

Questions:

What is “bkW” of Pump ?

Answer:

- 1) A pump's input power “P” is the Mechanical Power (*in kW*) - taken by the shaft.
The pump's input power is also known as **Brake Horse Power (BHP)** or **Brake Kilowatt (bkW)**.
- 2) bkW is **total power required by pump** to lift specified water to designated head.
 - a. Pump Input Power (*bkW*) also called as **Pump Shaft Power**.

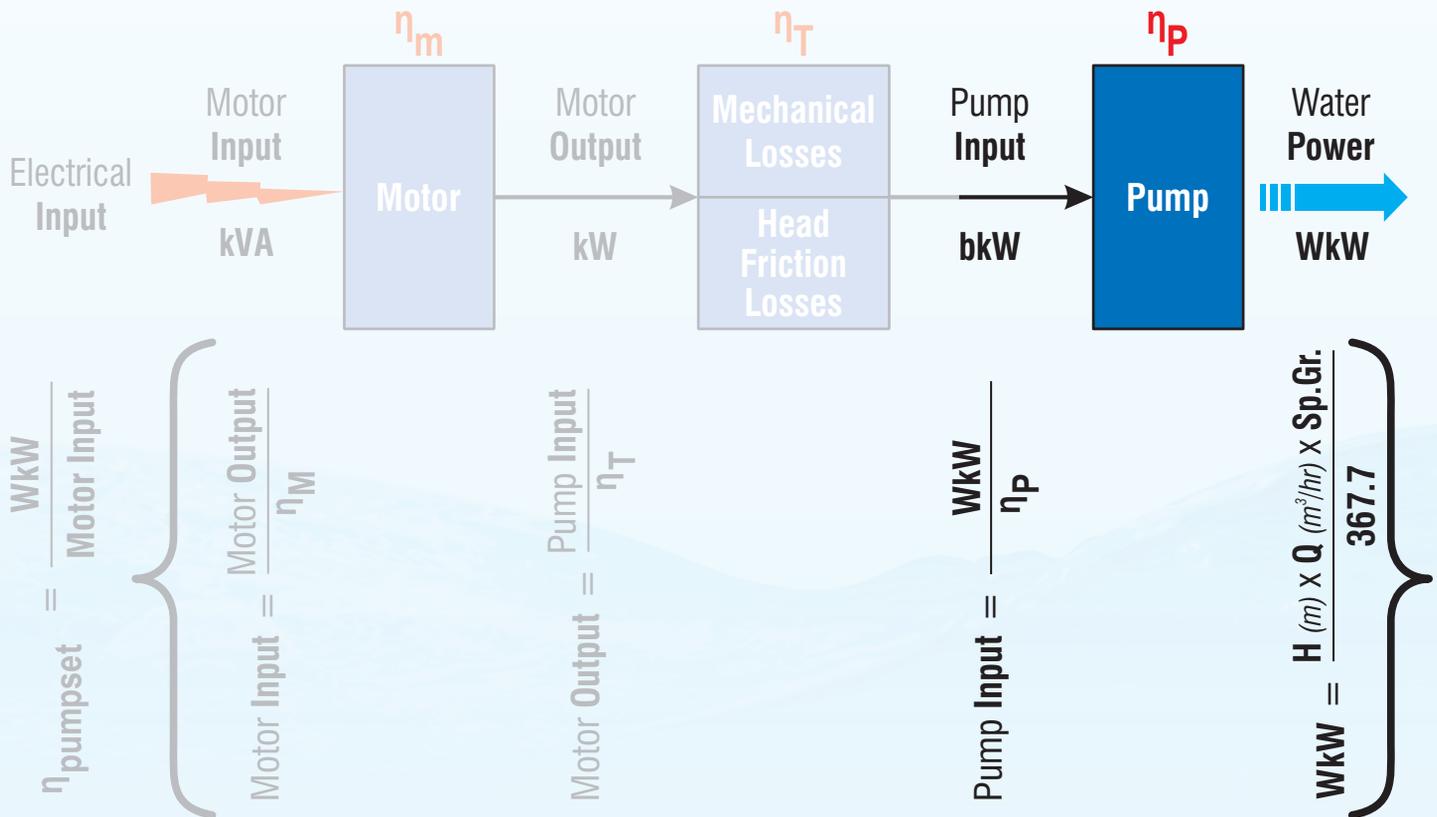


Fig.: Pumpset: **Energy Flow Diagram**

We can **calculate required Pump Input Power (bkW)** by following formulas:

Formula 1): Liquid or Water Kilowatt Power (in kW) =
$$\frac{Q \times H \times \text{Sp.Gr.}}{367.7}$$

Formula 2): Pump Input (bkW)
In SI Units bkW (in kW) =
$$\frac{\text{WkW}}{\text{Pump Effi. (\%)}}$$

Here, **Q** = Flow Rate in m³/hr
H = Total Head in Meters
Sp.Gr = Specific Gravity of Liquids