



- **Motor Terms**

AMPERE: A unit of intensity of electric current being produced in a conductor by the applied voltage.

FREQUENCY: The number of complete cycles per second of alternating current, e.g. 60 Hertz

HORSEPOWER: The rate at which work is done. It is the result of the work done (stated in foot-pounds) divided by the time involved.

INERTIA: The property of physical matter to remain at rest unless acted on by some external force. Inertia usually concerns the driven load.

MOTOR EFFICIENCY: A measure of how effectively the motor turns electrical energy into mechanical energy. Motor efficiency is never 100% and is normally in the neighborhood of 85%.

POWER FACTOR: The ratio of the true power to the volt-amperes in an alternating current circuit or apparatus.

SERVICE FACTOR: A safety factor in some motors which allows the motor, when necessary, to deliver greater than rated horsepower.

SYNCHRONOUS SPEED AND SLIP: The speed of an a-c motor at which the motor would operate if the rotor turned at the exact speed of the rotating magnetic field. However, in a-c induction motors, the rotor actually turns slightly slower.

This difference is defined as slip and is expressed in percent of synchronous speed. Most induction motors have a slip of 1-3%.

TORQUE: That force which tends to produce torsion or rotation. In motors, it is considered to be the amount of force produced to turn the load. It is measured in ft-lb.

VOLTAGE: A unit of electro-motive force. It is a force which, when applied to a conductor, will produce a current in the conductor.