## Manufacturing Opportunities with PCB Stator Motors



### ECM 's 5 Step Manufacturing Process



The PrintStator software uses input motor specifications and constraints to produce custom PCB Stator motor designs with exact operating characteristics.

#### **Design Optimization**

Using proprietary algorithms, PCB Stator designs are then further optimized for specialized criteria such as weight, efficiency, and material cost.

#### **File Creation**

PrintStator automatically produces a package of design files with each custom design. These Gerber files are in the standard format for printed circuit boards and can be utilized by global PCB houses for immediate production of the motor.

#### Manufacturing



PrintStator leverages the advanced manufacturing techniques of the global printed circuit board industry to create a cost-effective and highly repeatable manufacturing process for these advanced electric motors. There is no need for expensive winding lines or any specialized production equipment.



JEARCH FOR MOT

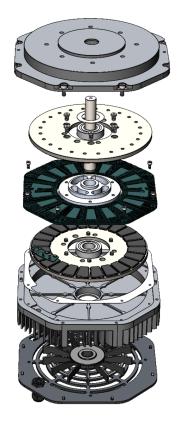
#### Assembly



ECM's motors are axial flux and have less parts offering a simplified and scalable assembly process. A typical assembly of these PCB Stator motors does not require more than 12 steps.



# ECM's technology platform simplifies electric motor design and manufacturing.



The electrification movement is expanding and there are countless frustrations with traditional motor sourcing and design. ECM's motor platform enables the rapid design and production of custom, premium electric motors for many diverse applications.

The combination of ECM's new PCB based motors and their PrintStator software's advanced design-to-manufacture processes results in simple, cost-effective vertical integration.

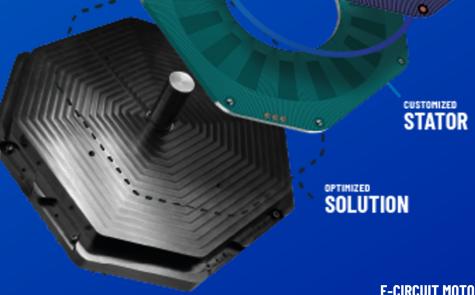
ECM's focus as a software and R&D enterprise is to equip partner organizations with the ability to become manufacturers and suppliers of custom PCB Stator motors.

#### Patented PCB Stator Technology.

Application Specific Design Customization. Proprietary Design optimization software. intelligent cost-effective manufacturing process. Revolutionary design for manufacture platform. GERBER







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