



News from the **Mechanical Inspectors**

3-01-09

The following information is provided from the Mechanical Inspection Department of the City of Winston-Salem.

We have received a lot of questions about residential duct insulation requirements in the 2009 NC Energy Code. The section below is the code section with some commentary below.

403.2.1 Insulation. Supply and return ducts shall be insulated to a minimum of R-8. Ducts in floor trusses shall be insulated to a minimum of R-6.

Exception: Ducts or portions thereof located completely inside the building thermal envelope.

Commentary: Supply duct and return duct located in an attic, crawl space and basement are to insulated with R-8 duct insulation. Ducts located in manufactured trusses above a crawl space or basement can be R-6. The building insulation will be located below these. For information on ducts located in between floors or walls that are conditioned above and below see next code section.

2009 NC Mechanical Code

603.12 Condensation. Provisions shall be made to prevent the formation of condensation on the exterior of the new duct. Ducts installed in attics crawl spaces or outdoors insulated per Section 403.2.1 or Section 503.2.7 of the *North Carolina Energy Code* shall be deemed to meet the intent of this section.

Commentary: Supply ducts located in between floors and the space above and below are conditioned only need minimum insulation to prevent condensation. Return ducts in these areas need no insulation.

Please send any comments to miken@cityofws.org we would like to hear from you.

Thanks,

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