

Top HVAC Energy Savings

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CALCULATIONS

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Surprise! Guess What's Costing You Money?

There is a lot of information on the web, describing how to save money on your HVAC energy bills; like Energy Star.gov. However, there are little things they don't tell you which can be more important than just changing your filter regularly.

1. **OVERSIZED HVAC SYSTEM:** *This is most likely the biggest culprit of them all. When you over-size your AC system, you use more energy than you need to. Also, because the system is oversized, it will turn off and on more often than is needed. What does this mean? AC systems take 3 to 5 times more energy on start-up than running just a little longer. Then when we oversize them, we keep turning the temperature down to control the humidity. Especially in humid climates when an AC system turns off to quickly.*

It drops the temperature so quickly, it doesn't allow the system time to remove the humidity, causing you to feel cool and clammy. Your average AC company does not do the proper Manual-J (LoadCalculation) to determine the right size. In the industry we joke about this; saying the AC guy stands on the curb, across the street from your home and however many fingers it takes to cover your house is how many tons of AC it needs.

ASK YOUR AC COMPANY:

- A. "I would like to see the Manual J Load Calculation you did to determine the proper tonnage?" Don't take NO or 400-500 sq ft per ton for the answer; this is a sign they have no clue.
- B. Make sure to verify all the information is correct according to how your house is built. Right insulation value in ceiling, right walls type (Block vs Frame) etc.

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C. Do they have the proper window types, this is the most important one. Single Pane vs Double Pane, Low-E. etc. You can have tons of AC difference just due to windows.

Contact [ProCalcs](#) to help better understand the importance.

2. **HVAC DUCTS:** Yes, your HVAC ducts can have leaks in them causing wasted energy efficiency. However, what most people don't know, or won't tell you, IF THEY ARE SIZED WRONG, this is just as bad. The duct system, the part which carries the air into the rooms, must be sized a specific way to ensure the right air gets to the right places in the right volumes. Also, that you have the proper returns in each room. Years ago, undercutting the doors to rooms was thought to be enough. However, we have learned this is not the case and the more returns, properly positioned, makes for a more energy efficient system, better room

temperature control and lower humidity. These two items can be the two biggest reasons for energy bill overpayment, as well as a long list of other issues. A Manual D is the TRUE method for designing a residential duct system; ask your HVAC guy what that term means? If the duct system is existing, this is a little more tricky, but in many cases can be resolved.

QUESTIONS TO ASK YOUR HVAC COMPANY:

- Are there dampers in my ducts?
- Can they do a Room by Room Load Calculation (Manual J) to determine EXACTLY how many CFM's (How we measure air flow) are needed per room, then adjust each grill to that amount of CFM's)
- There are company's, other than your HVAC company, that will come out and test the amount of CFM's for you, using a device called a FLOW HOOD.

LOOK FOR OUR EMAIL "10 HVAC MISCONCEPTIONS" TO FIND OUT MORE ON THESE INCREASING INDUSTRY ISSUE.