Direct evaporative cooling (DEC) is the process by which the primary airstream comes in direct contact with the water, either by an extended wetted surface material as shown in fig. 502.18(1) or with a series of spray nozzles. Indirect evaporative cooling (IEC) combines the benefits of evaporative cooling effect for sensible cooling without the addition of moisture into the primary air stream. During this process, a secondary air source is used to remove heat from the primary air using a heat exchanger as shown in fig. 502.18(2). Indirect application has an added benefit of lowering the wet-bulb temperature of primary air.

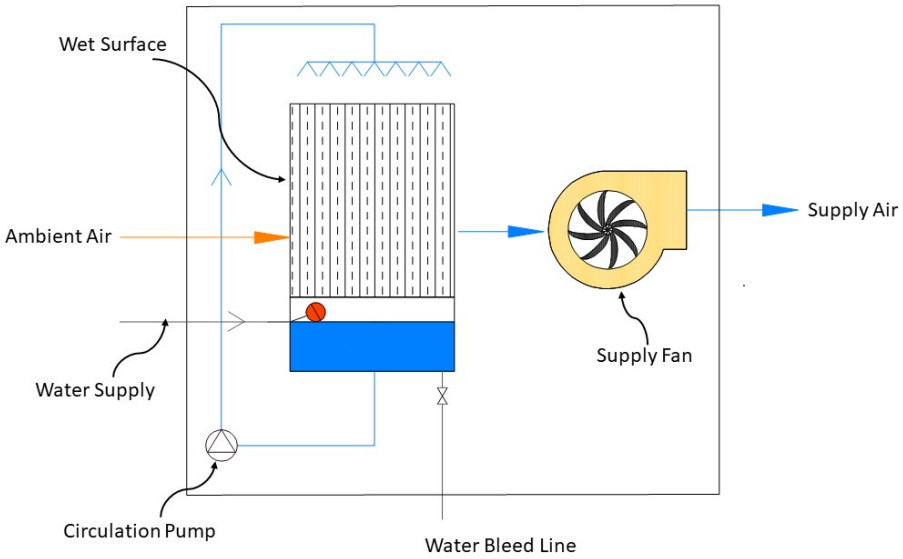


Fig. 502.18(1): Schematic Of Direct Evaporative Cooling

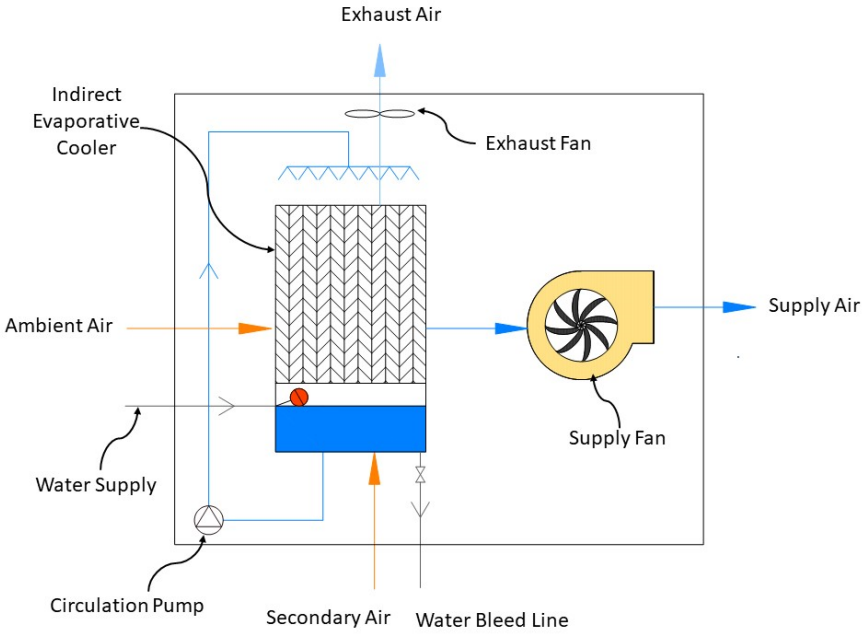


Fig. 502.18(2): Schematic of Indirect Evaporative Cooling