

**M1411.3.1.1 Water-level monitoring devices.** On down-flow units and all other coils that have no secondary drain or provisions to install a secondary or auxiliary drain pan, a water-level monitoring device shall be installed inside the primary drain pan. This device shall shut off the equipment served in the event that the primary drain becomes restricted. Devices shall not be installed in the drain line.

**M1411.3.2 Drain pipe materials and sizes.** Components of the condensate disposal system shall be cast iron, galvanized steel, copper, polybutylene, polyethylene, ABS, CPVC or PVC pipe or tubing. All components shall be selected for the pressure and temperature rating of the installation. Joints and connections shall be made in accordance with the materials specified in Chapter 30. Condensate waste and drain line size shall be not less than  $\frac{3}{4}$ -inch (19 mm) internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with an *approved* method.

**M1411.3.3 Appliances, equipment and insulation in pans.** Where *appliances, equipment* or insulation are subject to water damage when auxiliary drain pans fill, those portions of the *appliances, equipment* and insulation shall be installed above the flood level rim of the pan. Supports located inside of the pan to support the *appliance or equipment* shall be water resistant and *approved*.

**M1411.4 Auxiliary drain pan.** Category IV condensing *appliances* shall have an auxiliary drain pan where damage to any building component will occur as a result of stoppage in the condensate drainage system. These pans shall be installed in accordance with the applicable provisions of Section M1411.3.

**Exception:** Fuel-fired *appliances* that automatically shut down operation in the event of a stoppage in the condensate drainage system.

**M1411.5 Insulation of refrigerant piping.** Piping and fittings for refrigerant vapor (suction) lines shall be insulated with insulation having a thermal resistivity of at least R-4 and having external surface permeance not exceeding 0.05 perm [2.87  $\text{ng}/(\text{s} \cdot \text{m}^2 \cdot \text{Pa})$ ] when tested in accordance with ASTM E 96.

**M1411.6 Locking access port caps.** Refrigerant circuit access ports located outdoors shall be fitted with locking-type tamper-resistant caps.

## SECTION M1412

### ABSORPTION COOLING EQUIPMENT

**M1412.1 Approval of equipment.** Absorption systems shall be installed in accordance with the manufacturer's installation instructions.

**M1412.2 Condensate disposal.** Condensate from the cooling coil shall be disposed of as provided in Section M1411.3.

**M1412.3 Insulation of piping.** Refrigerant piping, brine piping and fittings within a building shall be insulated to prevent condensation from forming on piping.

**M1412.4 Pressure-relief protection.** Absorption systems shall be protected by a pressure-relief device. Discharge from the pressure-relief device shall be located where it will not create a hazard to persons or property.

## SECTION M1413

### EVAPORATIVE COOLING EQUIPMENT

**M1413.1 General.** Cooling *equipment* that uses evaporation of water for cooling shall be installed in accordance with the manufacturer's installation instructions. Evaporative coolers shall be installed on a level platform or base not less than 3 inches (76 mm) above the adjoining ground and secured to prevent displacement. Openings in exterior walls shall be flashed in accordance with Section R703.8.

**M1413.2 Protection of potable water.** The potable water system shall be protected from backflow in accordance with the provisions in Section P2902.

## SECTION 1414

### FIREPLACE STOVES

**M1414.1 General.** Fireplace stoves shall be *listed, labeled* and installed in accordance with the terms of the listing. Fireplace stoves shall be tested in accordance with UL 737.

**M1414.2 Hearth extensions.** Hearth extensions for fireplace stoves shall be installed in accordance with the *listing* of the fireplace stove. The supporting structure for a hearth extension for a fireplace stove shall be at the same level as the supporting structure for the fireplace unit. The hearth extension shall be readily distinguishable from the surrounding floor area.

## SECTION M1415

### MASONRY HEATERS

**M1415.1 General.** Masonry heaters shall be constructed in accordance with Section R1002.