

## AIR CONDITIONING FORMULAS

<b>Heating</b>	Btu/hr	=	GPM x 500 x $\Delta T$
	1 GPM at 20° $\Delta T$	=	10,000 Btu/hr
	Btu/hr / 10,000	=	1 GPM (@20° $\Delta T$ )
<b>Cooling</b>	1 ton (CHW)	=	GPM x 500 x $\Delta T$ /12,000
		=	2.4 GPM (@10° $\Delta T$ )
<b>Latent heat</b>	Btu/hr	=	.68 x CFM x $\Delta$ grains
<b>To cool air</b>	Btu/hr	=	CFM x 4.5 x $\Delta$ enthalpy (enthalpy from psych chart)
	GPM	=	Btu/hr / (500 x $\Delta T$ )
<b>To heat air</b>	Btu/hr	=	CFM x 1.08 x $\Delta T$
<b>To humidify air</b>	#/hr H <sub>2</sub> O	=	CFM x 4.5 x $\Delta$ grains/7,000
<b>Pump horsepower</b>	HP	=	GPM x ft Head x .0002525/eff
<b>Fan horsepower</b>	HP	=	CFM x static pressure ("H <sub>2</sub> O) .000157/eff