

PIKES PEAK REGIONAL BUILDING DEPARTMENT

Residential Air Conditioning Installation Inspection

All installations of air conditioning condensing units require an electrical permit as well as a mechanical permit and the related inspections, effective since Oct. 1, 2003. This applies to new and replacement equipment. Note: Code references below are to the 2003 International Mechanical Code (IMC), 2003 International Energy Conservation Code (IECC), and the 2005 Pikes Peak Regional Building Code (PPRBC).

PIPING

- 1. Air Conditioning (AC) suction line and downstream of TXV (if outside of coil cabinet) must be insulated. Refer to IMC Section 1107.3 & IECC Section 503.3.3.1.
- 2. Support copper tubing at a maximum horizontally to 6' on center and copper pipe to 12' on center; IMC Section 305.4.
- 3. Joints in copper tube used for refrigerating systems, containing Group A2, A3, B2 or B3 refrigerants, must be brazed. Soldered joints cannot be used in such refrigeration systems; IMC Section 1107.4.4. Mechanical joints cannot be used in annealed copper tubing larger in size than 7/8" outside diameter; IMC Section 1107.4.3
- 4. Soft annealed copper tubing or refrigerant piping containing other than Group A1 or B1 refrigerants, must be enclosed; IMC Section 1107.2.
- 5. Tests are required for both the high and low pressure sides of each system at no less than the design pressures. If no condenser installed, test at 300#; IMC Section 1108.1 as amended by the PPRBC. This also applies to AC preps on new construction.
- 6. Underground installation requires refrigeration lines to be installed in conduit. Exception: If less than 5' in total developed length and at least 12" deep; IMC Section 1101.3.
- 7. Joints under ground must be brazed. Sta-Brite is *not* acceptable; RBD Mechanical Committee, August 2001.
- 8. Provide vibration protection where piping enters cabinet at coil and condenser; IMC Section 1101.3

CONDENSER

- 9. Clearances per Manufacturer's specification; IMC Sections 301.4, 304.1, 304.2 & 1101.2 as amended by the PPRBC.
- 10. Support is a minimum of 3 inches above grade; IMC Sections 304.9 & 305.6 as amended by the PPRBC.
- 11. Service outlet located within 25 feet; IMC Section 306.7 as amended by PPRBC.

COIL

- 12. The coil case is to have an area not less than 90% of the furnace outlet collar; IMC Sections 603.2, 918.2 & 1101.2 as amended by the PPRBC and the RBD Mechanical Committee, October 2000. If less than 90%, one of the following options is applied:
 - a. Verify acceptance per furnace listing/ installation instructions;
 - b. Letter from furnace manufacturer stating use of specific coil with specific model furnace is acceptable;
 - c. Provide duct transition from furnace collar to coil with not more than a 45 degree angle based on the direction of air flow; or
 - d. Seek variance from the RBD Mechanical Committee.
- 13. Provide condensate drain and trap if required per manufacturer's installation instructions; IMC Sections 304.1, 307.2.2 & 1101.2 as amended by the PPRBC.
- 14. Provide overflow drain if required. Drain must be labeled and terminate at either floor drain or readily observable location; IMC Section 307.2.3 as amended by the PPRBC.
- 15. Duct work to be sealed substantially air tight; IMC Section 603.9 & IECC Section 503.3.3.4.3 as amended by the PPRBC.