259	298 x 840 x 259	298 x 840 x 259
Net Weight	kg	12	12	12	12
Sound Pressure Level	dB(A)	40/34/21	43/34/21	44/35/22	45/38/26
OUTDOOR UNIT dimensions	mm	540 x 780 x 289	540 x 780 x 290	540 x 780 x 290	640 x 850 x 290
Net Weight	kg	38	38	38	43
Sound Pressure Level	dB(A)	44	45	47	43
Power Source Rating MCB	A	6A	6A	6A	10A
Interconnecting Wires	Mains	3 + E	3 + E	3 + E	3 + E
Power Supply to		Indoor	Indoor	Indoor	Indoor
Ref. max Piping Length	m	15	15	15	25
PV (MIN)		500W~1.5KW	500W~1.5KW	1000W~2KW	1.5~2.5KW
Battery (In Case of backup)		48V	48V	48V	48V
*Area of Cooling		100~200Sq-ft	200~300sq-ft	300~400Sq-ft	400~600sq-ft
<p>* Performance is dependent on solar climate and intensity * Area of cooling is dependent on floor, no. of person, incoming heat ratio * Battery & Solar Panels price are excluded.</p>					

HIGHLIGHTS

- High C.O.P., up to record 5.45.
- New advanced Air filtration
- Infra-red controller with wall mounted bracket
- Extended operation range down to -15 °C
- Super-quiet – 21 DBA
- Back-up switch for loss of MPPT ALTEK controller
- Cold draft prevention on heat pump star up
- Fault diagnosis
- Pre-charged with Refrigerant
- Maximum indoor & outdoor pipe length should be 10 feet
- Auto re-start after power interruption