

How Ductwork Affects Your Comfort

Do you have:

- ✓ high summer and winter utility bills?
- ✓ rooms that are difficult to heat and cool?
- ✓ stuffy rooms that never feel comfortable?
- ✓ ducts located in an attic, basement, crawlspace or garage?

Then you may have duct system issues.

Your comfort relies on the correct amount of air making its way to your home's rooms via ductwork. If ducts are damaged, improperly installed or are the wrong size, they can cut your system's ability to heat or cool by more than half on hot or cold days and can lead to high utility bills and lack of comfort.

Duct systems lose energy in two main ways: air leakage through small cracks and seams and heat gain in summertime and heat loss in wintertime via the duct wall. Both the volume and temperature of air created by the equipment can be lost in the ductwork before it's delivered into your living space.

What is a duct system?

The duct system is a series of metal tubes that carry heated or cooled air from the central furnace, heat pump, or air conditioner to necessary rooms and then take it back to the equipment. The ducts also control how much air is delivered to each room.

Typical systems with ducts in the attics or crawl spaces lose 25%-40% of the heating or cooling energy that passes through them.

Air leakage from ductwork increases indoor relative humidity, which affects your comfort in hot and humid climates. You will adjust your thermostat to compensate, which then significantly increases your energy use.

Improperly sized ductwork decreases the airflow of your heating and cooling system, which can increase energy use by 11-14%.



Minimizing the air lost through a duct system is accomplished by sealing with special tape, paste, or an epoxy. Sealing ductwork can be sealed around the equipment or through a deep ductwork modification that seals the entire system from the inside out.



Improving the temperature loss that occurs at the ductwork can be done by placing insulation around the part of the duct that supplies the conditioned air to the rooms.



When evaluating the sizing and design of a duct system, a Manual J calculation is essential as it provides room-by-room heat loss and heat gain information that will help with necessary modification decisions.

How HVAC SAVE Can Help

The HVAC SAVE program trains HVAC professionals on performance testing of heating and cooling system. An HVAC SAVE test verifies operating performance, which will help you save energy and stop wasting money.

An HVAC SAVE certified contractor will be able to:

- ✓ Test and verify your system's performance
- ✓ Provide you with a diagnostic report detailing what needs to be fixed and how to fix it

Choosing an HVAC SAVE certified contractor ensures a high quality installation and you can have peace of mind that your system is operating as intended.

To find an HVAC SAVE certified professional in your area, visit www.hvacsave.com

For more information, email hvacsave@mwalliance.org

