

## **Air Conditioner Upgrades – Or Choosing a New Central Air Conditioner**

Central air conditioners are more efficient than room air conditioners. In addition, they are out of the way, quiet, and convenient to operate. But to save energy and money, you should try to buy an energy-efficient air conditioner and reduce your central air conditioner's energy use. In an average air-conditioned home, air conditioning consumes more than 2000 kilowatt-hours of electricity per year, causing power plants to emit about 3500 pounds of carbon dioxide and 31 pounds of sulfur dioxide.

If you are considering adding central air conditioning to your home or small business, the deciding factor may be the need for ductwork. If the building has ductwork for a forced-air heating system, you may be able to use it for air distribution. Whether or not your existing ducts will work for air conditioning equipment depends on the equipment capability and your relative heating and cooling loads. Check with a heating and cooling contractor in your area.

### **Upgrading Your Current System**

If you have an older central air conditioner, consider replacing the outdoor compressor with a modern, high-efficiency unit. Consult a local heating and cooling contractor to assure that the new compressor is properly matched to the indoor unit.

### **Choosing, Sizing, and Installing a New, Efficient Air Conditioner**

Proper sizing and installation are key elements in determining air conditioner efficiency. Too large a unit will not adequately remove humidity. Too small a unit will not be able to attain a comfortable temperature on the hottest days. Improper unit location, lack of insulation, and improper duct installation can greatly diminish efficiency.

When buying an air conditioner, look for the model with a high efficiency. Central air conditioners are rated according to their seasonal energy efficiency ratio (SEER). SEER indicates the relative amount of energy needed to provide a specific cooling output. Many older systems have SEER ratings of 6 or less. The minimum SEER allowed today is 10 for a split system and 9.7 for a single-package system. Look for the Energy Star label for central air conditioners with SEER ratings of 12 or greater.

### **Other Features to Look For When Buying an Air Conditioner**

- A unit that operates quietly
- A fan-only switch, so you can use the unit for nighttime ventilation to substantially reduce air-conditioning costs
- A filter check light to remind you to check the filter after a predetermined number of operating hours
- An automatic-delay fan switch to turn off the fan a few minutes after the compressor turns off.

The sites below provide more information about selecting and sizing air conditioning systems:

[Energy Star-Labeled Central Air Conditioners](#). Energy Star's web site includes product listings of Energy Star labeled central air conditioning equipment.

The [Energy Star program](#) is sponsored by the [U.S. Environmental Protection Agency](#) and the [U.S. Department of Energy](#).

[Sizing Residential Heating and Air Conditioning Systems](#). Some national surveys have determined that well over half of all HVAC contractors do not size heating and cooling systems correctly. Learn about correct sizing procedures and design factors in this fact sheet.