

FREQUENTLY ASKED QUESTIONS

Q: How is an Air Conditioners size determined?

A: In accordance with Industry standards, dependent on geographic location, most Air Conditioning units are sized to extreme load conditions. Items considered are worst-case outdoor conditions, maximum internal heat loading, with a margin of safety added on. This result is then applied to the closest next size larger available air conditioning unit that is most often chosen for installation.

Therefore, except when conditions require maximum output, the majority of its hours of operation are spent operating with excess capacity; oversized for the duty it is performing, while wasting energy.

Q: How does the Energy Saver adjust this overcapacity?

A: The AIRCON CONTROL turns the compressor off (largest electrical load) when its program senses overcapacity (saturated air unable to accept further cooling).

The air handler fan continues the cooling circulation. Upon sensing the calculated point that will maintain uninterrupted cooling the compressor is re introduced, thereby adjusting the output of the Air Conditioner to meet the demands of existing conditions and the set point of the thermostat, therein re-sizing the unit to meet demand. The result is a savings of energy without sacrificing comfort.

Q: Why doesn't the thermostat do the same job?

A: The thermostat maintains a temperature at which it is located, within certain tolerances, and cannot regulate the cooling applied to the area serviced by the Air Conditioner.

The oversized Air Conditioning system can quickly satisfy the thermostat set point. By rapidly satisfying the set point the system overshoots the set point.

Thermostat design set point allows for overshoot prior to switching the unit off. In many cases the short run time does not allow for proper dehumidification.

The AIRCON CONTROLLER modulates the output of the Air Conditioner in accordance with the demands of the area cooled so the overshoot of the thermostat set point is minimal while maintaining a more energy efficient cooling period.

Q: Where does the AIRCON ENERGY SAVER work?

A: The AIRCON CONTROL is compatible with most residential and light commercial units. e.g. packaged direct expansion(DX), split systems, PTAC units utilizing a single thermostat or sensor.

Q: What is the theory behind the AIRCON ENERGY SAVER.

A: The thermodynamic efficiency of the cooling cycle is improved by cycling the compressor. Compressors run most efficiently when fully loaded. In a static condition the refrigerant gas is at its highest density. Upon start up the compressor is fully loaded and the first minutes are the most efficient due to the higher evaporator coil temperatures accelerating the heat of vaporization process, resulting in a lower specific volume. This denser gas results in a higher compressor volumetric efficiency and a higher system Coefficient of Performance(COP).

Q: What makes the AIRCON CONTROL special .

A: To sum up:

1. Compatible with all split system Air Conditioners with single thermostat.
2. Modulates the output of the compressor to the immediate heat load of the space being cooled, not just at the location of the thermostat.
3. Less overshoot of the thermostat set point.
4. Improved thermodynamic efficiency through proper loading of the compressor.
5. Less coolness remaining in the coil and ducting after thermostat reaches set point.
6. Non-system intrusive installation. (No down time)