Furnaces and Air Conditioner Requirements

This packet explains residential attic furnace and air conditioning systems installation requirements.

(Updated for the 2010 codes)
The only requirement unique to attic furnaces is the requirement that a continuous floor 24 inches in width be provided from the firebox side of the furnace to areas required to service "temperature-limit control, air filter, fuel-control valve, vent collar or air-handling unit." In many cases, this will require continuous flooring 24 inches in width on three sides of the equipment and 30 inches on the control side. (Section 904.11)

Continuous floor 24 inches in width MUST be provided from the firebox side of the furnace to areas required to be serviced (temperature-limit control, air filter, fuel-control valve, condensate drain trap, vent collar or air-handling unit.) In many cases, this will require continuous flooring 24 inches in width on three sides of the equipment and 30 inches on the control side. (Section 904.11)

ELECTRIC OUTLET AND LIGHT FIXTURE

LOCATE MINIMUM 30" x 30" (762 mm x 762 mm) ACCESS OPENING WITHIN 30" (762 mm) OF FURNACE. EXCEPTION: MAY BE 22" x 30" (559 mm x 762 mm) PROVIDED LARGEST PIECE OF EQUIPMENT CAN BE REMOVED. 30" min. height

CBC1209.2

ELECTRIC REQUIREMENTS

- Furnace required to be on separate circuit and hard wired. CEC 422-12
- Existing or new “Romex” must be protected 6 ft from scuttle hole.
- Verify max. circuit ampacity for your model. 15 amp or 20 amp

ATTIC FURNACE
A plot plan must be submitted showing property lines, house and other buildings on lot, location of condensing unit, dimensions of unit and distances from property lines.

Provide disconnect adjacent to and in sight from equipment served. Provide waterproof receptacle outlet within 25' from equipment. Provide 30"x30" clear working space in front of disconnect and equipment controls. “Romex” with or without insulation is not permitted for AC connection.

5'-0" setback required from Property Line. Secure A/C to pad and pad to the ground. (Screws into the foam pad is NOT acceptable.)
CONDENSATE DISPOSAL REQUIREMENTS

The proceeding information pertains to condensate discharge requirements for air-conditioning units in residential, commercial and industrial buildings.

Residential Condensate Disposal Requirements –

Condensate discharge for residential air-conditioning units is typically terminated in drywells. Drywell specifications are as follows:
1. The minimum size of a residential drywell is 2 foot square by 2 foot deep.
2. The nearest edge of the drywell shall be at least 3 feet from any structure or building foundation.
3. The drywell shall be filled with min. 1" rock.
4. The top of the drywell shall be covered with building paper or plastic sheeting with 6" of earth or concrete over that.
5. The condensate pipe from the cooling coil (minimum 3/4") shall indirectly connect to a minimum 1 1/2” drainpipe.

Note: The indirect connection shall be made by an air break at the edge of the foundation.

Miscellaneous Information -
When a cooling coil is located in an attic, a secondary condensate drainpipe shall be installed and shall terminate in a readily observable location such as, over a window or door.

Residential Condensate Line & Drywell
CLOSET FURNACE CLEARANCE REQUIREMENTS

FURNACE MUST BE LISTED FOR ALCOVE OR CLOSET INSTALLATION

(Per the California Mechanical Code)
CLOSET FURNACE CLEARANCE REQUIREMENTS

Disconnect Switch. Cord and plug not permitted.
Gas valve Size connector according FAU input rating

Provide sufficient clearance for inspection, service and repairs of vent connectors, duct and plenum seals, electrical connections, gas valves and connectors and any parts of FAU that may require access. CMC 304.0

Door must allow FAU removal

30" MINIMUM WORKING SPACE

PER THE CALIFORNIA MECHANICAL CODE
Sample Plot Plan for Condenser

5' Min. to property line
5' setback

5' MIN.
REAR YARD

PUBLIC UTILITIES' EASEMENTS

PROPERTY LINES

FRONT YARD

SIDEWALK

If corner lot, show radius on plan.

NOTE:
1) Equipment noise shall not exceed 50Db at property line
2) Not allowed inside (P.U.E.) easements
3) No exposed duct work on roof

Min. scale - 1/16”
Preferred - 1/8”

1/2 OF STREET ESTIMATED.

Forms\A\A51 Sample Plot Plan for Condenser (4/11)
902.1 Added or Converted appliances. When additional or replacement appliances or equipment are installed or an appliance is converted to gas from another fuel, the location in which the appliances or equipment are to be operated shall be checked to verify the following:

(A) Air for combustion and ventilation is provided where required, in accordance with the provisions of Chapter 7. Where existing facilities are not adequate, they shall be upgraded to meet Chapter 7 specifications.

(B) The installation components and appliances meet the clearances to combustible material provisions of this code.
   It shall be determined that the installation and operation of the additional or replacement appliances do not render the remaining appliances unsafe for continued operation.

(C) The venting system is constructed and sized in accordance with the provisions of Chapter 8. Where the existing venting system is not adequate, it shall be upgraded to comply with Chapter 8. [NFPA 54:9.1.2]

CMC Section 902.1