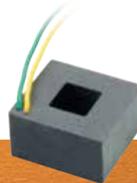


Custom Solutions & Manufacturing Excellence



From the day our company opened for business in 1947, our continuous growth as a U.S. manufacturer has been a great source of pride. We have accomplished this, in part, by providing custom solutions for your challenging circuit designs. Our products are designed to meet the highest quality standards, as evidenced by the S-level accreditation per MIL-PRF-39010. No other company in the world maintains this highest industry standard, and it is backed by over 250 million test unit hours.

The API Delevan team focuses on four pillars required by the engineering community:

Prototype Services – We offer solutions in hours or days, not weeks or months.

Smallest Size – Today's solutions, whether components or vertically integrated designs, must meet the needs of miniaturization.

Highest Performance – We promise to deliver better electrical & mechanical performance than any other manufacturer in the industry.

Lowest Cost – We realize the highest quality result at the lowest cost by adhering to daily Kaizen and Lean Manufacturing activities, producing one piece flow while simultaneously eliminating waste.

API Delevan has a reputation for developing application specific solutions in compliance with the industry's highest quality standards for an extraordinarily broad variety of products in every market segment. In addition to the 50 million standard products we manufacture every year, 40% of our business can be attributed to the custom designs our engineers provide.

Engineer to engineer solutions are the bedrock of custom designs, and our insistence on listening to, and working with our customers accounts for the on-going success of this very important element of our business. The relationships we develop have been long-standing, mutually rewarding, and highly valued.

Our Established Reliability Program has accumulated over 250 million hours of life testing. In addition to making available an engineering staff with over seven decades of accrued experience, API maintains a modern environmental lab, testing capabilities and a R&D department. API Delevan believes value comes not just with quality, but also with resourcefulness.



API Delevan Product Line



LEVEL "S" RELIABILITY PRODUCTS: The most reliable off the shelf inductors in the industry for use in high reliability applications, including communication systems, radar systems, guidance systems, fire control systems, avionics and space. Conforms to specification sheets MIL-PRF-39010 /01, /02, /03, /04, /05, /06 and /08. They include our full range of shielded and unshielded wire wound molded designs in phenolic (non-magnetic), powdered iron and ferrite core materials. Inductance values range from 0.10 μ H to 1,000 μ H, and operating temperatures from -55°C to +125°C.



MILITARY PRODUCTS:

- Only qualified manufacturer to "S" Level Failure Rate of DSCC MIL-Spec MIL-PRF-39010
- Other DSCC MIL-Spec approvals:
 - MIL-PRF-15305, 25+ MIL-Spec qualifications
 - MIL-PRF-83446, 20+ MIL-Spec qualifications
 - MIL-PRF-27, 3 MIL-Spec qualifications
- MIL-STD-202: On-site environmental test lab featuring thermal shock, temperature cycling, moisture resistance, solderability, life test, calibration, real time X-ray, and failure analysis
- MIL-STD-690: Product maintenance testing featuring 15,000,000 hours load/temperature testing every 14 months



CUSTOM PRODUCTS: Our prototype services provide solutions within hours or days, not weeks or months. We provide solutions to meet the demands for extreme product miniaturization, and we are committed to delivering better electrical and mechanical performance than any other manufacturer in the industry. Adhering to daily Kaizen and Lean Manufacturing practices enable us to engineer custom products of the highest quality at the lowest cost possible.



RF INDUCTORS:

- Axial-leaded, radial-leaded, and surface mount configurations
- Rugged epoxy molded construction using UL94V-0 materials
- Encapsulation provide resistance to corrosion in extreme environments
- Shielded configurations result in less than 2% coupling
- Tight tolerances to within +/-1% of nominal inductance
- Surface mount industry standard package sizes, with low-profile and temperature stable versions available
- Inductance ranges from 0.0018 μ H to 33,000 μ H
- -55°C to +125°C full Military operating temperature range



POWER INDUCTORS:

- Axial-leaded, radial-leaded, and surface mount configurations
- Inductance ranges from 0.22 μ H to 100,000 μ H
- Current ratings from 0.050A to 19.9A
- High temperature designs operating at up to +220°C
- Designed to withstand high levels of mechanical shock and vibration

API Delevan®



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Patent Pending
#20120092803

Bi-Directional Actuator

*IP Router/Switch for Hi-Speed Broadband
Satellite Internet Transceiver*

Features a low profile, rugged construction, surface mount style with continuously variable linear motion capability and vertical mounting tabs for secure circuit board positioning. The surface mount design allows automated pick and place assembly onto the circuit.

Ongoing engineering collaboration was a key factor in the successful design of this infinitely repeatable, electromagnetic, bi-directional linear actuator. Within 48 hours of receiving the customer's initial vision, the API Delevan team was able to prove a concept and provide a solution to transform an electrical signal into mechanical motion.



Fuel Measurement and Leak Detection Sensor

*Automatic Tank Gauging and Fuel Management System
for the Petroleum Industry*

This custom coil block assembly features two windings onto one core using a common coil in a surface mount style. The surface mount design with positioning pins allows for automated pick and place stability on the circuit, and the common coil for multiple windings allows size reduction of the coil block assembly.

Reliability and size were critical factors in the design of this coil block assembly. Designed for use in a magnetostrictive probe to measure fuel and water levels, the performance requirements included operating under harsh and potentially hazardous environmental conditions and in extreme temperature ranges of -40°C to +70°C.

Perimeter and Bump Sensors

*Surface Mount Power Inductor with Polarity Indicator
for Robotic Lawn Mowers*

A surface mount power choke supplied on tape and reel for pick and place circuit board assembly is a design that is unique to API Delevan. The benefits of high inductance and high current rating in a surface mount style with a polarity indicator for consistent orientation and performance, was the value that API Delevan was able to add to this requirement.

For this application-specific request, API Delevan was able to provide an economical solution for our customer with a standard product offering altered for their particular need. The distinct requirement to have the polarity of the component clearly indicated was accomplished through a production process change that guarantees the part will be supplied with the proper polarity as well as insuring ease of installation in a mass production environment.



Solar Energy String Inverters

*Large Custom Inductors for the Alternative Energy
Marketplace*

Featuring heavy gauge (#12) wire winding on triple stack Ferrite E-Cores and heavy gauge (#13) wire winding on steel banded Amorphous Alloy C-Cores with additional mounting of inductors and epoxy fill of the inverter box.

API Delevan was approached by one of the top global providers of solar inverters with a proposal to become a strategic partner to supply not only components, but also the next assembly of mounting and epoxy filling the inductors into the inverter box. With abundant facility capacity and engineering expertise to develop the required vacuum process necessary, API Delevan successfully supported this request, demonstrating our ability to deliver vertically integrated solutions for new and expanding markets.



3 Phase Copper Foil Transformer

Energy Efficient Power Supply for Data Storage Centers

Features a low profile, highly efficient design resulting in maximized temperature dissipation.

The low profile requirement of this transformer is sized for blade rack mounting and designed to provide rack storage appliances with ultra-low power utilization, using less energy and making it possible to move the application servers closer to the physical storage area.



Implantable Medical Devices

*Implantable Device that functions through
Programmed Electrical Stimulation*

Featuring epoxy molded construction in custom-sized packages, lean manufacturing process controls, and quality and reliability assurances for critical form, fit, and function.

When a world class manufacturer of medical implantable devices needed reliable inductors for a new product that would improve the lifestyles of patients suffering from debilitating neurological seizures, API Delevan was the perfect supplier to partner with. In an environment where failure is not an option, API Delevan's long history of quality and reliability provided confidence that the high current, high inductance magnetics intended to be implanted into the human body could be achieved. The API Delevan team successfully developed the ferro-magnetic coliforms and process controls to meet the customer's stringent requirements that have resulted in more than 80,000 total device implants.

