Pump Formulas
& Conversion Chart

FROM	TO	MULT. BY
GPM	BPH	1.4285700
GPM	BPD	34.2856800
GPM	BPM	0.0238095
GPM	GPH	60.0000000
GPM	GPD	1440.0000000
BPD	GPM	0.0291700
BPD	GPH	1.7298000
Ft. Hd.	PSI	0.4330000
PSI	Ft. Hd.	2.3100000

$$\{ \text{BPH} \times \text{PSI} \times .00045 \} = \text{HP}$$

$$\left\{ \frac{\text{GPM} \times \text{PSI}}{1715 \times \text{EFF}} \right\} = \text{HP}$$

Pump Efficiency Overall in Percent	Overall Efficiency $= \left(\dfrac{\text{Output Horsepower}}{\text{Input Horsepower}} \right) \times 100$	$\text{Eff}_{OV} = (\text{HP}/\text{HP}_{in}) \times 100$
	Overall Efficiency = Volumetric Eff. x Mechanical Eff.	$\text{Eff}_{OV} = \text{Eff}_{vol} \times \text{Eff}_{mech}$
Pump Efficiency Volumetric in Percent	Volumetric Efficiency $= \dfrac{\text{Actual Flow Rate Output (GPM)}}{\text{Theoretical Flow Rate Output (GPM)}} \times 100$	$\text{Eff}_{vol} = (Q/Q_{theo}) \times 100$
Pump Efficiency Mechanical in Percent	Mechanical Efficiency $= \dfrac{\text{Theoretical Torque to Drive}}{\text{Actual Torque to Drive}} \times 100$	$\text{Eff}_{mech} = (T/T_{act}) \times 100$

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