



Principles of Distillation



Typical electrically heated stills. Steam heated models also available.

Step-By-Step Technologies Used in Barnstead Distillation Systems

1. Cooling Water/Feed Water Inlet

Water enters the condenser for two purposes:

- to cool the vapor entering the condenser.
- to provide a warmed source of water for feed to the boiler.

2. Water flows from the condenser into the constant level device, then into the boiler. The constant level device maintains the proper water level in the boiler and sends excess water to drain.

3. The water in the boiler is heated, producing pure vapor that moves up the boiler through a pyrogen reducing baffle and into the condenser. The baffle removes contaminant-laden water droplets from the vapor.

4. In the condenser, the pure vapor is transported through the condenser where it contacts tubes or coils containing cooling water. The pure vapor contacts these tubes and coils and is condensed to produce pure water.

5. Distilled Water Outlet

The distilled water exits the condenser and is stored in a reservoir.

6. Atmospheric vent allows for volatile contaminants to be vented, increasing the purity of the distilled water.