



RULES OF THUMB – PUMP TANK/COOLING TOWER

- 1 Ton = 15,000 BTU/hr
 - Volume = Drawdown + Operating + Distance Correction
 - o Drawdown
 - Amount of fluid pumped out of the tank before it begins to return from the tower.
 - 2 gallons per ton x tons
 - o Operating
 - Reduces turbulence when system is in operation. One gallon required for every gallon being turned in one minute.
 - 1 gallon per gpm x gpm
 - o Distance Correction
 - Drawdown calculation allows for towers located within 25 feet of the tank. Additional volume will be required for distances greater than 25 feet.
 - (Distance(ft.) – 25) x 8.8* gallons/foot
- *Applies to tower sizes up to 100 ton. Factor becomes 16.4.

Towers 301 ton to 600 ton

Example: A 50-ton cooling tower located 35 feet from the tank, with a recirculating requirement of 150 gpm. How big is the tank?

- (2 gallons/ton) x 50 tons + (1 gallon/gpm) x 150 gpm
+ (35-25)ft. x 8.8 gallons/foot =
100 + 150 + 88 = 338 gallons required