



CUSTOM CAPABILITIES Manual

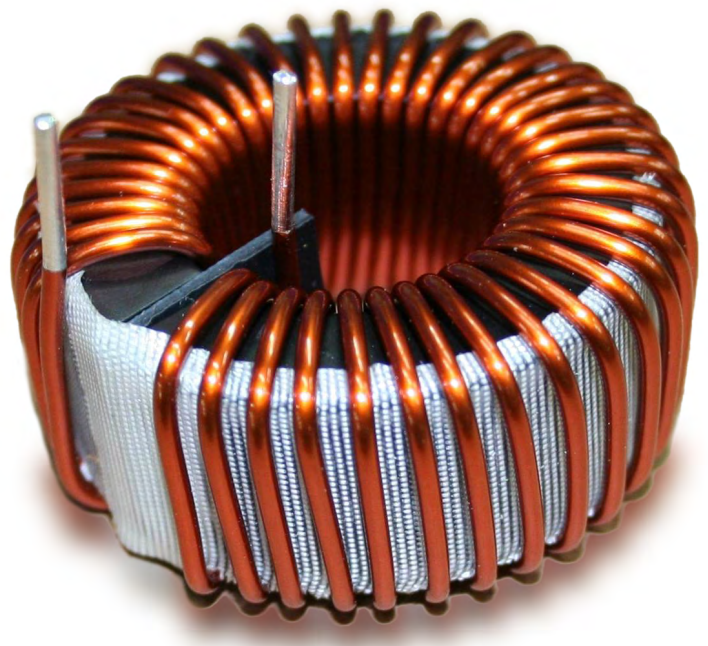


Custom Capabilities

Agile Magnetix is a variable volume, custom and contract manufacturer who has been in the magnetix business since 1992. We design and manufacture custom transformers, specialized inductors, and tailor-made electromagnetic coils. Our technical staff of engineers can provide you with design, fast prototyping, and product development services for all your magnetic and voltage control needs.

All of our products are built in our state of the art, 40,000 sq/ft manufacturing center in Concord, NH. Our facility is equipped with computerized, and automated work stations, which allows us to guarantee our customers the highest quality in custom magnetic products. In addition to our Concord facility, we also collaborate with several strategically located, high volume production facilities to ensure our customers receive their high quality products on time, every time.

We computer test 100% of the products we manufacture and we supply supporting documentation as required by each industry. We are an ISO 9001 and AS9100 registered manufacturer, and as such, our quality procedures are extensive. Our products are manufactured to UL, CUL, VDE, and CE standards and are supplied with UL and CUL markings as required.



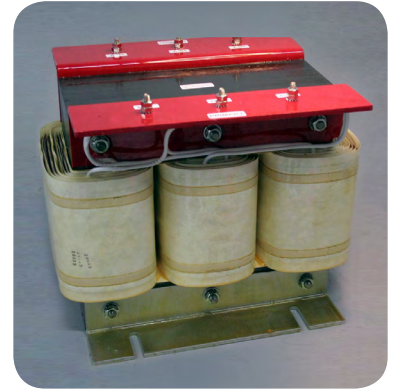
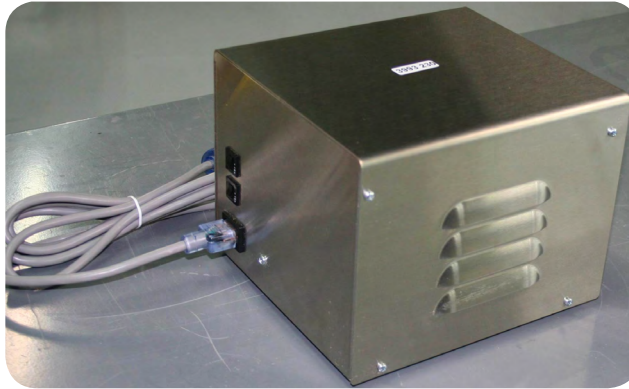
Custom Products

Our custom products include specialized transformers, inductors, and coils. We work with our customer's engineers to make sure that their custom designs are optimized for their specific applications and their budget.



Transformers

A transformer is a device used for increasing or reducing the voltage of an alternating current. At Agile Magnetix, we manufacture specialty transformers for a variety of industries, including OEM, instrumentation, imaging, medical, military, and aerospace.



Our specialty transformers include high voltage universal windings, line voltage transformers, high frequency transformers, and step up and step down transformers up to 100 KVA. Some of the different varieties of custom transformers we manufacture include:

High Frequency Transformers: High frequency transformers are useful when noise reduction, increased efficiency, and limited space are important to your application. High frequency transformers can deliver extraordinary power in a small unit. They are manufactured with advanced core materials, including ferrite and powdered iron.

Toroidal Transformers: Toroidal transformers are known for their high efficiency, excellent load regulation, and very low emitted EMI. Our toroidal transformers can handle wattage ratings from less than 10 VA to greater than 2000 VA. Toroidal transformers are used for audio, lighting, power, and medical applications.

Buck Boost Transformers: Buck boost transformers are designed to be able to adjust voltage within a limited range. They are most often used to precisely match the voltage of a power supply. For example, a buck boost transformer can be used to adjust the voltage from a power supply to the exact voltage required by a product. Buck boost transformers are also known as step up and step down transformers. We manufacture buck boost transformers in single or three phase applications with standard or multi-tap configurations. These transformers are often used for low power lighting and uninterruptible power supplies for computers. They are also often used for industrial lighting that runs at higher voltages.

Single Phase Transformers: These transformers are used for step up and step down applications for, industrial controls, isolation systems, lighting, and heating applications.

Three Phase Transformers: These transformers are primarily used to step up or step down voltages in three phase power industrial machine applications. While single phase transformers could be bundled and used for these systems, using a three phase transformer is generally more advantageous. They use less material, weigh less, and are usually smaller than a single phase bundle would be.

Isolation Transformers: Isolation transformers are used to prevent signal interference and to direct power between independent circuits that cannot be directly connected. Many applications require the circuit in contact with user be “isolated” from the main power circuit. At Agile Magnetics, our UL E160724 UL listing for insulation allows us to apply the UL mark for temperature ratings for 130 to 220 deg Celsius. Isolation transformers are often used for medical device and consumer product applications.

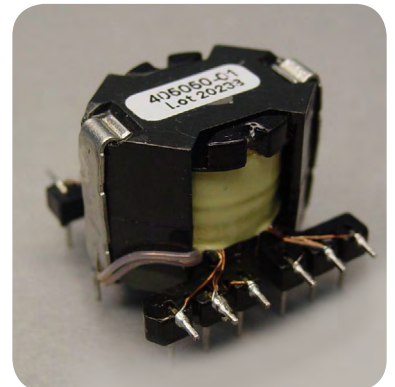
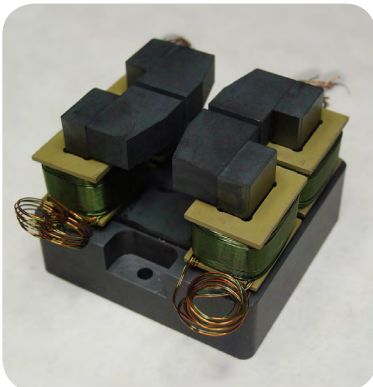
Instrument Transformers: These transformers are used to provide analog information to help monitor, control, operate, and protect the power system to which they are connected. We can manufacture instrument transformers in a range of sizes, from compact to broad mount capabilities. Our designers and engineers will work with you to develop a transformer with the correct voltage, VA rating, and physical size requirements you need.

Pulse Transformers: Pulse transformers are generally used to transmit information through analog and digital signals. They are designed to produce a specific rectangular waveform. These transformers are used in electronics, communications, power distribution controls, and radar applications.

High Voltage Transformers: These transformers allow for the safe and accurate step up of voltages up to 15,000 V. Common applications include electrostatic cleaners, laser equipment, ozone generation equipment, particle accelerators, high voltage power supplies, and x-ray machinery.

Power Inductors

A power inductor is used to maintain a steady electrical current in a varying current or voltage system by storing electrical energy in a magnetic field.



Our electrical, manufacturing, and quality engineers will work with you to provide the precise inductor you need for your application. Some of our custom inductor capabilities include the following:

Ferrite Inductors: We can manufacture ferrite inductors with the following cores: EE, RM, EP, Pot, EFD, U, UI, Toroid, EPC, ETD, PQ.

Air Core Inductors: Air core inductors are used for high frequency and high linearity switch mode magnetics. Air core inductors experience no core loss, and do not saturate.

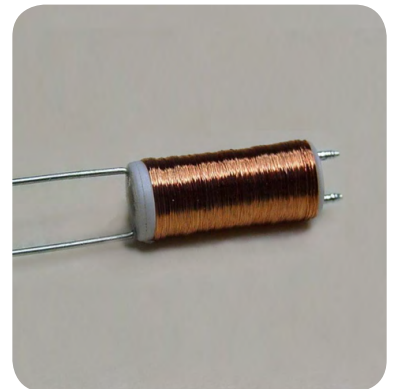
Toroidal Inductors: These inductors are usually a smaller size and lower cost than other inductors and can be made from a variety of materials. Core materials for toroidal inductors can be made from the following: cobalt alloy, ferrite, metallic glass, nickel alloys, powdered iron, silicon iron, amorphous, and nanocrystalline. Typical uses for toroidal inductors are common mode inductors, current sense transformers, input filter inductors, and switching regulator inductors.

High Current Inductors: Agile Magnetics can manufacture high current inductors for currents up to 1200 A and are designed to comply with RoHS. High current inductors are used for inductive load simulation, and are able to withstand high current spikes without saturation. Common applications include battery powered equipment, automotive components, and load testers.

Iron Core Inductors: These inductors offer high capacity in a variety of sizes, and are useful when space is an issue. Common applications include AC load banks, audio equipment, high energy physics, industrial power supplies, inverter systems, power conditioning, and rapid transit. We also manufacture custom powdered iron core inductors that possess increased frequency and current capabilities.

Electromagnetic Coils

Electromagnetic coils are electrical conductors that are used in electromagnetic devices, such as transformers and inductors.



At Agile Magnetix we design and manufacture both standard and exotic coils that can be supplied as standalone coils, or incorporated into a complete magnetic component. A few of our electromagnetic coil options are:

Magnetic Wire Coils: We manufacture magnetic wire coils in a variety of sizes and diameters. All of our magnetic wire coils are insulated with NEMA rated films. Coils can be made with a variety of insulation thermal classes ranging from 130 to 220 degrees Celsius.

Air Core Coils: Agile Magnetix can manufacture air core coils with a variety of wire types, gauges, sizes, and with precise levels of inductance.

High Frequency Coils: These coils are designed for minimal loss at frequency ranges from 20KHz to 1+ MHz. By using Litz wire or thin copper strips we are able to reduce the AC resistance at high frequency.

As experts in manufacturing, design, and sourcing, Agile Magnetix will provide you with the custom magnetix you need. Our experienced technical staff will work with you to design a custom transformer, inductor, or electromagnetic coil specific to your application. We guarantee that your on-paper designs can and will be manufactured in a reliable, repeatable, and controlled process.

