

CONDENSATE WATER

The air around you has water vapor in it. When the air temperature gets cold, this water condenses, and changes from a vapor into a liquid. In nature, when air rises from a warmer lower zone into a higher colder zone, the water vapor becomes clouds, rain, snow, or hail.

In developed countries with electricity, refrigeration and air conditioning systems are used. All of these cold systems use fans to blow air over the cooling coils. This air contains water vapor that transforms into liquid water when it comes into contact with a cold surface that is at or below the dew point temperature of the air. For a better understanding of **dew point** and **relative humidity**, see http://weathersavvy.com/Q-Science_Dewpoint.html .

COOLING COIL ICE-UP OR FROST OVER

When the cooling coils get too cold, they form ice, and no atmospheric water is produced. This needs to be adjusted to a temperature range where water condenses at say 45 degrees F and where water freezes at say 32 degrees F. See http://inspectapedia.com/aircond/Cooling_Coil_Frost_Ice.htm for details.



WHAT IS A CONDENSATE DRAIN LINE IN CENTRAL AIR UNITS?

SOURCE ; http://www.central-air-conditioner-and-refrigeration.com/central_air_units.html

A condensate drain is just a pipe that removes water from the evaporator coils. The condensate drain has a:

- P-Trap
- Pipe
- Drain pan
- Condensate pumps are sometimes used in larger units

The drain pan or the evaporator pan is located underneath the evaporator coil.

HOW MUCH WATER DOES A CENTRAL AC UNIT PRODUCE?

Each ton of [central air conditioning](#) in a climate with average humidity will produce 48 ounce of liquid (3 pints) per hour of operation.

A 4 ton central air conditioner unit will condense about 64 ounce of liquid (12 pints) per hour of operation. The evaporator is removing more than a gallon of moisture per hour.

