



Success with 2012 Code in North Carolina: Tech Tips for Builders

HVAC INSTLATION



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TECH TIPS: HVAC INSTALLATION

Success with 2012 IECC for Builders

1. Seal all duct terminations to drywall and/or subfloor and all HVAC penetrations in the building envelope with foam, caulk or mastic. Use fire-rated sealants where applicable.

X INSULATION



✓ SEAL



1. Seal all duct terminations to drywall and/or subfloor and all HVAC penetrations in the building envelope with foam, caulk or mastic. Use fire-rated sealants where applicable.

X NONE



✓ MASTIC



2. Seal all HVAC components at all joints, seams and corners.

X LOOSE SEAL



✓ BUCKET MASTIC



3. Mechanically fasten all metal duct work with screws. Attach the inner liner of flexible ducts with nylon/plastic straps and tighten with a manufacturer-approved tool.

X WRONG TAPE



✓ PLASTIC STRAP

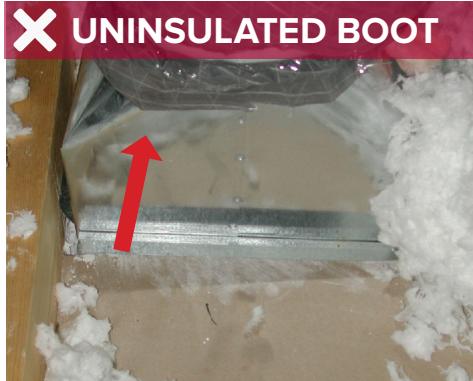




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4. Insulate all supply duct work in unconditioned attics to R-8.
Insulate all other duct work outside of conditioned space to R-6.



6. Support flexible duct (including spot ventilation) at least every 4 feet and do not bend greater than 90°.



5. Do not compress insulated flexible ducts more than the thickness of the insulation.



6. Support flexible duct (including spot ventilation) at least every 4 feet and do not bend greater than 90°.





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8. Install outside air ventilation intakes at least 10 feet from any exhaust vent or stack.



10. Terminate all exhaust ventilation ducts to the outside. Install screens where applicable.



9. Coordinate bath fan exhaust duct direction with Electrical Contractor.



11. For heat pumps, install a heat strip outdoor temperature lockout that prevents supplemental heat operation and set it to the balance point.





CRITICAL DETAIL:

DUCT SEALING: BOOTS

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It is recommended to seal all joints in the air distribution system with bucket duct mastic and fabric mesh.

The tester will be measuring the total duct leakage at CFM at 25 Pa (with reference to the outside).

✓ MASTIC BOOT



✓ INSTALL LINER



✓ INSTALL ZIP TIE



✓ MASTIC CONNECTION



✓ INSULATE BOOT



✓ SEAL SEAMS



✓ SEAL TO SUBFLOOR



✓ SEAL TO DRYWALL





CRITICAL DETAIL:

DUCT SEALING: PLENUMS

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It is recommended to seal all joints in the air distribution system with bucket duct mastic and fabric mesh.

The tester will be measuring the total duct leakage at CFM at 25 Pa (with reference to the outside).

✓ MASTIC PLENUM



✓ MASTIC COLLAR



✓ INSTALL ZIP TIE



✓ MASTIC CONNECTION



✓ INSULATE COLLAR



✓ SEAL SEAMS



✓ MASTIC PLENUM TO AHU



✓ USE BUCKET MASTIC

