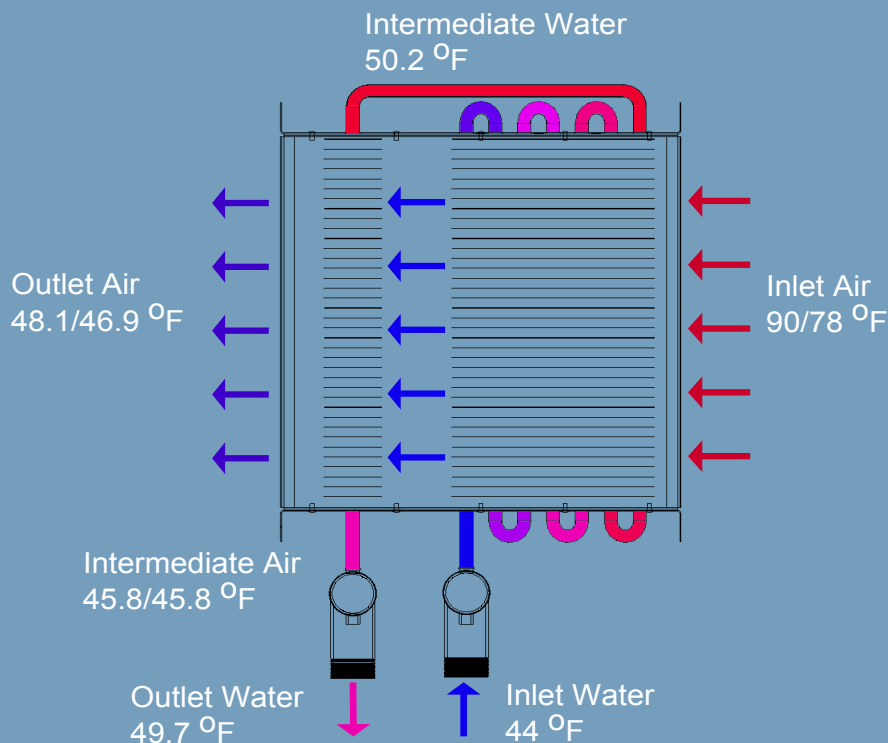


SureDri - Desaturation Cooling Coil

In cooling applications it is a common occurrence to have leaving air conditions that approach 100 percent saturation. Under such conditions water vapor is likely to condense on filters, equipment, or in the duct work which can lead to premature equipment failure and mold formation issues. Prolonged exposure to indoor mold has been linked to upper respiratory health conditions. To help avoid condensation forming down stream of cooling coils it is necessary to de-saturate the leaving air. Coilmaster's SureDri coil can accomplish this in one coil.

The SureDri coil consists of two cores: the primary cooling core and a re-heating core. By properly designing the primary core it is possible to have the leaving fluid temperature sufficiently above the leaving air temperature. This "warmer" fluid is then passed through the re-heat coil positioned on the outlet air side of the primary core to slightly increase the air temperature. The result is cool air leaving the coil that has a lower relative humidity and will be significantly less likely to condense downstream.

Example:



In this example the hot/humid inlet air is cooled with incoming 44 degree water to a fully saturated state at 45.8°F (100% RH). By taking into account the relationship between CFM and GPM the coil was sized such that the leaving water temperature was higher than the air temperature leaving the cooling core. The warmer water is then routed through a re-heat core to increase the air temperature. The result is leaving air that has been de-saturated having a relative humidity of 92 percent.



UL 207 – Underwriter's Laboratories



Intertek – ETL Semko