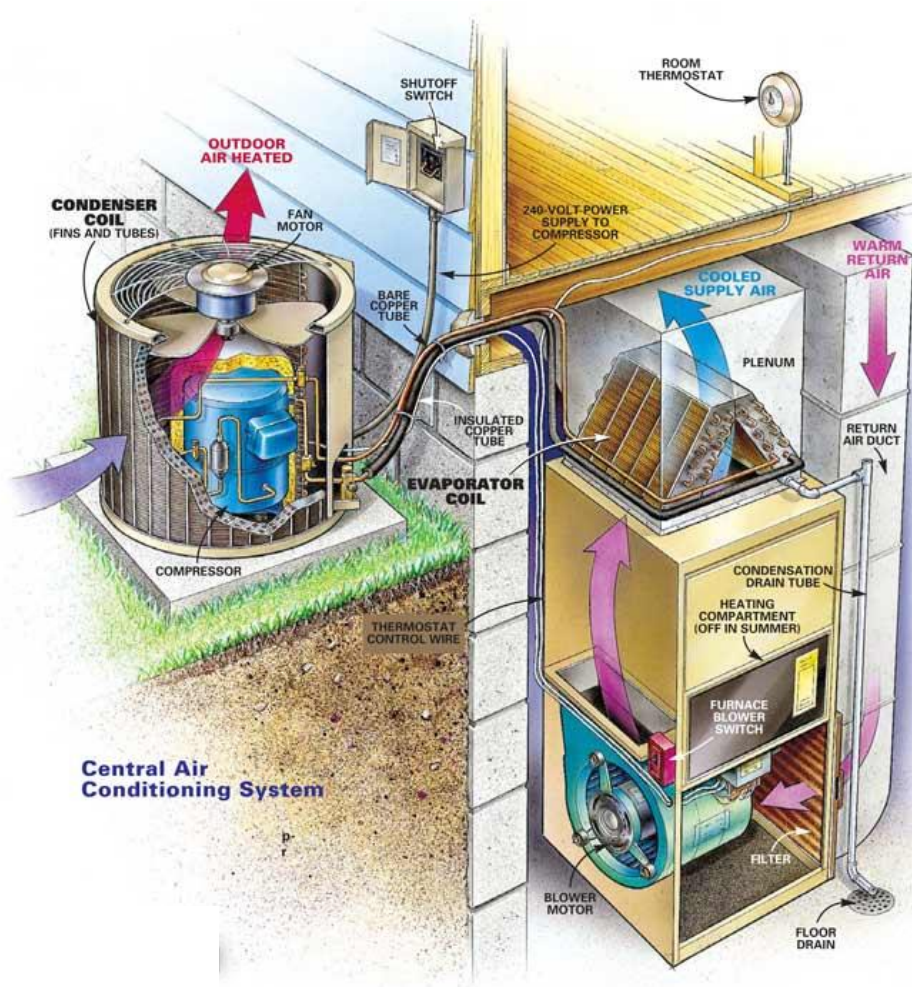


HVAC Guide

Your systems for heating and cooling are some of the most important, most used, and can be one of most expensive maintenance items in your home. Proper “conditioning” of your home is much more than just providing heating and cooling for comfort, it is essential for home durability, air quality and mold prevention. There are many different options available and you need to consult with a quality contractor to pick the right system or components to meet your needs and the need of your house.

Your HVAC System: The design of your system can vary depending on your climate, home type, personal needs, etc. In North Carolina, your system will typically consist of a heating source, a cooling source (can be combined in one unit like a heat pump), an air handler, cooling coil, supply/return ducts and thermostat/control. Whether you’re installing an entire system for a new home or replacing a condenser for an existing home, it is important to consider *all* the components as they work together as a system.



Each individual component has an impact on the functionality and performance of the entire system. For example, replacing an old, poor efficiency condenser unit (AC) with a new high efficiency 16 SEER unit will generally improve the overall efficiency of your system. However, if the indoor cooling coil is not compatible, if your ducts leak more than they should, etc., you will never experience the full potential of your new condenser.

Items To Consider When Choosing An HVAC Contractor: Just like any other business, the quality of HVAC contractors can cover a wide spectrum. Whether you are building a new home or replacing your existing system, we recommend that you do your homework and consult with more than one company. Your heating and cooling system is one of the most expensive and critical components of your home and can greatly impact your energy bills, your health, your comfort and the durability of your home. Here are a few items to assist you in your selection:

- A good contractor will evaluate your whole system and not just focus on the air conditioner or furnace you need to replace. As previously discussed, installing incompatible components, ignoring leaky or damaged ducts, etc. can have big impact in how your system performs. Ask questions and avoid a contractor that only wants to talk about “box” replacement.
- Whether you are installing a new system while building a home or replacing your condenser unit for your existing home, all HVAC contractors are required to perform a [Load Calculation](#) for your home. This ensures that the design and size of your system is appropriate for the heating and cooling needs of your house. Avoid contractors that don’t do load calculations and always ask for a copy up front; if they won’t provide you a copy they probably aren’t doing it.
- All new duct systems and existing ducts that are replaced (only the replaced portion) are required to be tested for leakage. In NC your system cannot have [Duct Leakage](#) exceeding 6%. Before 2012 duct testing was not required and it is common for ducts installed before then to leak in excess of 20% - generally the older the home and system the leakier the ducts, but some newer homes (built before 2012) can still have significant leakage. This is air you are paying to heat and cool and you want to ensure you aren’t spending that money to heat and cool the crawlspace, garage and/or attic. In addition, leaky ducts can negatively impact the indoor air quality of your home as they tend to draw in contaminated air from the attic and crawlspace. Again, ask your contractor to supply you the results of your duct test.
- If you are the owner of an existing home and replacing a component of your system, ask your contractor evaluate the condition of your ducts and whether they might need replacing or sealing. Now this will add cost to your project, but as described above it can

save you money. Not all HVAC contractors have crews that seal existing ducts, so ask if they can recommend a home performance contractor that offers that service.