

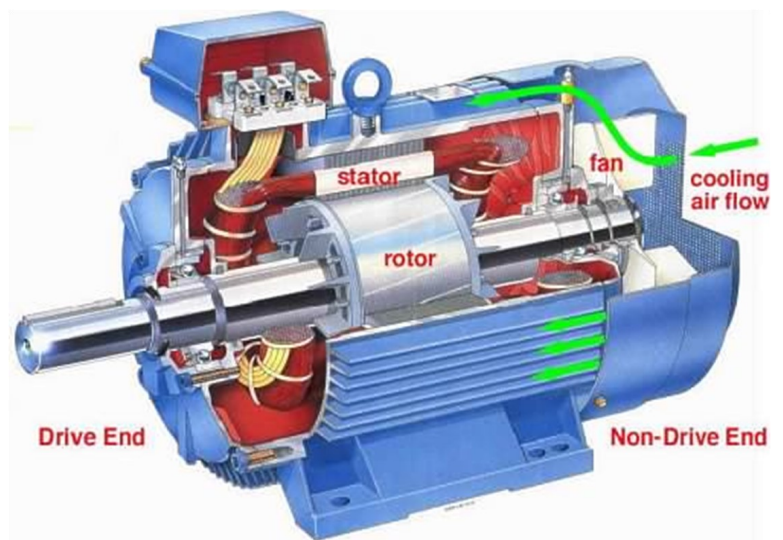
## Introduction to Motor Maintenance & Troubleshooting

Course No. TT-MMT-Intro

Electric motors are a critical asset in many industrial and commercial facilities. They are costly to operate and maintain. An unexpected motor failure can result in expensive loss of production and increased repair costs. This is a classroom course which introduces the student to electric motors and covers issues such as power quality, lubrication, electrical and mechanical failure mechanisms, winding and insulation assessment and bearing assessment. The student will leave this class with a basic understanding of how to properly operate and maintain electric motors and with a basic understanding of electrical and mechanical preventive and predictive maintenance and troubleshooting technologies.

### Course Outline:

- Brief overview of terms and definitions
- AC & DC motor theory and construction
- Failure modes and mechanisms
- Windings & insulation systems
- Bearings
- Seals
- Lubrication
- Alignment, balancing, looseness
- Vibration testing
- Ultrasonic acoustic emissions testing
- Infrared thermography
- Power quality
- Energized electrical testing
- De-energized electrical testing
- Electrical arcing in bearings
- How to perform a proper inspection
- Motor storage
- Working with a motor repair shop
- Safety considerations
- Hands on training
- Practical, real world examples
- Useful reference materials



**Who Should Attend This Course?** Electricians, mechanics, supervisors, energy auditors, PdM technicians and others seeking introductory knowledge of electric motors. Bring your questions to class.

**On-Site Cost:** Please contact us for a price quote which includes training materials for up to 10 students. Price may vary depending on number of students, instructor travel time and expenses.

**Contact Torq Engineering** at (970)412-9337 [sales@TeamTorq.com](mailto:sales@TeamTorq.com) to schedule a class.