

# Straight Talk About 13 SEER: What Are the Rules?

by Karim Amrane

On January 22, 2001, the U.S. Department of Energy (DOE) published in the Federal Register a final rule on energy conservation standards for Residential Central Air Conditioners and Heat Pumps. The rule increased the minimum efficiency standard for residential central air conditioners and heat pumps from today's minimum standard of 10 SEER (seasonal energy efficiency ratio)/6.8 HSPF (heating season performance factor) to 13 SEER/7.7 HSPF for equipment manufactured on or after January 23, 2006.

Now, with that deadline just around the corner, many HVAC contractors are scratching their heads, wondering:

- Exactly what equipment is covered?
- How long can I purchase 10 or 12 SEER units?
- What about my existing inventory? Can I still install less than 10 or 12 SEER units after January 22, 2006?

To shed some light on this important issue, here are answers to some often-asked questions:

## What Equipment Is Covered by the Standard?

The equipment covered by the regulation includes both split-system and single-package residential air conditioning systems and heat pumps. Air conditioning systems must be rated at least 13 SEER, and heat pumps must have a rating of 13 SEER and 7.7 HSPF.

## Exceptions to the Rule

The DOE has granted a temporarily lower SEER rating for through-the-wall air conditioners and heat pumps, stating that their manufacturers need additional time to redesign the systems to meet the higher efficiency rating.

For example, for split-system, through-the wall air conditioning units, the minimum rating is 10.9 SEER, and for heat pumps, 7.1 HSPF.

For single-package, through-the-wall units, 10.6 SEER is the minimum rating for air conditioners and 7.0 HSPF for heat pumps.

However, on January 23, 2010, the minimum efficiency of these units will be 12 SEER/7.4 HSPF.

Furthermore, through-the wall products:

- may not exceed 30,000 Btuh in cooling capacity;
- may not contain special weatherization features that would allow them to be installed totally outdoors; and
- must be marked for installation only through an exterior wall.

The DOE also limits the size of the area used for condenser air exchange in order to limit these classes to those products intended primarily for replacement applications.

## Space Constrained Products

Also exempt from the 13 SEER ruling are "space constrained" units. The DOE granted these products a lower efficiency rating of 12 SEER/7.4 HSPF, as it felt their redesign would be costprohibitive for manufacturers.

The DOE defines a space constrained product as a central air conditioner or heat pump:

1. that has rated cooling capacities no greater than 30,000 Btuh;
2. that has an outdoor or indoor unit having at least two overall exterior dimensions or an overall displacement that:
  - (i) is substantially smaller than those of other units that are:
    - (A) currently usually installed in site built single-family homes; and
    - (B) of a similar cooling, and, if a heat pump, heating capacity; and
  - (ii) if increased, would result in a considerable increase in the usual cost of installation or

would result in a significant loss in the utility of the product to the consumer; and  
3. of a product type that was available for purchase in the U.S. as of December 1, 2000.  
In addition, ductless mini-splits don't automatically qualify as space constrained and are subject to the 13 SEER/ 7.7 HSPF standard, unless they meet the above definition.

### **Small Duct High-velocity Systems**

When the 13 SEER standard was originally published in 2001, it stated that small duct, high-velocity systems, such as units manufactured by Unico and SpacePak, had to meet the 13 SEER rating. However, the DOE then recognized that these products wouldn't be able to meet the 13 SEER standard and proposed to provide relief through changes to the federal test procedures. Therefore, the DOE advised the manufacturers to file for an "Exception Relief" waiver, which they were granted. As a result, small duct high-velocity systems manufactured by Unico and SpacePak are required to meet a minimum rating of 11 SEER/6.8 HSPF.

### **What's Next?**

So, with all these facts and figures in hand, what does it mean for contractors? Can they still purchase and install a residential central air conditioner or heat pump with an efficiency standard less than 13 SEER after January 22, 2006?

The answer is yes. A residential central air conditioner or heat pump with an efficiency standard less than 13 SEER can be purchased and installed after January 22, 2006. However, it must have been manufactured prior to January 23, 2006.

This means manufacturers, distributors, and contractors have the ability to sell their inventory of 10 SEER to 13 SEER residential central air conditioners and heat pumps, as long as they were manufactured before January 23, 2006.

However, as manufacturers gear up to produce equipment that meets the 13 SEER standard, lower SEER supplies are expected to dwindle.

Therefore, contractors not already offering 13 SEER and above products will need to get ready as well. This includes training technicians, reconfiguring marketing materials, and even rethinking their sales approach on how to upsell equipment.

In addition, there has been speculation that cities and states could incorporate the standard into their building codes, making 13 SEER mandatory in new construction.

Fortunately, there is a wealth of information available. Associations and organizations such as the Air Conditioning Contractors of America (ACCA) and the Air-Conditioning and Refrigeration Institute (ARI), as well as distributors and the manufacturers themselves, can all help make the transition much smoother. As with any change, a proactive instead of a reactive approach will be the key to success.

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