



5 Things You Need to Know Before Replacing Your A/C System

1. Should I buy a new air conditioner?

You should consider buying one if your current unit is 10 years or older and if you're worried about its reliability. A new unit can also be a good idea if your old unit is inefficient and causing high utility bills. Of course if your old A/C unit is broken and repairs are costly it makes the decision easier to purchase a new unit.

Most manufactures have rebates during the spring March-June timeframe. You can get some bargains after the season as well. A hot summer can leave you putting out more money.

2. What features do I need?

You have many options when it comes to choosing a new system. Typically, your least expensive system would be the minimum efficiency with few features. High end systems include two speed cooling for the peak efficiency and variable speed blower motors for improved air flow and humidity control. Utility companies and manufacturers often include rebates for your purchase of a high end system. Rebates and tax credits help offset the added upfront expense. There are also options to consider between the least expensive and high end systems. Make sure the representative offers you more than one option and lets you choose which one fits your needs and budget.

You may consider adding indoor air quality products to your new system to create a healthy environment in your home. Homes today are built better and are sealed to the outside air. This causes the air in your home to become unhealthy. There are many products that remove extremely small particles that you can't see. This also helps those that suffer from allergies. These products can cause a new system to be more efficient over the years because the coils and components will stay factory fresh.

3. Which company to choose?

There are hundreds of companies to choose from when considering the installation of a new unit. So how do you know which one to choose? Consider four factors. One, make sure they are licensed, bonded and insured. Two, is the company an Accredited Member of the Better Business Bureau and is their license in good standing with the Registrar of Contractors? What are their customers saying about them on review sites such as Yelp, Angie's List etc? Three, does the company hire clean, knowledgeable, and drug free employees? And fourth, does the company care about you after the install? For example, follow up and quality control.

There are many corners that can be cut to lessen the investment of a new unit which can cause the system to be less efficient and have future repairs. You will be able to see if they care about your install by the way they respect your home and needs. Saving money is important but should not compromise the quality of the installation.

4. What are SEER and EER?

The efficiency of air conditioners is often rated by the **Seasonal Energy Efficiency Ratio (SEER)** which is defined by the Air Conditioning, Heating and Refrigeration Institute in its standard ARI 210/240, Performance Rating of Unitary Air-Conditioning and Air-Source Heat Pump Equipment.

The SEER rating of a unit is the cooling output in Btu (British thermal unit) during a typical cooling-season divided by the total electric energy input in watt-hours during the same period. The higher the unit's SEER rating the more energy efficient it is.

The Energy Efficiency Ratio (EER) of a particular cooling device is the ratio of *output* cooling (in Btu/hr) to *input* electrical power (in Watts) at a given operating point. EER is generally calculated using a 95F outside temp and an inside (actually return air) temp of 80F and 50% relative humidity.

5. What cooling capacity do I need?

Cooling capacity is measured in BTU/hour. (British Thermal Units per Hour) The higher the number, the more powerful the unit is. A small room of 150 square feet may only need a 5000 BTU/Hour unit, whereas a home of 1300 square feet may need a 36,000 BTU/Hour.

However, room size is not the only factor that contributes to the capacity. There are many other factors when sizing a system correctly including:

- the number and size of the windows
- the direction the room faces
- the available shade
- how well the room is insulated
- how many people use the room
- what appliances (computers etc.) are in the room

It is important to get a unit as close to the correct capacity as possible. It is not very often that the current old system is too small or too big for the home. If there was an addition to the home then there could be a change in capacity. Beware of companies trying to sell a different size capacity system. Too small a unit may not be able to cool the home on a hot day. Too large a unit will cost more to operate. It may also cool the home too quickly and leave excessive moisture in the air.

Make sure your sales representative does his due diligence. This is done by doing a complete home analysis. It also means getting in the attic and looking at the furnace or air handler if it is located there. They should also look at the duct work for any problems.

Airflow is everything to efficiencies. The new units today require more airflow to achieve high efficiency. Make sure that when purchasing high efficiency unit that the duct work connected to the unit are sized accordingly to the capacity of the unit.