

# 13 SEER

**What you need to know**

New government regulations and your new air conditioner or heat pump



It's time to get comfortable.

## What's a SEER and why does it matter?

January 23, 2006 marks a new era in home comfort. By Federal law, the minimum efficiency standard for newly manufactured air conditioners and heat pumps increases from 10 SEER to 13 SEER.

SEER is short for Seasonal Energy Efficiency Ratio. It's a number similar to miles-per-gallon in cars. So the higher the SEER, the more efficient your system. A 13 SEER system is about 30% more efficient than a 10 SEER system.

Another aspect of the new era is the environmentally friendly refrigerant, R-410A. This refrigerant is just as effective as the older R-22 refrigerant, which government regulations will gradually phase out.

Because of these changes, it pays to understand how they affect your system's performance. You'll learn why having matched and balanced components in your system directly affects your comfort, as well as how much energy you buy and use.



### Inside your home comfort system

Air conditioning and heat pump systems “condition” air to make your home more comfortable by controlling air temperature, humidity, and indoor air quality. There are three major aspects of a system that must be properly matched and balanced to provide peak efficiency and economy.

#### Outdoor unit

The outdoor unit contains a compressor and a condensing coil filled with refrigerant. A fan blows outside air over the coil, transferring thermal energy between the refrigerant and the outside air. Then the refrigerant is circulated through pipes (a “lineset”) to the indoor unit.

#### Indoor unit

Your indoor unit is comprised of a coil and blower, which is located inside an air handler or furnace. The blower circulates air through the coil before it is sent to the ducts throughout your home.

#### Lineset

The lineset contains refrigerant that circulates between the indoor and outdoor units.



### Why a matched system matters

If the indoor coil is not matched with the outdoor unit, several major problems can occur with your system:

- Capacity will not be sufficient to keep you comfortable
- Energy bills will increase due to reduced efficiency
- Your manufacturer's warranty may become void
- Reliability will suffer and compressor failure is more likely to occur

The energy efficiency of a 13 SEER system requires a larger condensing unit and indoor coil. Each unit can be as much as one-and-a-half times the size of those in a 10 SEER system. This larger size allows more thermal energy to be transferred from your home to the outside.

Just as importantly, the outdoor unit must be matched with an indoor coil that's just as efficient. Improperly matched components can put additional stress on a system, which can cause it to fail.

Also, be sure you change the lineset to allow the refrigerant to circulate properly to avoid capacity, efficiency, and reliability problems.

### A qualified dealer: The final step in a perfect match

Now that you've learned how your new 13 SEER system can be a perfect match, do the same with your dealer.

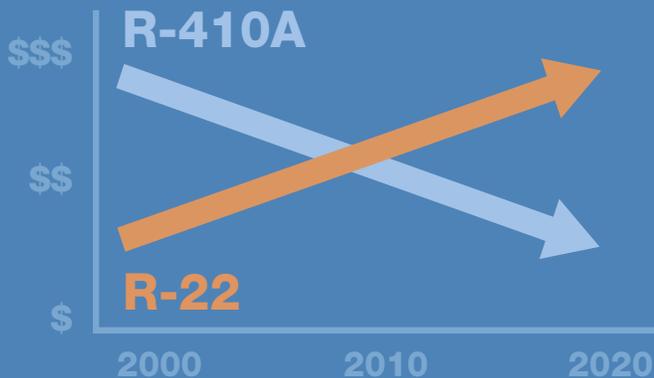
A qualified dealer can make sure your system is matched and installed correctly, and is efficient and economical to operate. You'll get the assurance of properly matched compressor, coils, and lineset. What's more, your dealer can recommend other ways to improve your home's comfort by better controlling humidity and indoor air quality.





## The refrigerant for a new era: R-410A.

The manufacturers of home comfort systems will be prohibited from using R-22 in 2010. As a result, most manufacturers have already begun to use the more economical and environmentally friendly R-410A. Although R-22 will still be available for existing systems, its phase out will cause its price to rise as its availability decreases. Choose a system that makes sense for your budget and comfort, as well as the environment.



As R-22 refrigerant is phased out, its price will rise. As R-410A use becomes more widespread, its price will drop.

## 13 SEER. Do it right.

Seek out a qualified and reputable contractor, and be sure you get answers to these important questions:

1. Will you replace my present indoor coil with a new, high-efficiency coil?
2. Does the new indoor coil properly match the outdoor unit manufacturer's specifications for the system?
3. Can you verify the efficiency of the compressor and coil combination by showing me its SEER rating in a recognized industry list?

Call on a qualified contractor who can provide a matched system to deliver all of the comfort, indoor air quality, and energy efficiency of 13 SEER technology.



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Unitary Products Group, Inc.  
5005 York Drive, Norman, OK 73069  
[www.yorkupg.com](http://www.yorkupg.com)

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