

Residential Mechanical Changes Workshop 08.29.05



R309.1.1

Duct penetration.

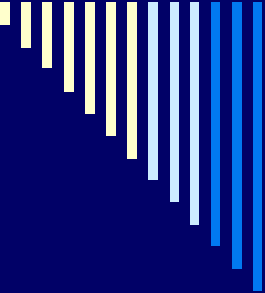
- Ducts in the garage and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum No. 26 gage (0.48 mm) sheet steel or other approved
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M1305.1.3

Appliances in attics.

- Attics containing appliances requiring access shall be provided with an opening and unobstructed passageway large enough to allow removal of the largest appliance. The passageway shall not be less than 30 inches (762 mm) high and 22 inches (559 mm) wide and not more than 6 feet (1829 mm) in length measured along the centerline of the passageway from the attic access opening to the appliance's service panel.
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M1305.1.3.2

Air-handling units.

- ❑ Air-handling units shall be allowed in attics if the following conditions are met:
- ❑ The service panel of the equipment is located within 6 feet (1829 mm) of an attic access.
- ❑ A device is installed to alert the owner or shut the unit down when the condensation drain is not working properly.
- ❑ The attic access opening is of sufficient size to replace the air handler.
- ❑ A notice is posted on the electric service panel indicating to the homeowner that the air handler is located in the attic. Said notice shall be in all capitals, in 16 point type, with the title and first paragraph in bold:



NOTICE TO HOMEOWNER

A PART OF YOUR AIR CONDITIONING SYSTEM, THE AIR HANDLER, IS LOCATED IN THE ATTIC. FOR PROPER, EFFICIENT, AND ECONOMIC OPERATION OF THE AIR CONDITIONING SYSTEM, YOU MUST ENSURE THAT REGULAR MAINTENANCE IS PERFORMED. YOUR AIR CONDITIONING SYSTEM IS EQUIPPED WITH ONE OR BOTH OF THE FOLLOWING:

- 1) A DEVICE THAT WILL ALERT YOU WHEN THE CONDENSATION DRAIN IS NOT WORKING PROPERLY OR
 - 2) A DEVICE THAT WILL SHUT THE SYSTEM DOWN WHEN THE CONDENSATION DRAIN IS NOT WORKING. TO LIMIT POTENTIAL DAMAGE TO YOUR HOME, AND TO AVOID DISRUPTION OF SERVICE, IT IS RECOMMENDED THAT YOU ENSURE PROPER WORKING ORDER OF THESE DEVICES BEFORE EACH SEASON OF PEAK OPERATION.
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SECTION M1307 APPLIANCE INSTALLATION

- M1307.3.1 Ground-mounted units.
 - Ground-mounted units for Group R3 residential applications may be anchored with #14 screws with gasketed washers according to the following
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M1307.3.1

Ground-mounted units.

- 1. For units with sides less than 12 inches (305 mm), one screw shall be used at each side of the unit
 - 2. For units between 12 and 24 inches (305 and 610 mm), two screws shall be used per side.
 - 3. For units between 24 and 36 inches (610 and 9144 mm), three screws shall be used per side.
 - 4. For units greater than 36 inches or 5 tons (9144 mm and 18 kW), anchorage shall be designed in accordance with Section [M1307.3.](#)
 - **Notes:**
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M1308.2

Protection against physical damage.

- In concealed locations where piping, other than cast-iron or galvanized steel, is installed through holes or notches in studs, joists, rafters or similar members less than 1.5 inches (38 mm) from the nearest edge of the member, the pipe shall be protected by shield plates. Protective shield plates shall be a minimum of 0.062-inch-thick (1.6 mm) steel, shall cover the area of the pipe where the member is notched or bored, and shall extend a minimum of 2 inches (51 mm) above sole plates and below top plates.
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M1403.2

Foundations and supports.

- Supports and foundations for the outdoor unit of a heat pump shall be raised at least 3 inches (76 mm) above the ground to permit free drainage of defrost water, and shall conform to the manufacturer's installation instructions.
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M1411.3.1

Auxiliary and secondary drain systems.

- In addition to the requirements of Section [M1411.3](#), a secondary drain or auxiliary drain pan shall be required for each cooling or evaporator coil where damage to any building components will occur as a result of overflow from the equipment drain pan or stoppage in the condensate drain piping.
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M1411.3.1

Auxiliary and secondary drain systems.

- An auxiliary drain pan without a separate drain line shall be provided under the coils on which condensate will occur. Such pan shall be equipped with a water level detection device that will shut off the equipment served prior to overflow of the pan. The auxiliary drain pan shall be constructed in accordance with Item 1 of this section.
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M1502.2

Duct material.

- Single-wall ducts serving range hoods shall be constructed of galvanized steel, stainless steel or copper.
 - **Exception:** Ducts for domestic kitchen cooking appliances equipped with down draft exhaust systems shall be permitted to be constructed of schedule 40 PVC pipe provided that the installation complies with all of the following:
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M1502.2

Duct material.

Exception:

- ❑ The duct shall be installed under a concrete slab poured on grade,
 - ❑ The underfloor trench in which the duct is installed shall be completely backfilled with sand or gravel,
 - ❑ The PVC duct shall extend not greater than 1 inch (25.4 mm) above the indoor concrete floor surface,
 - ❑ The PVC duct shall extend not greater than 1 inch (25.4 mm) above grade outside of the building, and
 - ❑ The PVC ducts shall be solvent cemented.
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SECTION M1601 DUCT CONSTRUCTION

- **M1601.1 Duct design.**
 - Duct systems serving heating, cooling and ventilation equipment shall be fabricated in accordance with the provisions of this section and **ACCA Manual D** or other approved methods
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M1601.6.2.7

Penetrations prohibited.

- Flexible air ducts and flexible air connectors shall not pass through any fire-resistance-rated assembly. Flexible air connectors shall not pass through any wall, floor or ceiling.
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M1601.11

Enclosed support platforms.

- ❑ Enclosed support platforms located between the return air inlet(s) from conditioned space and the inlet of the air handling unit or furnace, shall contain a duct section constructed entirely of rigid metal, rigid fibrous glass duct board, or flexible duct which is constructed and sealed according to the respective requirements of Section [M1601.3](#) and insulated according to the requirements of Section 13-610 of Chapter 13 of the *Florida Building Code, Building*.
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M1601.11

Enclosed support platforms.

- The duct section shall be designed and constructed so that no portion of the building structure, including adjoining walls, floors and ceilings, shall be in contact with the return air stream or function as a component of this duct section.
 - The duct section shall not be penetrated by a refrigerant line chase, refrigerant line, wiring, pipe or any object other than a component of the air distribution system
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M1601.11

Enclosed support platforms.

- Through-wall, through-floor and through-ceiling penetrations into the duct section shall contain a branch duct which is fabricated of rigid fibrous glass duct board or rigid metal and which extends to and is sealed to both the duct section and the grille side wall surface. The branch duct shall be fabricated and attached to the duct insert in accordance with Section [M1601.5](#) or Section [M1601.6.3](#), respective to the duct type used.
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M1601.14

Mechanical protection.

- Ducts installed in locations where they are exposed to mechanical damage by vehicles or from other causes shall be protected by approved barriers
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SECTION M1602

RETURN AIR

- ❑ **M1602.2 Prohibited sources.**
 - ❑ Outside or return air for a forced-air heating or cooling system shall not be taken from the following locations:
 - ❑ A closet, bathroom, toilet room, kitchen, garage, mechanical room, furnace room or other dwelling unit.
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