

310.0 Condensate Wastes and Control

310.1 Condensate Disposal

Condensate from air washers, air-cooling coils, condensing appliances, and the overflow from evaporative coolers and similar water-supplied equipment or similar air-conditioning equipment shall be collected and discharged to an approved plumbing fixture or disposal area. Where discharged into the drainage system, equipment shall drain by means of an indirect waste pipe. The waste pipe shall have a slope of not less than $\frac{1}{8}$ inch per foot (10.4 mm/m) or 1 percent slope and shall be of approved corrosion-resistant material not smaller than the outlet size in accordance with Section 310.3 or Section 310.4 for air-cooling coils or condensing appliances, respectively. Condensate or wastewater shall not drain over a public way.

310.1.1 Condensate Pumps

Where approved by the Authority Having Jurisdiction, condensate pumps shall be installed in accordance with the manufacturer's installation instructions. Pump discharge shall rise vertically to a point where it is possible to connect to a gravity condensate drain and discharged to an approved disposal point. Each condensing unit shall be provided with a separate sump and interlocked with the equipment to prevent the equipment from operating during a failure. Separate pumps shall be permitted to connect to a single gravity indirect waste where equipped with check valves and approved by the Authority Having Jurisdiction.

310.2 Condensate Control

Where an equipment or appliance is installed in a space where damage is capable of resulting from condensate overflow, other than damage to replaceable lay-in ceiling tiles, a drain line shall be provided and shall be drained in accordance with Section 310.1. An additional protection method for condensate overflow shall be provided in accordance with one of the following:

- (1) A water level detecting device that will shut off the equipment or appliance in the event the primary drain is blocked.
- (2) An additional watertight pan of corrosion-resistant material, with a separate drain line, installed beneath the cooling coil, unit, or the appliance to catch the overflow condensate due to a clogged primary condensate drain.
- (3) An additional drain line at a level that is higher than the primary drain line connection of the drain pan.
- (4) An additional watertight pan of corrosion-resistant material with a water level detection device installed beneath the cooling coil, unit, or the appliance to catch the overflow condensate due to a clogged primary condensate drain and to shut off the equipment.

The additional pan or the additional drain line connection shall be provided with a drain pipe of not less than $\frac{3}{4}$ of an inch (20 mm) nominal pipe size, discharging at a point that is readily observed.

310.2.1 Protection of Appurtenances

Where insulation or appurtenances are installed where damage is capable of resulting from a condensate drain pan overflow, such installations shall occur above the rim of the drain pan with supports. Where the supports are in contact with the condensate waste, the supports shall be of approved corrosion-resistant material.

310.3 Condensate Waste Pipe Material and

Sizing

Condensate waste pipes from air-cooling coils shall be sized in accordance with the equipment capacity as specified in Table 310.3. The material of the piping shall comply with the pressure and temperature rating of the appliance or equipment, and shall be approved for use with the liquid being discharged.

TABLE 310.3
MINIMUM CONDENSATE PIPE SIZE

EQUIPMENT CAPACITY IN TONS OF REFRIGERATION	MINIMUM CONDENSATE PIPE DIAMETER (inches)
Up to 20	$\frac{3}{4}$
21-40	1
41-90	$1\frac{1}{4}$
91-125	$1\frac{1}{2}$
126-250	2

For SI units: 1 ton of refrigeration = 3.52kW, 1 inch = 25 mm

The size of condensate waste pipes is for one unit or a combination of units, or as recommended by the manufacturer. The capacity of waste pipes assumes a $\frac{1}{8}$ inch per foot (10.4 mm/m) or 1 percent slope, with the pipe running three-quarters full at the following pipe conditions:

Outside Air - 20%		Room Air - 80%	
DB	WB	DB	WB
90°F	73°F	75°F	62.5°F

For SI units: °C = (°F - 32)/1.8

Condensate drain sizing for other slopes or other conditions shall be approved by the Authority Having Jurisdiction.

310.3.1 Cleanouts

Condensate drain lines shall be configured or provided with a cleanout to permit the clearing of blockages and for maintenance without requiring the drain line to be cut.

310.4 Appliance Condensate Drains

Condensate drain lines from individual condensing appliances shall be sized as required by the manufacturer's instructions. Condensate drain lines serving more than one appliance shall be approved by the Authority Having Jurisdiction prior to installation.

310.5 Point of Discharge

Air-conditioning condensate waste pipes shall connect indirectly, except where permitted in Section 310.6, to the drainage system through an air gap or airbreak to trapped and vented receptors, dry wells, leach pits, or the tailpiece of plumbing fixtures. A condensate drain shall be trapped in accordance with the appliance manufacturer's instruction or as approved.

310.6 Condensate Waste From Air-Conditioning Coils

Where the condensate waste from air-conditioning coils discharges by direct connection to a lavatory tailpiece or to an approved accessible inlet on a bathtub overflow, the connection shall be located in the area controlled by the same person controlling the air-conditioned space.

310.7 Plastic

Fittings

Female plastic screwed fittings shall be used with plastic male fittings and plastic male threads.