

Custom services for magnetic components

We design and customise transformers, inductors and other magnetic accessories and can help at any stage of your project, whether you are in design or production.

Our capabilities

Our in-house custom services team design and manufacture magnetic components matched to customer requirements.

We design transformers, chokes and even cores, based on the technical and commercial aspects of your project.

We produce designs suitable for EMI suppression, power conversion and signal processing applications, although we specialise in power solutions.

Key strengths

- Dedicated design engineers who work with your development team
- 25 years experience designing bespoke magnetic components
- Widest range of soft magnetic core materials and shapes in Europe
- Components sourced from world-leading manufacturers
- Rapid prototyping and testing
- Central European team capable of next day on-site support
- Up to date with the latest technical and application developments
- Supply chain and quality management services

Expanded design and manufacturing expertise

In addition to our in-house design department and technical sales teams we have expanded our wealth of expertise and our design and manufacturing capabilities with Myrra, Noratel, RSG and Flux joining the Acal Group.

Our service commitment

Contact us today and we will arrange a discussion with one of our design engineers within 48 hours. After an initial discussion with your designer we will prepare a design proposal including a first price estimation within the next 72 hours. After design approval you will be provided with a quote and prototype within 7 days.



We produce fully custom and application-specific designs, developed in collaboration with customers

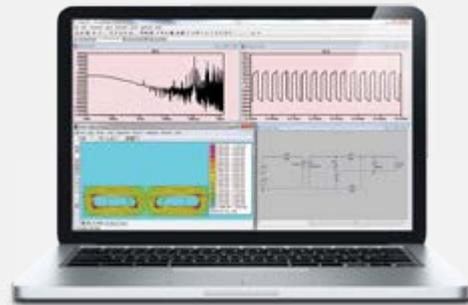
Our unique service

We use modern design and simulation tools

Our design engineers use modern design and simulation software to create bespoke magnetic components. Further to that, they fully understand the surrounding ecosystem of the magnetic components inside the device. Our designs are tested and approved by development samples from our sample production as well as first samples from the production. Samples undergo functional and additional tests up to validation programs.

To perform these tests, we use our own in-house test equipment which exceeds the usual equipment level:

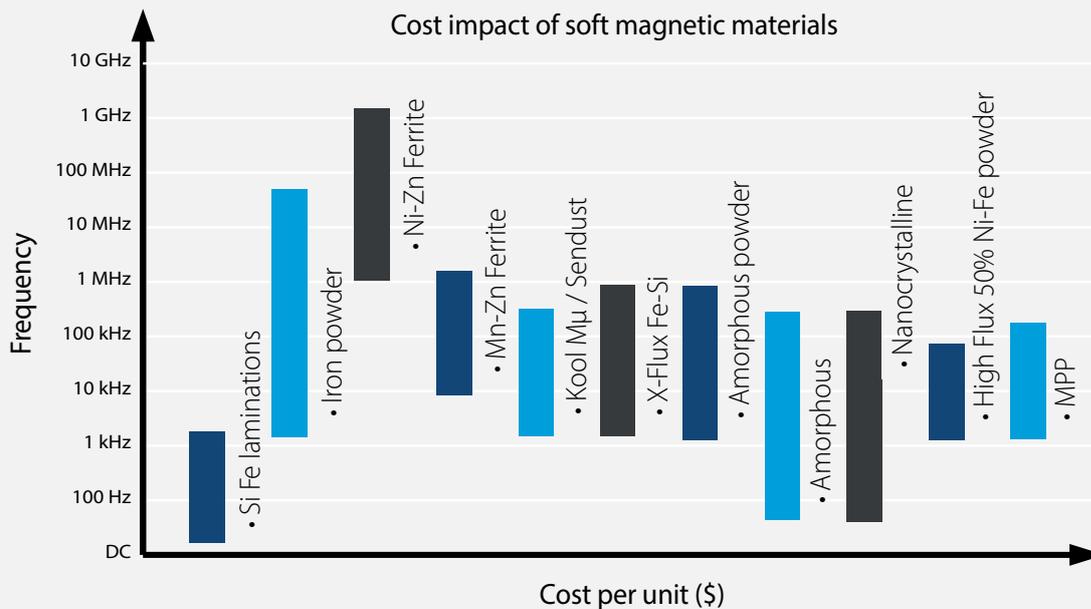
- high voltage testing up to 5.5 kV (AC+DC)
- high current testing up to 1000 A (DC)
- partial discharge test up to 10 kV
- impedance analysis up to 100 MHz
- climate chamber from -40 to +180°C
- high temperature testing up to 300°C



The aim of development is not only to provide best product design and performance, but also to ensure reliability in the production process. This is achieved by both samples during development phase to simulate production and exclude possible problems (also using FMEA), and proper specifications, documentation and prescriptions for production.

We match your technical with your economical requirements by offering all types of magnetic cores

Acal Bfi stock and distribute soft magnetic cores in all core materials from the world's leading suppliers. Additionally, we offer and use our own brand of amorphous and nanocrystalline cores. Therefore our design engineers can freely choose the best material for your application without restriction. Working in long-term relationships with our world-class suppliers, we have a full understanding of the material's properties and how they match with your requirements. Because we also understand their cost implications on your application, we can offer you the most economical design.

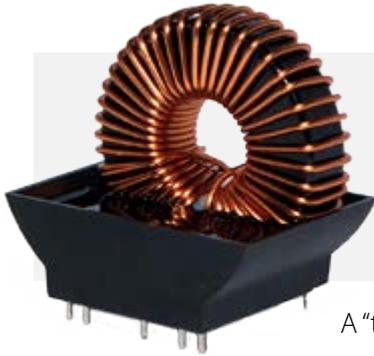


We know how to use all existing wires

With all common wire gauges, including high-current designs, round or flat, solid or stranded, all insulation types, we can meet your requirements with respect to voltage, current, copper losses and frequency.



A flat wire winding



A "trough" base-plate for socketing

We also customise accessories

Particularly important where space is limited, performance is crucial or weight matters, we can custom design accessories that help make your design work effectively, including bobbins, housings, clips and base plates.

We produce a wide range of form factors

By considering your target application and choosing the optimal core from any available material and shape – without any restriction – our design engineers will meet your requirements in terms of frequency, power losses and Q-factor, chemical and mechanical stability, aging, space, and most importantly, cost.

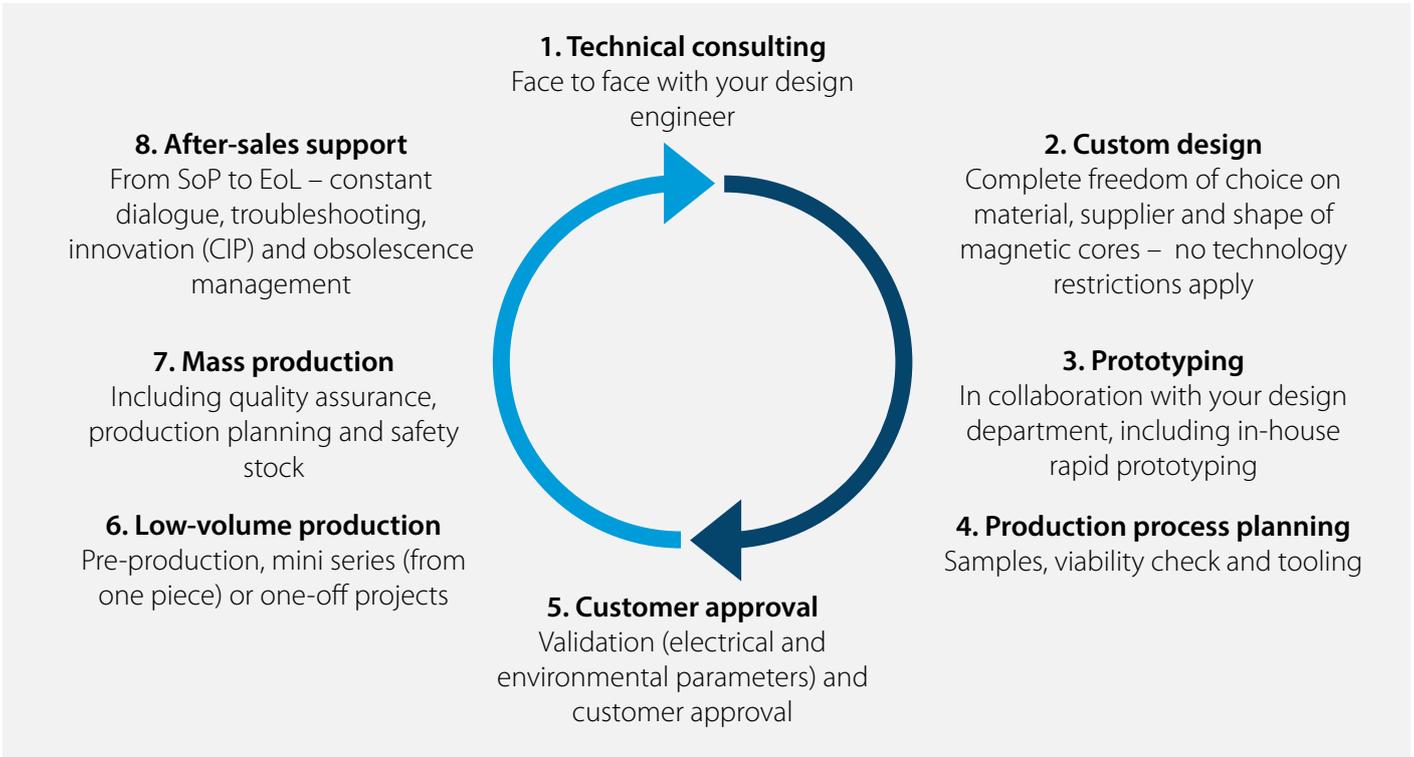
And if no standard core is good enough we can also design and manufacture custom cores. Our portfolio of bespoke magnetic components ranges from midget chokes to vast transformers, from simple air-core coils to complex filter modules.



How we work with you

A complete service – from beginning to end

With our complete service approach we work with you throughout the project – we Consult. Design. Integrate.

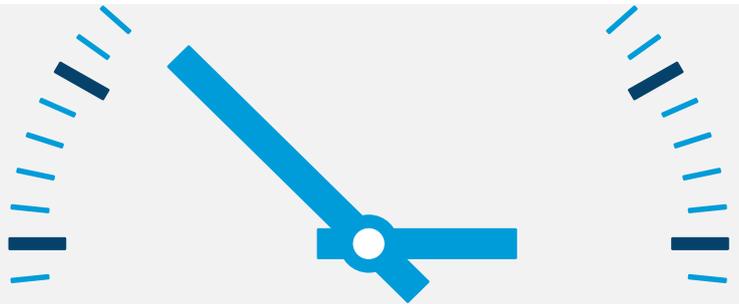


Design timelines – our service commitment

First discussion:
within 48 hours after contact request

Design proposal including first price estimation:
within 72 hours after discussion

Quote and prototype:
within 7 days after design approval



An international network

The Acal Group own an international network of production plants. Prototypes, samples and low-volume series are produced in-house in Germany. Mass production in Asia is processed by plants that have implemented European measures of process stability, product quality and general management. For products with higher complexity, or if short lead times are required, we also work with long-standing manufacturing partners in Eastern Europe.



Supply chain and quality management services

Designed to your manufacturing process

Our design matches your end product and its environment as well as your processes, for example pinning (THT, SMT), material specifications (UL, RoHS), component specification (temperature, IP classes), cooling and space limitations.

Flexible packaging options

Our packaging (single, blister, trays, tape and reel, ESD) including documentation and labelling is harmonised with your assembling technology. Where suitable we use returnable packaging.

Flexible manufacturing sites

Depending on size, weight, volume, cost considerations and delivery area we are able to choose the optimum manufacturing site globally.

Our warehouse capabilities include stock profiles, safety stocks, consignment stocks, shipping on demand, drop shipments, and just in time.



Commitment to quality

Final quality checks are managed by our central quality department. We are your direct partner for quality assurance agreements, audits and complaint management, and take full responsibility for each delivery independent of the production site.

Testing is carried out in our own lab using modern semi-automatic equipment. In addition to standard defined parameter tests, we also offer other examinations on request, such as climate, mechanical, HV, and partial discharge tests, as well as impedance analyses.

To ensure the highest quality level of production and conformity with required standards (ISO, RoHS, REACH, UL), our central quality management team provide full support and perform audits at our production sites.

Get in touch

We have a local contact in each country for our custom services for magnetic components.

Contact us today and we will arrange a discussion with one of our design engineers within 48 hours.

See back page for contact details.

Keep up to date

To receive regular technology news and updates via our quarterly newsletter 'Q-facts', ensure that **Magnetics** is selected in 'communication preferences' when registering on our website.





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