

# **ATS E-Motors & Batteries**





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## Description

Complete test stations for in process and final tests of electrical motors, battery packs, and components used in hybrid and electric drive systems.

Automated test solutions across multiple models for:

- E-motor assembly and final tests
- Battery pack assembly and final tests
- Simulation or interfaces with electronic controls, controllers
- Design / mapping of test methodolgy and specifications
- Design and build of ancillary assembly stations

### Experience

- ATS has provided innovative and flexible fixture design, automated part handling, test equipment, and procedures for rapidly changing technologies and continuous part evolutions.
- Data acquisition, test analysis, and test sequencing using our NI based Test Executive software. Optional integration of customer preferred data acquisition and NVH systems is available.

#### **E-Motors & Batteries**

#### **Capabilities:**

A range of station designs from fully integrated and automated to standalone manually loaded for all aspects of quality verification. Station designs are readily scaled from small volume to high volume throughput requirements.

Electric motor assembly tests including:

- Electrical tests for windings, temperature sensors, resolvers, and encoders
- Dielectric (Hi-pot), insulation, resistance, LCR
- Voltage waveform and harmonic analysis

#### **Electric motor final tests including:**

- Back-emf, locked rotor, voltage and waveform and harmonic analysis
- Spin up and down, torque to turn, four quadrant full load tests

Battery pack assembly tests including:

- Leak tests of battery coolant channels, covers, seals
- Cell resistances , voltage checks

**Battery pack final tests including:** 

- Leak tests, battery pack charge / discharge
- Battery management system interfaces with temperature monitoring, controls, high voltage interlocks





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