

13 Is Your Lucky Number

On January 23, 2006, new federal regulations for air conditioners went into effect: now manufacturers can only make equipment with a seasonal energy efficiency rating (SEER) of 13 or higher. SEER is like a miles-per-gallon rating for your air conditioner or heat pump.

Homeowners are not *required* to buy a 13 SEER system now, and there are still a few lower rated models or units available. However, if your air conditioner is ready for replacement, consider HVAC equipment that is 13 SEER and higher. It will save you money in the long run because it's more energy efficient.

There are five things you should consider when you purchase new equipment.

Can I buy just the outdoor or indoor unit?

It's not a good idea. Someone may recommend changing only the outdoor unit—after all, it has a sticker that says 13 SEER. But that means that the unit can achieve the new standard *if properly matched* to the indoor unit. Replacing both will cost more, but if you don't have a matched system:

- The new unit may not work properly or keep you comfortable
- The new unit could fail more quickly
- You may void the manufacturer's warranty
- Your energy bills may go up instead of down

Ask your contractor for an "ARI Certificate of Certified Performance" to prove that you're getting a matched set. You can also go to www.ari.org to find out if your system is matched. Simply click on the ARI Directory of Certified Product Performance button, then unitary products, heat pump or air conditioner, and fill in your equipment's information on the form.

Does size matter?

Yes, however bigger is *not* better when it comes to cooling capacity! Your contractor needs to look at your whole home to ensure that you're buying the right system. Professional contractors always perform what's called a "Manual J" load calculation," even when they're installing a replacement: the existing system may not have been sized properly to begin with, and you may have made changes to the house that affect cooling. The calculation takes into account windows, doors, room sizes, insulation, and the like.

Air conditioning equipment that has too much cooling capacity will cycle on and off too often—it won't last as long and won't dehumidify the air enough. Your home will be cold and clammy, and moisture problems may develop.

In addition, many of today's high-efficiency air conditioners and heat pumps are physically larger than older models. The contractor will measure the existing equipment's location to ensure the new unit will fit.

What else is different?

The refrigerant is. Most manufacturers are using something called R-410A in their new systems. It's much more environmentally friendly than the old refrigerant (R-22) because it doesn't deplete the ozone layer. Heating, ventilation, and air conditioning (HVAC) equipment manufacturers must stop using R-22 by January 2010. Although

R-22 will be available for servicing existing systems until 2020, prices will probably rise as supplies decrease. Choose a system that makes sense for your long-range goals, budget, and comfort as well as the environment.

What about ducts—do I need to be concerned about them?

Air conditioners are one part of a whole system. The best air conditioner in the world will not overcome a poor air distribution system—the network of ducts that carries air from your home to the cooling equipment and back into the rooms. Leaky ducts can cause pressure changes in your home that may result in moisture problems, uncomfortable rooms, or higher energy costs. If the ducts are restricted, the cool air you paid for can't get to that hot room. It's also possible the ducts may be drawing in air from hot, dusty, humid, or unhealthy places. When you purchase a new air conditioner, also have the contractor inspect and test the ductwork.

How will I know if it was installed right?

The contractor should perform several tests for your health and safety and to verify proper operation for maximum comfort and energy efficiency. The contractor will check:

- Air flow through the unit
- Air flow through the ducts
- Refrigerant pressures and temperatures
- Electrical measurements and connections
- Thermostat operation
- Air temperatures in the home and at the outdoor and indoor units

Good contractors will review their findings with you and make sure you know how to operate the thermostat and maintain the system.

Buying a new air conditioner is something you do only every 8 to 15 years. Consider your options carefully and make the best decision for your family's health, safety, comfort, and future energy bills.

Visit www.acca.org for more information on purchasing an air conditioner or heat pump.

ACCA is the nationwide nonprofit association of heating, ventilation, air condition, and refrigeration contracting businesses. For over 40 years, ACCA has provided education and research in support of efficient, safe and healthy heating and cooling systems. Learn more at www.acca.org.

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 **Air Conditioning Contractors of America**

ComfortTools help consumers make informed choices about indoor heating and cooling systems. ComfortTools promote energy efficiency, indoor air quality, and safe, healthy homes and buildings.

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