

Getting the Right Size Heat Pump or Air Conditioner

When Arizona temperatures soar, choosing the right size cooling unit will help you keep your living space cool economically and efficiently. Studies show that over half of home heat pumps and air conditioners are oversized – often 60 to 80 percent larger than they need to be! Although a larger cooling unit may seem like a good idea, oversized cooling units cost more to buy and operate and actually don't do as good a job of keeping you comfortable year-round as a properly sized unit.

Bigger Isn't Necessarily Better

An oversized heat pump or air conditioning unit can increase your electric bill and decrease your comfort. Here are the disadvantages of an oversized cooling unit:

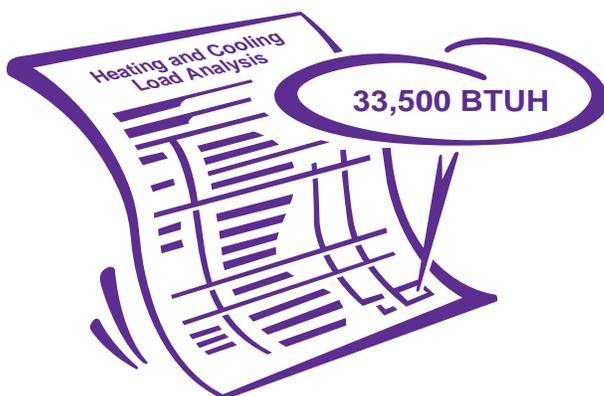
- Turns on and off more frequently because it is built to cool a larger space, putting an unnecessary strain on your system and increasing maintenance costs.
- Doesn't run long enough to reach its rated efficiency level.
- Doesn't reduce the moisture content in your home as efficiently as a correctly sized unit.

The benefits of a properly sized and installed heat pump or air conditioner are:

- Offers better humidity and temperature control in your home, increasing your comfort.
- Saves money on the initial purchase cost and on monthly energy bills.
- Operates properly for peak efficiency and low maintenance.
- Protects the environment by reducing energy use.

A Heating and Cooling Load Analysis Will Determine What Size Unit You Need

The size and construction of your home are among the factors that determine the appropriate size unit necessary to cool your living space efficiently and effectively. A trained, qualified air conditioning contractor can conduct a Heating and Cooling Load Analysis to determine the size heat pump or air conditioner that best suits your needs, and provides the most comfort for the lowest cost. If you are installing a new cooling unit, your contractor should include a Heating and Cooling Load Analysis with the estimate.



How Much More Does an Oversized Heat Pump or Air Conditioning Unit Cost You to Operate Each Year?

About 50 percent of your annual electric bill is spent on running your heating and cooling system. An oversized unit will cost you more to operate than a properly sized unit. How much more depends on how much the unit is oversized. The chart

at the left provides an estimate of the extra money you may be spending each year to cool your home with an oversized cooling unit. In addition to your monthly bill, the initial price of an oversized unit will most likely be greater, and maintenance costs can also be higher due to the more frequent on/off cycling.

Increased Annual Energy Costs From Oversizing (Compared to a Properly Sized 3-Ton Unit)

Amount Unit is Oversized	Increase In Annual Energy Costs
1/2 Ton	\$ 60
1 Ton	\$160
2 Ton	\$300

Note: The figures above are based on energy calculations by APS using the APS Standard Plan. Your actual energy costs may vary.

Correct Sizing Protects the Environment

By installing a unit that is properly sized, you use less electricity for the same amount of cooling and preserve natural resources. What you save on your monthly electric bills is only one part of the bigger picture — you help protect the environment too!

Efficiency Requires Proper Installation

Selecting a trained, qualified air conditioning contractor to “size it right” and properly install a heating/cooling system can be as important as the equipment you install. Be sure your contractor is licensed, bonded and insured and knows how to conduct a Heating and Cooling Load Analysis. APS offers contractor referrals to help consumers find trained, qualified contractors. **APS Qualified Contractors** have the skills to conduct a complete analysis of your air conditioning system and help you get the right size unit for your home.

For More Information or a Referral to an APS Qualified Contractor

For more information on the correct sizing of your heat pump or air conditioner, or a referral to an **APS Qualified Contractor**, call the **APS Energy Answer Line in Phoenix at (602) 371-3636** or toll-free **1 (888) 890-9730**. Or visit our web site at www.apsc.com.