Electrical Conversions & Formulas

Ohms Law

Ohms = Volts/Amperes (R=E/I)

Amperes = Volts/Ohms (I=E/R)

Volts = Amperes x Ohms

(E=IR)

Power AC Circuits

3 phase KW = Volts x Amps x Power Factor X 1.732 / 1000

3 phase Amps = 746 x Horsepower / 1.732 x Volts x Efficiency x Power Factor

3 phase Power Factor = Input Watts / Volts x Amps x 1.732

1 phase Power Factor = Input Watts / Volts x Amps

Power DC

Watts = Volts x Amps (W=EI)

Amps = Watts / Volts (I=W/E)

Horsepower = Volts x Amps x Efficiency / 746

Conversion Factors

Conversion Web Site

Centimeters x .3937 = inches

Inches x 2.54 = Centimeters

Kilometers x .6214 = Miles

Meters x 3.281 = Feet

Miles x 1.609 = Kilometers

Celsius=(Fahrenheit-32) / 1.8

Kalvin=Celsius+273

Motor Application

Torque (lb. - ft.) = Horsepower x 5250 / RPM

Horsepower = Torque (lb. - ft.) x RPM / 5250

Marathon Electric Motor Cross reference Link:
http://www.marathonelectric.com/motors/xreflookup.jsp