

Marc complements electromagnetic and thermal design tools by predicting structural behavior, thermal stress, fatigue, vibration, and durability in EV motors. Engineers can optimize reliability, reduce development risk, accelerate validation, and improve motor lifetime before physical prototypes are built.

Key Benefits for EV Motors

- Predict rotor stress and burst-speed safety margin
- Prevent magnet cracking and debonding
- Analyze thermal expansion and air-gap variation
- Evaluate bearing load changes and housing deformation
- Predict fatigue life and crack initiation
- Reduce vibration and NVH risks
- Assess assembly, shrink-fit, and manufacturing effects
- Improve motor reliability and durability
- Reduce physical prototype testing
- Accelerate design validation and time-to-market

Key Message

Electromagnetic tools predict torque and efficiency. Marc predicts whether the motor can survive high-speed operation, thermal cycling, vibration, and years of real-world service.