



Comparing Apples to Apples: Understanding Government Ratings

Air conditioners, furnaces and heat pumps all have different regulations and different rating criteria. It is important to keep these ratings in mind when you are comparing various systems from different manufacturers, as they will tell you the true performance characteristics of each. Because these can be confusing to read, below is a brief summary on the ratings and what they mean.

SEER – This stands for “Seasonal Energy Efficiency Ratio” and is simply the average efficiency at which your central air conditioner will run during various conditions. An average is used because the efficiency performance will change from the hottest summer months to the warm spring or fall months. The U.S. currently has a minimum SEER rating of 13 for all central air conditioners. High efficiency systems are rated above 16 SEER and deliver the most energy savings throughout the year.

EER – This stands for “Energy Efficiency Rating.” This is a peak load rating, which tells you how efficiently your air conditioner will perform on the hottest days. This rating is important to consider if you live in very hot, dry areas that remain hot most of the year as the system will be at or near peak load more often. EER’s range from 8 to more than 15 and should not be confused with SEER ratings. An EER rating over 12 is excellent. Some systems have very good SEER ratings, but are compromised on their peak load performance. If you live in a hot area you should evaluate both SEER and EER to keep your electricity bill low in the summer. If you are in a more moderate climate zone it would be better to focus on the SEER ratings.

HSPF – This stands for “Heating Seasonal Performance Factor” and is rating used to describe a system’s heat pump efficiency. These ratings range from 8 to more than 13 HSPF. As with SEER and EER, a higher number represents a more efficient system. If you’re using a heat pump with another heating source, such as a gas furnace, the HSPF will only be reflective of the heat pump and not the dual system capacity.

AFUE – This stands for “Annual Fuel Utilization Efficiency” and is the standard efficiency rating for furnaces that burn fossil fuels like natural gas or heating oil. AFUE ratings are expressed in terms of efficiency percentages where the lowest efficiency equipment might have AFUEs of around 70% and the highest efficiencies are more than 90%.

You may not realize it, but the United States has some of the highest minimum efficiency standards for air conditioning in the world. These standards were put into practice over the past 20 to 30 years as the adoption of central air conditioning in the U.S. was expanding rapidly. These regulations were required to make sure the increase in power used for air conditioning did not put too much stress on the electric power grid, and also to help reduce environmental impacts.