

Who Ever Heard of Upgrading Ductwork?

Aren't heating and air conditioning ducts the same in all homes?

The short answer is usually. Unfortunately, that may not be a good thing for your home. The Environmental Protection Agency (EPA) states: "about 20-30 percent of the air that moves through a duct system is lost due to leaks, holes, and poorly connected ducts. When the ducts are in an unconditioned space, the result is higher utility bills and difficulty keeping the house comfortable, no matter where the thermostat is set." In high humidity areas, duct leakage into unconditioned space also results in increased humidity in the home... "that cold clammy feeling and wet dog smell." In cold climates, duct leakage to unconditioned areas lowers the humidity in the home making it feel cooler and adding some excitement through unexpected sparking static electricity (EPA website: https://www.energystar.gov/index.cfm?c=home_improvement.hm_improvement_ducts).

My ducts seem ok, why change/upgrade ducting now?

If the ducting system is not designed and installed properly, your heating and air conditioning system will not work properly. Often duct systems were not designed properly and the return duct and/or the supply duct are undersized. If that is the case, your duct system may need to be redesigned and/or repaired or replaced in order to get the air where it is needed. Replacing or repairing undersized or leaky ducts and/or duct insulation may allow a professional heating ventilation and air conditioning (HVAC) contractor to downsize your HVAC equipment. Thus, saving on the price of the equipment. A homeowner's benefit in upgrading the ductwork is the increased comfort, followed by energy savings

How can repairing ducts make my home more comfortable?

Heated or cooled air is transferred from your HVAC equipment to the rooms in your home through the duct system. If the correct amount of air at the correct temperature does not make it through the duct to the rooms, these rooms will not be heated or cooled properly. Thus, you will have hot and cold spots and drafts in your home. Additionally, there needs to be a proper path for the air to return to the HVAC equipment. Unfortunately, many homebuilders still ignore the return ducting requirements in order to save on the installation cost. The result is stuffy, uncomfortable rooms, and uneven heating and cooling in the average home.

Are there other benefits to duct upgrades and repairs?

For many existing homes, there will also be improved indoor air quality, enhanced health, lower utility bills, and improved humidity levels. Obviously, using less energy translates into lower utility bills for you. Using less energy is not only smart; it is also a national goal that is environmentally friendly.

"Improved indoor air quality and enhanced health" are big claims!

If you currently have good indoor air quality, you may not see an obvious improvement. However, in many systems, sealing the duct will increase the indoor air quality. Thus, enhancing occupant health. For example, if ducts are leaking in an attic or crawl space they may bring in outside elements like pollen, mold spores, or other pollutants. Worse yet, if they are in a garage, leaking ducts may bring in automotive exhaust fumes or other chemical fumes from items stored in the garage. In a worst case scenario, leaking return ducts can cause a furnace or water heater in a small space to operate unsafely.

Are energy savings really going to show up on my utility bill?

If you have leaking or uninsulated ducting in an attic or crawl space, the answer is "Yes." A typical homeowner story is available on the Department of Energy's website (<http://energy.gov/energysaver/articles/story-house-never-stayed-warm-well-insulated-resolution>) indicates a 53% decrease in energy costs. The homeowner said, "But it's magic. We're keeping the house warmer and paying half as much."

"Sold!" Who is the best person to contact when I need to decide on HVAC upgrades that include duct repairs?

Look no further than your professional HVAC contractor! Professional HVAC contractors can evaluate, design, install, and/or repair ducts. An excellent time to have this work done is during an equipment change out. That way your duct system will work with your new higher efficiency equipment to make your home more energy efficient. Additionally, once the duct system is repaired or replaced, and balanced based on your individual room heating and cooling requirements, you should enjoy a new level of comfort in your home. One thing all of the best contractor's will have in common is the ability to perform a Manual J load calculation, a Manual S equipment selection calculation, and a Manual D duct design calculation.

ComforTools™

ComforTools help consumers make informed choices about indoor heating and cooling systems. ComforTools promote energy conservation, indoor air quality, and safe, healthy homes and buildings.

For more information, contact:

ACCA is a non-profit association serving more than 60,000 professionals and 4,000 businesses in the indoor environmental and energy services community. Founded more than 40 years ago, today ACCA sets the standards for quality comfort systems, provides leading-edge education for contractors and their employees, and fights for the interests of professional contractors in every state in the country. **We invite you to visit us at www.acca.org.**