

Duct Sealing

A duct system that is well designed and properly sealed can make your home more comfortable, energy efficient, and safer. Making improvements to your duct system can:

Improve Comfort

Sealing and insulating ducts can help with common comfort problems, such as rooms that are too hot in the summer or too cold in the winter.

Enhance Indoor Air Quality

Fumes from household and garden chemicals, insulation particles, and dust can enter your duct system, aggravating asthma and allergy problems. Sealing ducts can help improve indoor air quality by reducing the risk of pollutants entering ducts and circulating through your home.



Properly Sealed Duct

Promote Safety

During normal operation, gas appliances such as water heaters, clothes dryers, and furnaces release combustion gases (like carbon monoxide) through their ventilation systems. Leaky duct work in your heating and cooling system may cause “backdrafting,” where these gases are drawn back into the living space, rather than expelled to the outdoors. Sealing leaks can minimize this risk.

Save Money

Leaky ducts can reduce heating and cooling system efficiency by as much as 20 percent. Sealing and insulating ducts increases efficiency, lowers your energy bills, and can often pay for itself in energy savings. Plus, if you’re planning to install new heating and cooling equipment, a well-designed and sealed duct system may allow you to downsize to a smaller, less costly heating and cooling system that will provide better dehumidification.

Protect the Environment

The less energy we use in our homes, the less air pollution we generate. By sealing your ducts and reducing the amount of energy necessary to comfortably heat or cool your home, you can reduce the amount of air pollution generated.



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Performance Testing Duct Sealing

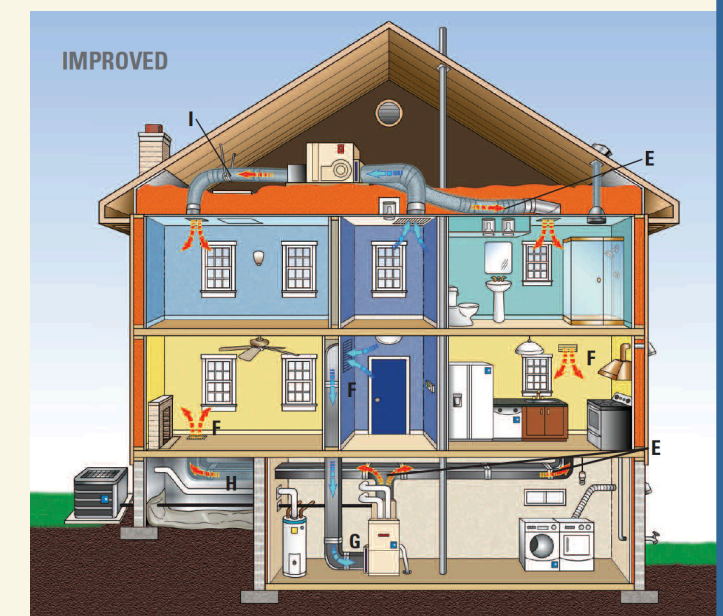
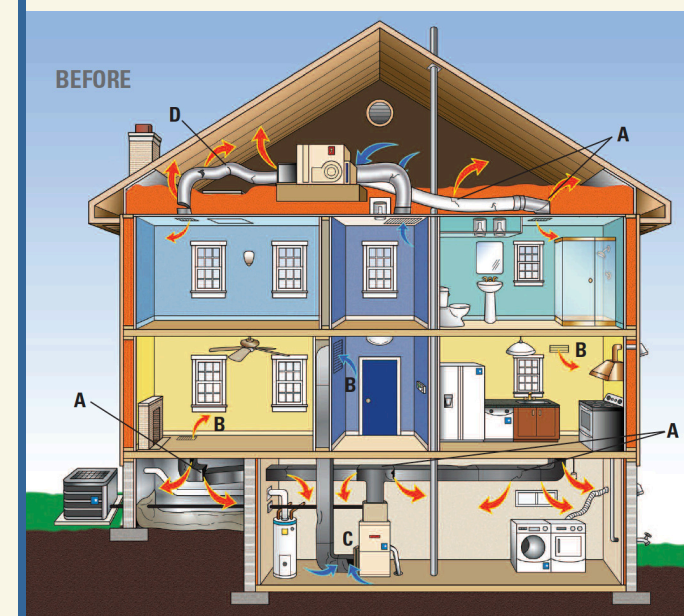
Common Duct Problems and Solutions

PROBLEMS:

- A) Leaky, torn and disconnected ducts
- B) Poorly sealed registers and grills
- C) Leaks at furnace and filter slot
- D) Kinks in flexible duct work, restricting airflow

SOLUTIONS:

- E) Properly sealed ducts
- F) Registers and grills tightly sealed to ducts
- G) Sealed furnace and filter slot
- H) Well-insulated ducts in unfinished areas
- I) Straightened flexible ducts, improved airflow



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Performance Testing

Is your house leaking?

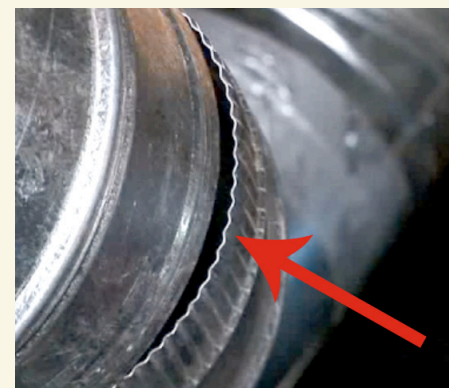
Homes are not airtight. Leaks in your home's envelope—its exterior walls, ceiling, and floors—and your duct system can add up to big losses.

As much as 20% or more of the air that moves through your home may be lost due to holes and poorly connected ducts. The result is higher utility bills and difficulty keeping your home comfortable, no matter how the thermostat is set!

Leaky systems can cause:

- ◆ High summer and winter utility bills
- ◆ Rooms that are difficult to heat and cool
- ◆ Stuffy rooms that never seem to feel comfortable
- ◆ Musty smells

Leaky duct work is one of the most important and common problems found in houses. Leaks in your duct system will not only increase your utility bills, but they can prevent your heating and cooling system from delivering the comfort you need. Worse yet, duct leaks could be creating air quality problems that affect the health of your family.

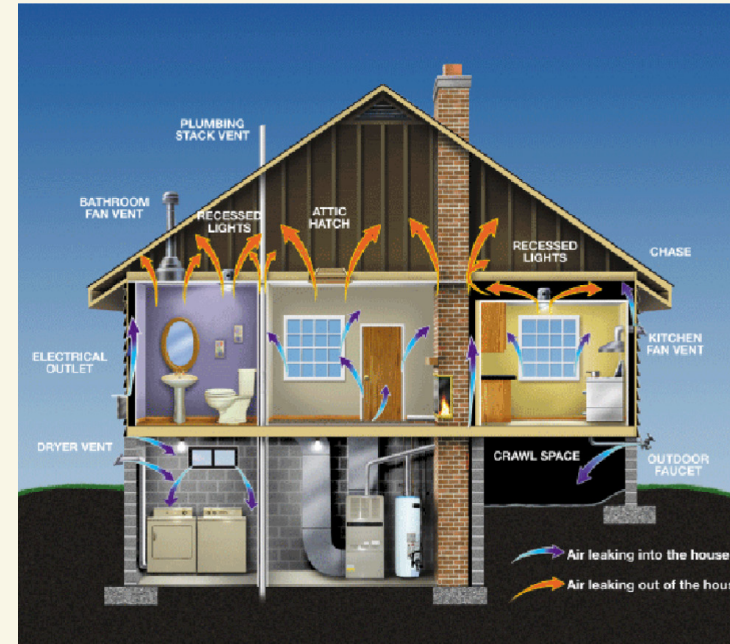


Unsealed, Leaky Duct

Indoor Air Quality

Up to 90% of time is spent indoors, so the quality of the air in your home is critical. Asthma, allergies and odors have all been linked to indoor air pollution. A recent scientific study found that 40% of children's illnesses can be caused by home environmental factors.

In fact, the Environmental Protection Agency calls "indoor air pollution" the country's leading environmental health concern. In many houses, duct leakage is the main cause of indoor air quality problems.



Common Air Leaks in a Standard Home

If your home has a leaky envelope and leaky ducts, you're losing air to the outside that you've already paid to heat or cool!

New Building Codes

Energy costs are going up, perhaps substantially. Washington State is doing its part by boosting efficiency standards for new homes. By following these guidelines for your home, you can achieve the same energy saving benefits!

Getting Started

The first step to improving your indoor air quality, and making your house tighter and more efficient, is to schedule a Performance Test for your home. This procedure has two parts: a "Blower Door" to test the airtightness of your home's envelope, and a Duct Test to measure the integrity of both the supply and return ducts of your heating and cooling system.



Blower Door

Bob's technicians are specially trained and **PTCS Certified**, so you can be sure that all work will be performed according to strict guidelines.

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Blower Door

A Blower Door is a diagnostic tool designed to measure the airtightness of buildings and find air leakage sites. A powerful fan is sealed into a doorway and blows air into or out of the building, creating a small pressure difference between the inside and outside. This pressure difference forces air through all holes and penetrations in the building enclosure.



Duct Leakage Test

A Duct Leakage Test involves pressurizing the duct system with a calibrated fan. The tighter the duct system, the less air you need from the fan to create a change in duct system pressure.

Once these tests are completed, you will have the diagnostic information you need to take the next steps to making your home more energy efficient.

These steps may include Duct Sealing, Duct Cleaning, or upgrading your Furnace, Air Conditioning or Ventilation systems. After making the recommended repairs, we will re-test to ensure that your heating and cooling distribution system is operating at peak performance. When properly sealed and insulated, your home will become more comfortable, energy efficient, safer and healthier.



Duct Leakage Test