



| NEED TO FIND | GIVEN | FORMULA |
|----------------------|---------------------|---|
| Ratio | High & Low RPM | $\frac{\text{High RPM}}{\text{Low RPM}}$ |
| High RPM | Ratio & Low RPM | Ratio X Low RPM |
| Low RPM | Ratio & High RPM | $\frac{\text{High RPM}}{\text{Ratio}}$ |
| Velocity in FPM | Dia. (inches) & RPM | .262 X Dia. X RPM |
| RPM | FPM & Dia. | $\frac{\text{FPM}}{.262 \text{ X Dia.}}$ |
| Diameter (inches) | FPM & RPM | $\frac{\text{FPM}}{.262 \text{ X RPM}}$ |
| Horsepower | Torque (In.Lbs.) | $\frac{T \text{ X RPM}}{63025}$ |
| Torque (In.Lbs.) | HP & RPM | $\frac{\text{HP X } 63025}{\text{RPM}}$ |
| Horsepower | Force (Lbs.) & FPM | $\frac{F \text{ X FPM}}{33,000}$ |
| Motor RPM | Number of Poles | $\frac{120 \text{ X } 60 \text{ (hz)}}{\text{Number of Poles}}$ |
| Degrees - Centigrade | Degrees Fahrenheit | .56(F-32) |
| Degrees - Fahrenheit | Degrees Centigrade | 1.8 X C +32 |
| Kilowatts | Horsepower | HP X .746 |
| Horsepower | Kilowatts | KW X 1.34 |

RULES OF THUMB

1HP = 746 Watts or .746 Kilowatts
At 3600 rpm a motor develops 1.5 ft/lbs of Torque per HP
At 1800 rpm a motor develops 3 ft/lbs of Torque per HP
At 1200 rpm a motor develops 4.5 ft/lbs of Torque per HP