

# PFEIFER INDUSTRIES, LLC.

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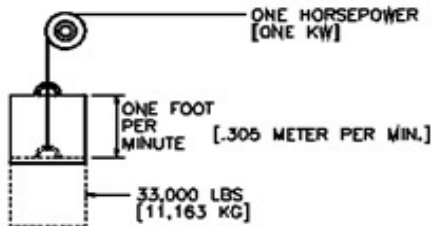
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## HORSEPOWER / KILOWATT

Definition: Quantity one (1) HP is the rate of work required to raise 33,000 pounds one (1) foot in one (1) minute

Definition: Quantity one (1) KW is the rate of work required to raise 11,163 kilograms 0.305 meter in one (1) minute



$$\text{HP} = \frac{\text{Force} \times \text{FPM}}{33,000}$$

$$\text{HP} = \frac{\text{Torque (in pound-inches)} \times \text{RPM}}{63,025}$$

$$\text{HP} = \frac{\text{Torque (in pound-feet)} \times \text{RPM}}{5,252}$$

$$\text{KW} = \frac{\text{Nm} \times \text{RPM}}{9,550}$$

**NOTE:** It is important to realize that when you increase or decrease speed (RPM), horsepower also increases or decreases proportionately. **HOWEVER**, torque always remains constant

## CONVERSIONS

$$\text{HP} = \text{KW} \times 1.341$$

$$\text{KW} = \text{HP} \times 0.7457$$

$$\text{ft-lb} = \text{Nm} \times 0.737562$$

$$\text{in-lb} = \text{Nm} \times 8.85$$

$$\text{Nm} = \text{ft-lb} \times 1.356$$

$$\text{Nm} = \text{in-lb} \times 0.113$$

$$\text{ft-lb/sec} = \text{HP} \times 550$$