



What is a Duct Leakage Test ?

A duct leakage test is a diagnostic test procedure used to measure the airtightness of a home's HVAC ductwork. It involves temporarily sealing off all supply and return vents and using a specialized calibrated fan (a "duct blaster") to pressurize (blow air into the system) or depressurize (pull air out of the system). The test measures exactly how much air escapes (or enters) through gaps, and loose/unsealed connections.

How is the test done ?

- Sealing: All supply and return registers (grilles) are sealed with a strong, temporary adhesive tape or specialized covers such as Vent Cap Systems®.
- Setup: The duct leakage test apparatus (fan, flex duct, and digital pressure gauge) is connected and sealed to the return air duct or one of the registers.
- Pressurization: The fan is turned on to either pressurize or depressurize the duct system to a standard target pressure, usually 25 Pascals.
- Measurement: The gauge (a digital manometer) measures the volume of air (typically in CFM or Cubic Feet per Minute) required to hold that pressure. A higher CFM indicates a leakier system that requires corrections.

Why is the test performed ?

- Energy Efficiency: Leaky ducts force your heating and cooling system to work much harder to maintain desired temperatures, drastically driving up utility bills.
- Indoor Air Quality: Holes in the ductwork pull in dust, mold, and allergens from unconditioned spaces (like crawlspaces or attics), and distributes this 'dirty' air throughout the living space.
- Code Compliance: Most states have now implemented adherence to IECC energy codes that require new homes and major HVAC renovations to pass a duct leakage test.

