Air Conditioning still stays the most energy efficient way to heat up an area!

But now, for the big question: Do I install an inverter air conditioner or the normal non-inverter? Well, let’s compare:

The initial capital outlay for Inverter Air conditioning is more expensive than non-inverter air conditioning but with the current spiralling energy costs, it might just be worth the extra outlay!

Let's see; what are the benefits of an inverter air conditioning, compared with a non-inverter air conditioning:

The inverter air conditioning is:

- At least 30% - 50% cheaper to run as it consumes less power
- Far quicker to achieve desired temperature
- The start-up current is reduced by 30%
- Much quieter
- No temperature fluctuations, maximising comfort level
- No voltage peaks from compressor
- Runs on New ozone friendly R410 Refrigerant. (The R22 Refrigerant that’s used in the normal non-inverter units is slowly starting to phase out)
- All our air conditioning (inverters and non-inverters) come standard with heat pump technology what in itself is one of the most energy efficient form of heating.

What is the difference between inverter and non-inverter air conditioning units?

Non inverter or Fixed speed air conditioning deliver a fixed amount of power via a fixed speed. This means the compressor has to stop and start to maintain the desired room temperature. (But, even though, it is still more energy efficient on heating than any other bar-heaters, oil-heaters or gas-heaters)

Inverter air conditioning units, varies the speed of the compressors, delivering precise cooling or heating power as required. (Making it up to 40% more energy efficient than your non-inverter units.)
How does Inverter Air Conditioning work?

The amount of cooling or heating required by an air conditioning unit varies depending on the outdoor temperature and the amount of heat in the room.

When the cooling or heating capacity needs to be increased, the compressor will operate at a high speed and will increase the amount of refrigerant flow.

Conversely, during moderate outside temperatures for example, when the cooling and heating capacity needs to be decreased, the compressor will operate at a low speed and will decrease the amount of refrigerant flow.

When the inverter air conditioning is switched on, the compressor operates at a high speed in order to cool or heat the room quickly. As the room temperature approaches the set temperature, the compressor slows down, maintaining a constant temperature and saving energy. Any sudden fluctuation in the room temperature, will be sensed and instantly adjusted to bring the room temperature back to the set temperature. Our inverter air conditioning units use between 30-50% less electricity to operate.

Is it worth paying more for an inverter air conditioning?

If you install a couple of air conditioning units and you run them for long periods per day, you will definitely save a lot of money, but for one or two units running for two or three hours per day at home; no the energy saving won’t cover the extra additional capital outlay and you might just break even.
Current Differences Graph, between an Inverter- and a Non-Inverter Unit

Red Line: 12 000 Btu Non-Inverter Air conditioning unit, with a Running current of 5.7 A

Blue Line: 12 000 Btu Inverter Air conditioning unit, with a Maximum Running current of 4.5 A

- In the above comparison, the ambient starting Temperatures are in both circumstances the same at 28°C and the Starting current are both on 0 Amp’s.
- The Non-Inverter’s Compressor (Fixed Speed) start at 0 Amp’s and Speeds up to more than 4 times the normal Running Amp’s for a millisecond, then slows down back to the normal Running current (in this case 5.7A).
- The compressor will run at this Fixed speed until it reaches the desired set room temperature (in this case it is set to 23°C) and then the compressor will switch of completely.
- The indoor unit will still be on, circulating the air inside and constantly measuring the indoor ambient temperature to detect any temperature changes.
- The Indoor Room temperature sensor, will usually react on a temperature difference of +/- 2°C (meaning that in this case, the compressor has switched off on 23°C and it will restart on 25°C)
- And the whole presses will rerun itself for the period that the unit is on.
- The Inverter’s Compressor is a Variable speed compressor.
- The Compressor will start at 0 Amp’s and speed up gradually until the required temperature has been reached (in this case it is set to 23°C).
- The compressor will slow down and “idle” at an average off +/- 3Amps for the period that he unit is on.

The energy saving of the Inverter in the above mentioned graph lays above the Blue line!

*Remember: Air conditioning must be set to a comfortable temperature in order to be Energy Sufficient!*