

Measuring Duct Leakage: It's Code

Did you know?

Effective 2010, the Massachusetts Energy Code Options became:

1: 780 CMR, Chapter 61 (Amended 7th edition) = 2009 IECC (International Energy Conservation Code)

OR

2. 780 CMR, Appendix 120 AA, also known as The Stretch Code - "a more energy efficient alternative to the base energy code" that municipalities may volunteer to adopt.

Testing the Duct System in NON-STRETCH CODE cities or towns (1 of the 4 Testing Options Required)

Testing Option	Testing Description	Max CFM leakage per 100 sq ft @ 25 Pascals
At rough-in, air handler not installed	Duct Blast Test - Duct Only	4
At rough-in, air handler installed	Duct Blast Test - Duct w/indoor unit	6
Post-construction, leakage to outdoors	Blower Door Test	8
Post-construction, total leakage	Duct, Registers, Indoor Unit	12

Important: Which test is required will be determined by the inspector. Be prepared! Call the City or Town Hall beforehand. "Ideally, at rough-in, air handler not installed" is more forgiving. **Stretch Code cities or towns require a Blower Door Test.**

Q: Why are there "Stretch Code" cities or towns? A: These towns get federal funding.

APPENDIX AA: STRETCH ENERGY CODE

The Stretch Energy Code is the *International Energy Conservation Code* (IECC) 2009 with Massachusetts Amendments (780 CMR 115.AA)

401.3 Prescriptive Option for Residential Additions: Additions to an existing building, building system, or portion thereof shall conform to IECC 2009 Chapter 4, and shall further demonstrate compliance with:

3. Ducts for new HVAC systems shall be sealed and tested post-construction to demonstrate leakage to outdoors of less than or equal to **4 cfm per 100 square feet of conditioned floor area**, except where the air handler and all ducts are located within **conditioned space**.

Important: Blower Door Tests are required for Stretch Code cities or towns and are 50% more stringent (4 cfm vs 8 cfm) than non-Stretch Code areas.

Also see: Duct Leakage Q&As, and "Stretch Appendix to the Building Energy Code in Massachusetts, Q&A - October 2010.

Taking HVAC *outside* the box

Duct Testing Q&As

Q: How can I learn more about duct testing?

A: Reach out to Sharon Carlino at Conservation Services Group (CSG) 508-836-9500. Register for the Cool Smart "Duct Diagnostics 101 Course, which is held on a regular basis at Air Purchases in Burlington.

Q. Which cities and towns have adopted the "Stretch Energy Code?"

A: As of April 26, 2011, seventy-two municipalities have adopted the Stretch Code, but more are being added all the time. For a current list, Google "Stretch Codes Mass" or go to:
http://www.mass.gov/Eoeea/docs/doer/green_communities/grant_program/stretch_code_towns.pdf

Q: What if the duct already exists?

A: You do not have to test existing ductwork, however, if you add to the duct distribution system you will have to test the portion you have added.

Q: How much does a Duct Blaster test kit cost?

A: The price varies, but be prepared to invest approximately \$1,800 for a TEC Duct Blaster or comparable system. **NOTE:** If you participate in the CoolSmart "CFM Leakage Reduction Program" you can earn \$2.00 per cfm in leakage reduction, up to \$600, plus you can get a significant savings on the cost of a Duct Blaster. Call Sharon Carlino at 508-836-9500 for more information.

Q: Can I do my own test?

A: You would need to confirm that with the municipality; some require third-party verification.

Q: How long does a Duct Blaster test take?

A: Approximately 45 minutes, once you have become comfortable with the process.

Important: Hidden or unexpected costs can eat significantly into your bottom line. Being prepared will allow you to cover these costs during the sales process. Know your marketing area and what is required there for Duct Leakage testing. Also be aware of what cities and towns are charging for Mechanical Permits. We have seen costs for such permits ranging from a flat fee to a percentage of the sold job of up to 10%.

Still have questions? Please feel free to contact Jim Travers, Air Purchases, 781-273-2050.

(Also see: "Stretch Appendix to the Building Energy Code in Massachusetts - Question & Answer, October 2010")

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