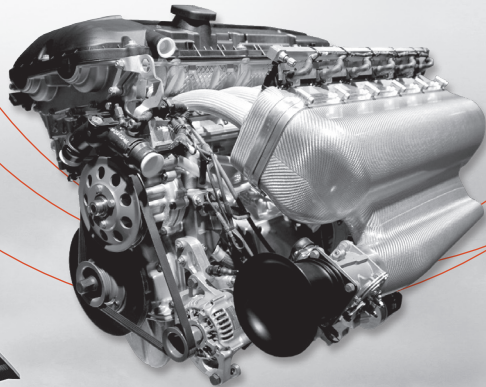




PRECISION ENGINEERED
COIL WINDING AND COIL
ENCAPSULATION FOR
ZERO DEFECTS



DESIGNING FUTURE TECHNOLOGIES TODAY





Guardian Electric is a leader in combining world class quality with true “customer-focused” methodology. We have over 75 years of experience in designing and manufacturing millions of custom electromagnetic coils for the automotive, agricultural, aeronautic, and hydraulic control industries, providing solutions for a variety of voltages, terminations, and connector configurations.

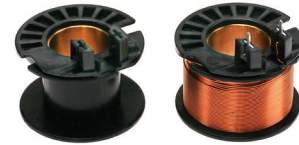
Guardian Electric’s core philosophy is governed by Lean Manufacturing with an emphasis on single piece flow on the assembly line to maintain the highest level of quality control and process efficiency delivering 100% ontime delivery.

Our multi-faceted design and process expertise is managed by the APQP process. Our years of experience in bobbin and coil termination design complimented by an expertise in bobbin insert molding, precision layer winding and thin wall coil overmolding has resulted in a “Zero Defect” rating for coil electrical defects in the field.

As the name implies, Guardian coils are a “guardian” to the life and function of your electromechanical device.



Hard-Top Actuator Coil and Valve



Solenoid Coil with IDC Connection for Borg Warner



Cartridge Valve Coil for Caterpillar



Timing Valve Coil for Volvo



Custom Hydraulic Coil for Husco-Automotive



Cartridge Valve Coil for Husco International



Control Coil for Hilite International

SUPERIOR PROCESSING & LEAN MANUFACTURING LEADING TO ZERO DEFECTS & COMPETITIVE PRICING

Guardian's precision layer winding capabilities accommodate the growing trend toward smaller and smaller modules and systems. Our processing expertise and superior quality translate to the most cost-effective product for our customers.

Highly-skilled technicians bring years of experience with termination processes, including crimping, soldering, resistance welding, flame soldering, and insulation displacement. Thermal shock cycling for lot-to-lot qualification of the coil termination is available to insure 100% defect-free long term part durability.

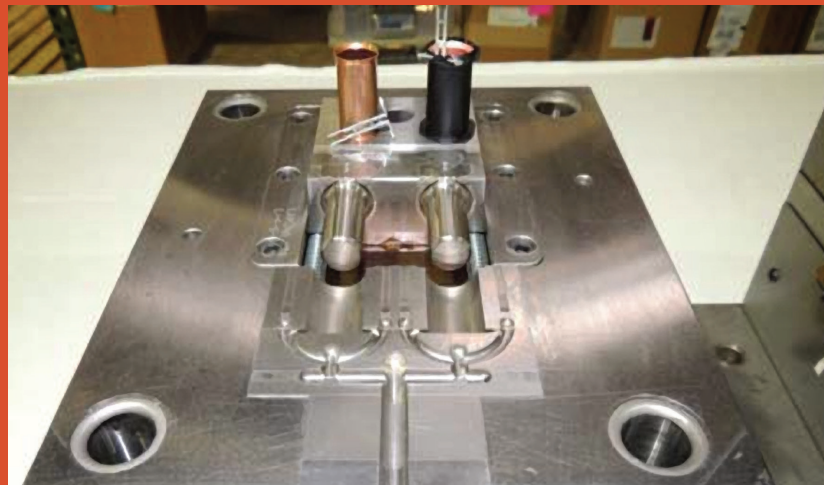
Guardian Electric's supermarket program of finished goods offers our customers the ability to request same day shipments for spikes in demand above and beyond released and scheduled quantities. From low to high volume quantities, we can tailor your own supermarket here at Guardian to give you the flexibility you need to accommodate changes in your customers' schedule or your own assembly line challenges.

We offer coil solutions for:

- Cam Phasing Valves
- Variable Valve Timing
- Emission Valves
- Latching Devices
- Actuators
- Engine Management
- Transmission Control
- Ride Control
- Oil Flow Control
- Hydraulic Fluid Control
- Start-stop Systems
- Direct Inject Valves
- Heating Control
- Door Locks
- Irrigation Control
- Security Systems
- Appliance Control Valves
- Position Sensor Device Coils
- Lift Controls

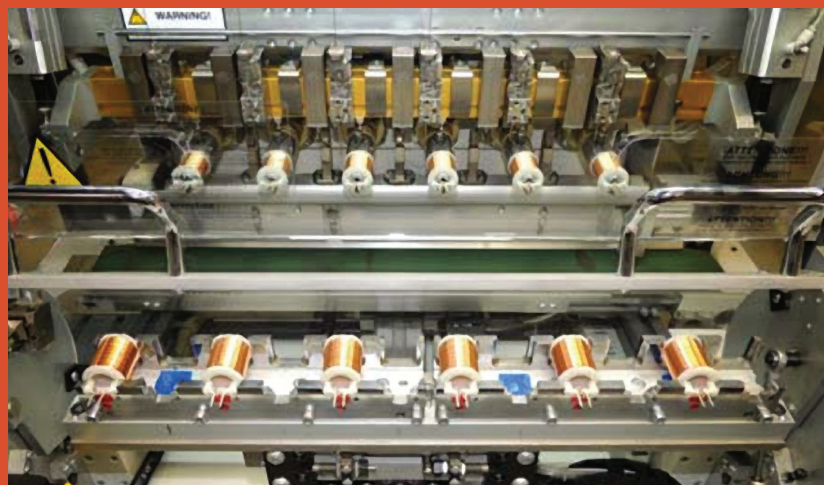
DESIGN EXPERTISE

- Custom bobbins
- Custom bobbin mold tooling
- Precision winding grooves
- Custom encapsulation mold tooling
- Custom integral connector geometry
- High temperature design (220C)
- Custom sealing features for IP68 & IP69K
- Zero defect terminations
 - Weld tang
 - "V" Notch
 - IDC (Insulation Displacement)
 - Solder wrap post



PROCESS EXPERTISE

- Multi-cavity custom insert molding of bobbins, terminals, cores, sleeves
- Multi-spindle high volume precision layer winding
- Magnet wire ranging from 19 AWG to 43 AWG
- Wire termination mastery (resistance welding, dip and nozzle flow soldering, IDC terminations)
- Multi-cavity coil encapsulation and overmolding
- Coil electrical testing for resistance, hipot, shorted turns, surge



OUR PEOPLE MAKE THE DIFFERENCE.

At Guardian Electric, we carry the voice of our customers in everything we do — from design and development through order fulfillment. All of our customers receive personalized service from engineers, consultants, and specialists who understand their specific industry and have years of experience in the production of electromagnetic coils. Commitment to open communication throughout the manufacturing process and a sincere interest in client satisfaction has earned Guardian the trust of its loyal customers.



1425 LAKE AVE
WOODSTOCK, IL 60098
Ph: 815-334-3600

www.Kelcoind.com

