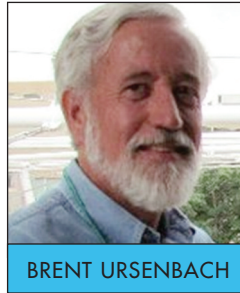


MECHANICAL CODE DISCUSSION

Duct Blaster— Duct Leakage Testing



BRENT URSENBACH

SALT LAKE COUNTY PLANNING AND DEVELOPMENT

bursenbach@slco.org
385-468-6694

DUCT LEAKAGE TESTING will be required on new duct systems, installed outside the thermal envelope of a home, effective July 1 this year. The code will require residential HVAC systems with air handlers or at least 50% of the duct system, measured by length, to be tested for leakage, if located in an attic, crawlspace or outside.

The State Amendment in part reads:
Post-construction test: Total leakage shall be less than or equal to 10 CFM (283 L/min) per 100 square feet (9.29 m²) of conditioned floor space when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. All register boots shall be taped or otherwise sealed during the test.

A duct leakage tester or duct blaster is a diagnostic tool designed to measure the airtightness of HVAC ductwork. A

duct leakage tester consists of a calibrated fan for measuring an air flow rate and a pressure sensing device to measure the pressure created by the fan

“A duct leakage test can be performed by either pressurizing or depressurizing the ductwork . . .”

flow. The combination of pressure and fan flow measurements is used to determine the ductwork airtightness.

A basic duct leakage testing system includes three components — a calibrated fan, a register sealing system and a device to measure fan flow and building pressure. Supply registers or return air grills are sealed using adhesive tapes, cardboard, or non-adhesive reusable seals. The blower compartment or return is left unsealed.

The calibrated fan is then connected to that unsealed opening. Pressure is monitored in one of the branches of the ductwork while the calibrated fan

delivers air into the system. As air is delivered into the ductwork, pressure builds and forces air out of all of the holes in the various ductwork connections or through the seams and joints of the furnace or air-



conditioner. The tighter the ductwork system (e.g. fewer holes), the less air you need from the fan to create a change in the ductwork pressure.

A duct leakage test can be performed by either pressurizing or depressurizing the ductwork; however ductwork that is outside the building envelope, such as an unconditioned attic or crawlspace, should be pressurized so as to not bring in unwanted contaminants.

Watch for additional information here and in future training. As I mentioned at the Education Summit, I’m hopeful that I’ll have a duct blaster available within the next few months, for use in demonstrations and training. ■

Please remember you questions, comments and suggestions are always welcome.—Brent

ADVERTISE YOUR BUSINESS
in the next issue of RMGA Pipeline with **THIS SIZE AD FOR ONLY \$120**
Call Duane Hill at 801-521-8335 to reserve your space!