REPLACING AN AIR CONDITIONER

Central air conditioners have an expected life of about 15-20 years and can show signs of their age through refrigerant leaks, motor failures, and an inability to efficiently cool the house. Installing a new unit before the old one fails completely allows for time for careful shopping, as well as enjoying the energy savings of a high efficiency unit.

**Proper sizing**

Over-sizing an air conditioner is the most common mistake made by consumers, thinking that “bigger is better.” Buying too large a unit is not only expensive, it can increase discomfort by not removing enough humidity from the air, leaving you feeling cold and clammy.

The primary tasks of an air conditioner are to cool and dehumidify, but a typical unit is much more efficient at cooling. Since the major control in an air conditioner is a thermostat, and not a humidistat, the unit comes on and shuts off in response to air temperature, regardless of humidity. A system that is too large often achieves the desired temperature before the humidity is adequately removed.

If a system is too small, it may dehumidify well but not cool the air sufficiently. A properly sized unit needs an operating cycle long enough to balance the removal of both heat and humidity.

Factors such as the amount of shade around your house, window area, and the insulation and tightness of the building envelope will also help determine the correct size of an air conditioner for your home.

Make sure that your contractor does a heat-gain calculation to ensure the proper sizing of the equipment.

**Efficiency ratings**

Because air conditioners operate on electricity, more efficient models will not only save money, they will also reduce environmental effects related to electricity generation.

Since 2006, all residential central air conditioners sold in the United States must have a seasonal energy efficiency ratio (SEER) rating of at least 13. The higher the SEER rating number, the more efficient it is for cooling. ENERGY STAR® qualified units must have a SEER rating of at least 14, and there are units available with SEER ratings of 20 and higher.

Room air conditioners are also required to carry an “Energy Guide” label showing their energy efficiency ratio (EER). A higher EER rating means higher efficiency. Purchase an ENERGY STAR® model with an EER of 11 or higher.

Ultimately, purchasing the most efficient air conditioner will provide energy-savings payback over the life of the equipment.