

Evaporative Cooler Formulas

Evaporative Cooler Effectiveness:

$$E = \frac{T_{edb} - T_{ldb}}{T_{edb} - T_{ewb}} \times 100$$

Where:

T_{edb} = Dry Bulb Temperature Entering Media, °F

T_{ldb} = Dry Bulb Temperature Leaving Media, °F

T_{ewb} = Wet Bulb Temperature Entering Media, °F

Water Evaporation Rate Estimate:

$$\text{Gallons per minute} = \frac{V \times (T_{edb} - T_{ldb})}{500,000}$$

Where:

V = Air Volume in cubic feet per minute, cfm

T_{edb} = Dry Bulb Temperature Entering Media, °F

T_{ldb} = Dry Bulb Temperature Leaving Media, °F