



Eco-Smart, Inc.

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Eco-Airsaver HOW IT WORKS

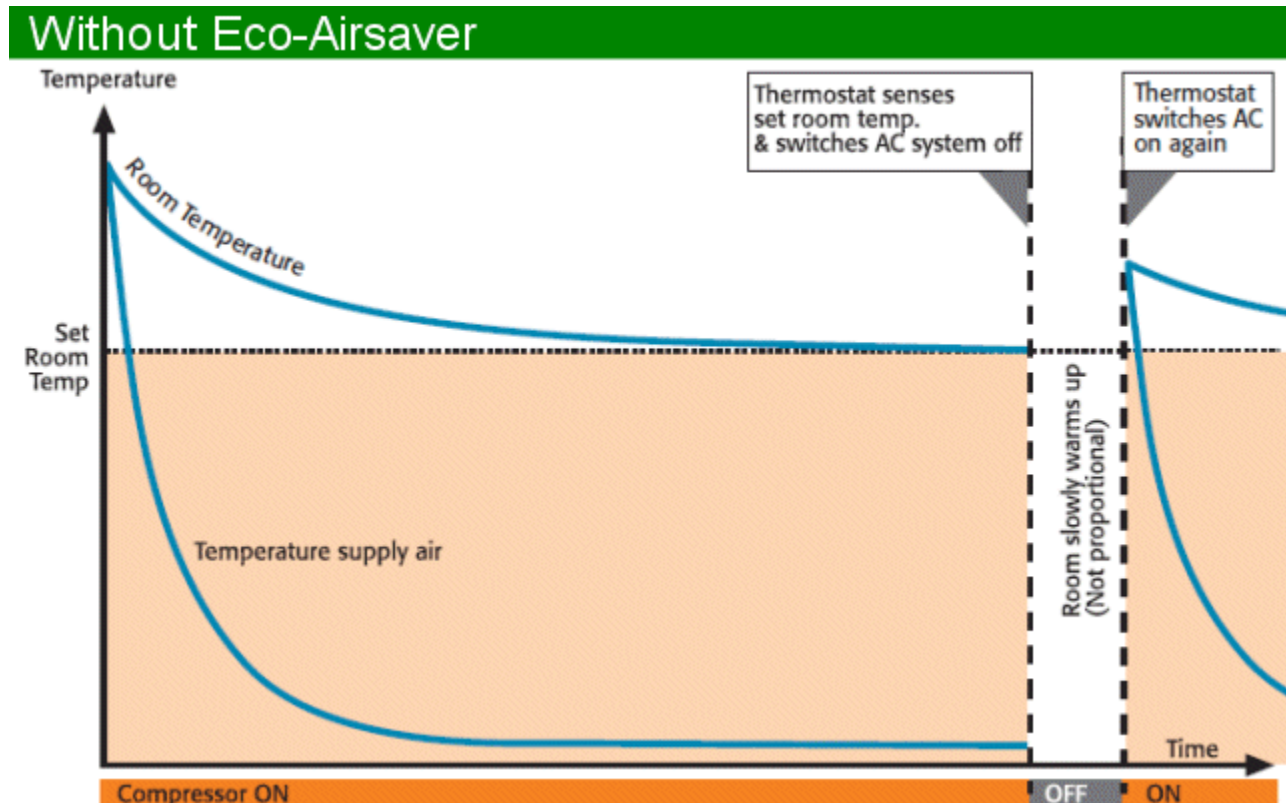
Typical AC systems

When switched on, typical air conditioning systems operate continuously until the room thermostat senses the desired temperature and turns the system off. As the room warms up, the thermostat switches the air conditioner back on and the cycle repeats.

Air conditioning systems are usually dimensioned to cope with the extreme cooling demands of the few hottest days of the year (plus a safety margin). However, in most operational conditions, this maximum output is not required and the system is oversized. Running the system continuously until the room thermostat switches it off means that the system operates with excess capacity most of the time.

A typical cooling cycle with excess capacity:

When the cycle starts, the compressor pushes the cooling energy into the heat exchanger which acts as energy storage. At this stage, the system works with high efficiency because compressors operate most efficiently when fully loaded.

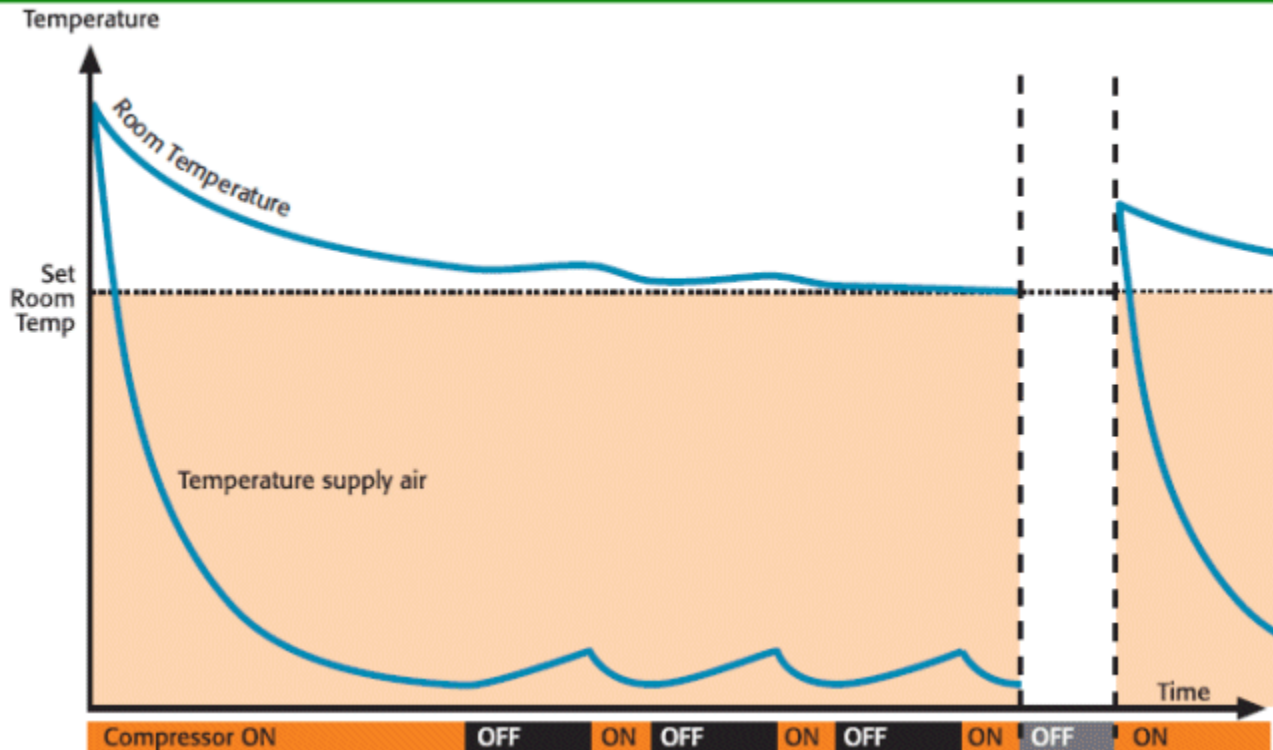


In normal weather conditions, the energy storage is “fully charged”. From this point onwards, the compressor provides more cooling energy than the heat exchanger can take up (thermodynamic saturation). Running the compressor beyond this stage does not increase the cooling effect any more.

It's just a waste of energy.

Eco-Airsaver adds intelligence to your AC system.

With Eco-Airsaver



Sensor driven software algorithms are designed to detect thermodynamic saturation and to optimize the compressor accordingly. When over-capacity is detected, the Eco-Airsaver switches the compressor off and avoids inefficient over-cooling.

Your unit switches into saver mode. The fan keeps running and your system makes maximum use of the stored cooling energy in the heat exchanger. Once the stored energy is used up, the compressor can work efficiently again and is switched back on.

The set room temperature is reached without the inefficient parts of the cooling cycle. This results in significant energy savings without compromising cooling comfort.

Since the correct point to switch the compressor varies from unit to unit and changes with weather conditions, Eco-Airsaver constantly adapts its settings to ensure efficient operation of your air conditioning system at all times.

Visit

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for **Eco-Airsaver Retrofit AC Electronic Controller**