



C · M O T I V E

Transforming Motion with Electrostatic Motors.

Electric motors as we know them have been around since 1835, using magnetism to create motion. Almost a century earlier, Benjamin Franklin created a machine that used static electricity to generate motion; these experiments were impressive, but could not be scaled to meaningful amounts of work. While completing their PhDs at the University of Wisconsin-Madison, Justin Reed and Dan Ludois decided to pick up where Franklin left off and got to work developing the technology for a modern electrostatic motor, creating C-Motive in the process.

No other company is developing commercially viable electrostatic machines.

C-Motive's patent protection is diverse, worldwide, and comprehensive. C-Motive owns 25+ issued and pending patents, has exclusively licensed an additional 12 patents from the University of Wisconsin-Madison, and maintains an ever-growing list of technology-enabling trade secrets.



c-motive.com



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TECHNOLOGY

Electrostatic motors use medium-voltage, low-current power to harness static electricity for converting electricity into mechanical torque. Electrostatic motors are designed specifically to deliver full torque and efficiency at low speeds (<500 RPM), delivering true direct drive performance without gearing, belt systems, or active cooling. The resulting system efficiency is significantly improved, delivering return on investments in as little as 12 months.

APPLICATIONS

C-Motive is currently focused on applications to aid in decarbonizing commercial and industrial facilities:



Material Conveyance



Industrial Fans



Industrial Automation



Pumps

With further technology development, these electrostatic motors will be scalable to additional applications:



E-Mobility



Marine Propulsion



Renewable Generation

SUSTAINABILITY

C-Motive improves system level efficiencies which deliver both economic savings as well as avoided carbon emissions. Electrostatic motor systems can significantly contribute to meeting Scope 2 carbon emission targets and, because these machines use no rare-earth metals, they have an inherently lower embodied carbon footprint from the start. Changing a single traditional motor for a C-Motive machine can deliver over 2 metric tons of CO₂ savings annually.

SUPPLY CHAIN

C-Motive's electrostatic motors are made with a simplified, regional, and secure supply chain in mind. In the current market, a small number of countries have control over the majority of critical materials necessary for traditional high performance motors (copper, electrical steel, and permanent magnets). Instead of relying on these materials, electrostatic motors use printed circuit board plates and a proprietary dielectric liquid that can be sourced anywhere in the world and are not reliant on a single supplier or country.