

Optimizing Motor Performance

How Custom Standex Edge Magnetics Maximized the Flexibility and Scalability of a Motor Manufacturer's Motion Solutions.





Introduction

A motor manufacturer's business is to create a better tomorrow by efficiently converting power into motion. Using customized magnetic components from the Renco Electronics division of Standex Edge enabled them to provide the best in flexible and scalable motion solutions.

The Goal

The motor manufacturer's goal was to create essential motorized products that would keep systems running in mission critical applications worldwide. Their precision power and motor-driver electronics would run industrial products for food, beverage, and pharmaceutical production, HVAC systems, and the conveying equipment and components that help warehouses function.

The motor manufacturer needed precision power electronics for their critical motion-control driver and they were unhappy with the magnetic components available off-the-shelf.

They turned to the Renco Electronics division of Standex Edge, a global company with a hands-on approach, for custom magnetics to address their unique performance demands.

The Solution

The efficient, precise, and reliable custom magnetics from the Renco Electronics division of Standex Edge made the difference. They provided a level of application knowledge and engineering collaboration enabling the motor manufacturer to create the high performance power supplies and motor-driver systems demanded for the exacting applications they aimed to serve. The custom magnetics solution provided outperformed standard off-the-shelf components in every way.

A Powerful Partnership

At the outset of the partnership, the experienced and knowledgeable team of mechanical and electrical engineers from Renco Electronics worked hand-in-hand with the manufacturer's development team to design the custom devices needed for the advanced prototypes. The collaborative effort was not only able to meet the design deadlines for the various projects, but the team was also able to explore and expand upon solutions that exceeded specifications and incorporated more cost-effective assembly strategies to address design-for-manufacture initiatives. In addition, the global service locations of Standex Edge offered an expanded global manufacturing footprint.

Addressing Design and Manufacturing Issues

In addition to meeting the demanding needs of the various critical applications served, the customer leveraged the manufacturing and technical expertise of Renco Electronics to mitigate fluctuations in component availability with the ability to change certain aspects of a given power solution without significantly impacting the circuit topology. Custom devices can also address system ruggedness and product form-factor requirements.

Pushing the Power Envelope

The latest generation of high-performance motor-driver systems now use high-frequency circuits to address power density and performance needs, and the custom magnetics from the Renco Electronics division of Standex Edge enable motor manufacturers to create these solutions with low noise and EMI while achieving the highest levels of efficiency. In addition, other important performance parameters like thermal management and form-factor issues can be tweaked and optimized by using custom magnetic components for both power conversion and filtering.

Prototype and Test for Success

When it comes to evaluating and validating power and motor-driver solutions, Standex Edge can perform industrial-grade testing to ensure compliance and market success. A factory environment can be a harsh place and solutions deployed outdoors can encounter almost anything. That's why Standex Edge can perform a variety of tests, including thermal, salt fog, corona, altitude, and submersion, to ensure the customer's products are compliant and can operate in the field.



Customer-Driven Solutions

To create the optimum magnetic solution, Standex Edge can provide modified standard parts as well as completely custom solutions, speeding product development by turning around custom samples in 2 weeks or less. Prototypes are created by a dedicated engineering team experienced in core materials and component topologies. They will tweak and test until the designs meet or exceed the application requirements. Once developed, the parts can be manufactured in locations around the world.





A Standex **Electronics** Business

The new brand name for the Standex Electronics Magnetics division exemplifies the position occupied by Standex Magnetics engineers in relation to magnetic component innovation.

Standex Edge expertise spans transformers, inductors, current sensors, chokes and other advanced magnetic components used across multiple industries.

Combining decades of engineering innovation with global manufacturing capabilities, Standex Magnetics Engineers are leaders in component miniaturization, thermal management, robust design, and efficient production. They have firmly established their position at the **Edge** of innovation, where energy meets possibility.

Welcome to **Standex Edge**.

standexedge.com

EDGE-IND-CS260901