

## Providing Electric Motor Design and Production

### Custom Designed Permanent Magnet Motors and Related Components

EEC Motorsolver designs and manufactures rotors, stators, and electric motors for the aerospace, defense, and medical industries. As a strategic partnership combining over 80 years of innovation and manufacturing excellence, EEC Motorsolver is capable of serving the most demanding applications.

### More Than Just Your Supplier

By combining Electron Energy Corporation's ability to produce customized rare earth magnets and assemblies with Motorsolver's advanced electric machine design capabilities, EEC Motorsolver allows customers to source custom designed electric motors, rotors, stators, and magnet materials from a single supplier. EEC Motorsolver provides a consolidated source of design, prototyping, and production across all critical electric motor components.



#### Rotors

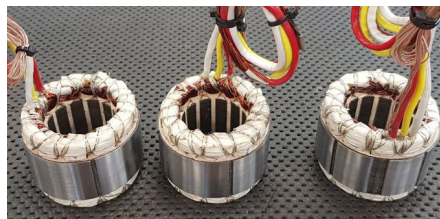
A rotor is the rotating component within an electric motor or generator. A rotor typically consists of a shaft with permanent magnets. The magnetic fields interact with the stator and cause rotation.

#### CAPABILITIES

**Shaft Production:** our highly skilled machinists produce custom shaft components.

**Magnet Production:** With a vertically integrated process, the magnets used in our stators are exclusively produced in-house and tailored to each application.

**Final Assembly:** Each rotor is sleeved, balanced, and carefully inspected to ensure premium performance.



#### Stators

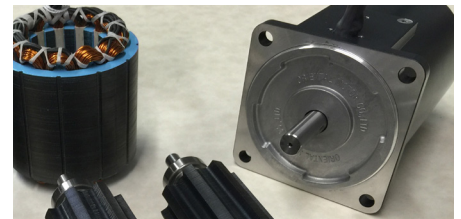
A stator is the stationary component found in electric motors and generators. It consists of a laminated core and coils of insulated wire known as the windings. Once current is applied to a stator, it effectively becomes an electromagnet.

#### CAPABILITIES

**Lamination Stacks:** Cores are produced using laser/EDM technology to cut thin steel which are then laminated with TIG welding or bonding.

**Coil Winding:** Using 3D printing & CNC draw knives, concentrated windings and random windings are added to each core.

**Final Assembly:** To ensure optimal thermal conductivity, complete vacuum encapsulation is performed.



#### Electric Motors

Electric motors consist of a rotating armature, called a rotor, being driven by a magnetic field from the stator.

#### CAPABILITIES

**Design:** Custom solutions for using FEA, loss analysis, and high-speed balancing.

**Prototyping:** Optimization including hi pot and surge testing, high-speed balancing.

**Production:** Precision machining and assembly following alpha and beta prototyping.

