



ABLE COIL
& ELECTRONICS



Able Coil & Electronics, Inc.

Since 1969, Able Coil & Electronics has manufactured custom precision-wound coils, toroids, transformers, solenoids, cable and connector harnesses, and many other electrical assemblies for the most demanding applications.

As a full-service electromagnetic manufacturing company, the staff at Able Coil carries on the tradition of providing high quality products and services at a competitive price. Within our 40,000 sq. ft. of manufacturing facilities, we provide flexible prototyping and manufacturing services to our customers and are fully equipped to support both high- and low-volume production runs.

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Able Coil & Electronics products are 100% manufactured in the USA. Contact us today to learn about how we can customize a wire-wound product best suited for your application requirements.

CUSTOM IS OUR STANDARD

Capabilities

We specialize in the fabrication of custom wire-wound products that require tight tolerances, challenging geometries, high reliability and stringent environmental requirements.

- » Custom Coil Assemblies
- » Fine Wire Assemblies
- » Self-Supporting Coils
- » Toroids
- » Transformers
- » Inductors & Chokes
- » Cable and Connector Harnesses
- » Encapsulated Assemblies
- » Integrated Electro-mechanical Assemblies

Coil Winding	
Winding Processes	Manual, random, wet, bondable, single, multi, precision
Wire Size Range	#4 AWG - #56 AWG, including half sizes and other nonstandard gauges
Wire Insulation Systems	Per NEMA MW 1000 designations
Temperature Range	UL Insulation systems: Class B (130°C), Class F (155°C), Class H (180°C)
Wire Materials	Copper, aluminum, litz, Cupron®, nichrome and other alloys
Wire Shapes	Round, square, rectangle, flattened, and other custom configurations
Coil Types	Bobbin-wound, self-supporting, layered, orthocyclic, impregnated, universal
Coil Shapes	Oblong, triangular, square, round, trapezoidal, tapered, custom
Bobbin Materials	Ceramic; Metals (steel, aluminum, brass, magnetic alloys); Plastics & Composites (Torlon®, PEEK, Ultem™, Delrin®/Acetal/POM, Rynite®/PET, Ryton®/PPS, Zytel®/Nylon, LCP, DAP, Teflon™/PTFE, G10, Phenolic, GPO3)
Custom Transformers	
Transformer Types	Dry wound, impregnated, VPI, encapsulated
Power Rating	Milliwatts to 10 KVA
Configurations	Single & multi-tap, isolation, autotransformer, buck boost, switching, power, signal, high frequency, current, step up/step down, flyback
Testing & Measurement	
Inductance, capacitance, resistance, impedance	High voltage AC and DC dielectric (HI-POT) and insulation resistance (Up to 20 KV AC or DC)
Statistical process analysis & control (SPC)	Turns ratio & phasing
Exciting current	Surge stress
Advanced Finishing	
Vacuum pressure impregnation (VPI)	Selective conformal coating
Epoxy and silicone encapsulation	Thermoplastic injection overmolding

Industries

Our customer reach extends into various industries, including:

- » Aerospace » Commercial » Communications » Laser » Medical » Military & Defense » Music & Audio

Quality Assurance

At Able Coil, our Quality Management System (QMS) is certified for both ISO 9001:2015 and AS9100D, and we are ITAR registered. Every product is manufactured under a controlled product realization plan. Each plan is supported by product specifications, work instructions, inspection plans, pictures, and customized documentation. Materials and products are lot controlled throughout the entire manufacturing process. Our team is also trained in solder joint inspection per IPC J-STD-001.



Engineering Support

Our engineering staff has many years of experience in high performance magnetic product manufacturing and design. We work with your team throughout the entire product development cycle.

- ✓ Collaborative design support
- ✓ 3D modeling and drafting
- ✓ Prototyping and 3D printing
- ✓ In house tooling
- ✓ Product qualification testing
- ✓ Documented first article inspections



Equipment

Able Coil utilizes state-of-the-art winding and assembly equipment in our modern manufacturing facility. We are committed to continuously improving our processes, equipment, and capabilities to stay up to date with technology.

- ✓ Manual wound to multi-spindle CNC winding, for both low- and high-volume production with high repeatability and optimized throughput.
- ✓ Automated selective soldering for high volume integration of custom coils and cable assemblies to circuit boards.
- ✓ Injection molding machines for precision overmolding of coils, transformers, and other components.

