



Success with 2009 IECC in Georgia:  
*Tech Tips for Builders*

# HVAC INSTALLATION



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# TECH TIPS: HVAC INSTALLATION

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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

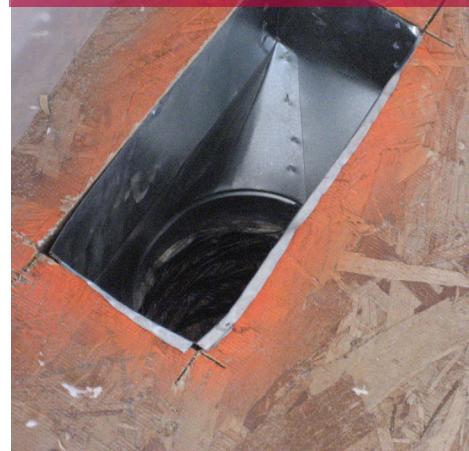


## ✓ SEAL



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





# TECH TIPS: HVAC INSTALLATION

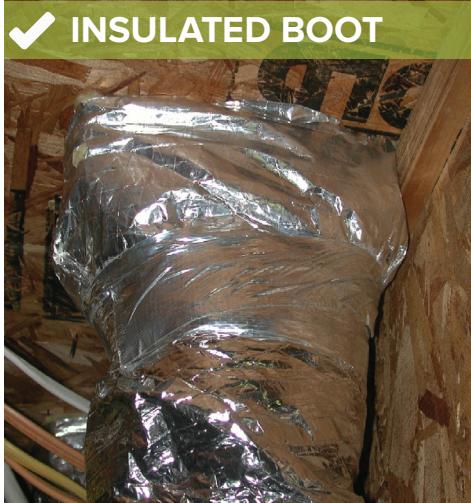
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4. Insulate all ducts outside of conditioned space to at least R-6 and supply ducts in attics to at least R-8.

## X UNINSULATED BOOT



## ✓ INSULATED BOOT



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

## X COMPRESSION



## ✓ NO COMPRESSION



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

## X NO SUPPORT



## ✓ SUPPORT



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

## X GREATER THAN 90°



## ✓ LESS THAN 90°





# TECH TIPS: HVAC INSTALLATION

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

## X WRONG LOCATION



## ✓ RIGHT LOCATION



8. Coordinate bath fan exhaust duct direction with electrical contractor.

## X WRONG DIRECTION



## ✓ RIGHT DIRECTION



9. Terminate exhaust ventilation duct work to the outside and install a screen over the termination.

## X WRONG TERMINATION

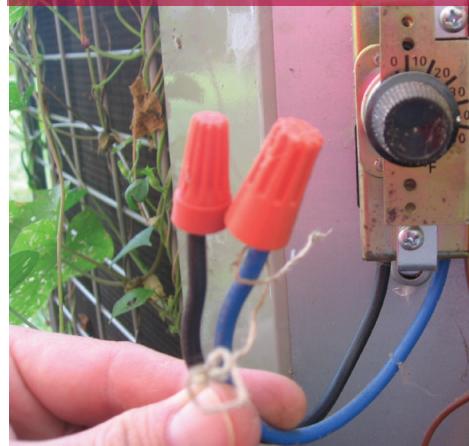


## ✓ RIGHT TERMINATION



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

## X DISCONNECTED



## ✓ RIGHT INSTALLATION





# CRITICAL DETAIL:

## DUCT SEALING: BOOTS

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

### ✓ MASTIC BOOT



### ✓ INSTALL LINER



### ✓ INSTALL ZIP TIE



### ✓ MASTIC CONNECTION



### ✓ INSULATE BOOT



### ✓ SEAL SEAMS



### ✓ SEAL TO SUBFLOOR



### ✓ SEAL TO DRYWALL



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



# CRITICAL DETAIL:

## DUCT SEALING: PLENUMS

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

### ✓ MASTIC PLENUM



### ✓ MASTIC COLLAR



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

### ✓ INSTALL ZIP TIE



### ✓ MASTIC CONNECTION



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### ✓ INSULATE COLLAR



### ✓ SEAL SEAMS



### ✓ MASTIC AIR HANDLER



### ✓ USE BUCKET MASTIC

