Inductive components

European leader in advanced technology solutions
About Acal BFi

Acal BFi are Europe’s leading provider of advanced technology solutions, operating in 12 countries throughout Europe.

We offer products across specialist technology areas, each with a dedicated pan-European sales team. Customers use our design-led expertise and expert consultation services to find the best technology solutions for their design, prototype and production needs.

Products and support

- Cables and Connectors
- Embedded computing
- Imaging
- **Magnetic components**
- Power
- Semiconductors
- Electromechanical
- Fibre optics
- IoT and Wireless
- Photonics
- RF and Frequency control
- Sensors
One-stop shop for inductive components

The largest team of technical support specialists in Europe

Using experience gained over 40 years in the market, we offer a comprehensive range of products that meets all your needs. Our close relationships with world-class manufacturers means we can help you select, source, customise, stock and integrate inductive components for any application.

Trust us with your inductive components supply

When you work with Acal BFi you can trust us to have your business’s interests at heart. Our experience, technical expertise, flexible approach and rapid response let you concentrate on fulfilling your customer’s brief with confidence.

consult. design. integrate.
Full custom design

Our magnetic components division supply much more than off-the-shelf components.

Custom inductors and transformers
Helping customers with bespoke magnetic components for over 25 years, we offer a complete customisation service – from the choice of soft magnetic cores to designing finished components. With access to all core materials and shapes, and expertise for all applications and technologies, we give you access to the best solutions.

If there is no standard solution available, our dedicated technical sales team will help select your ideal partner. Our sister companies Myrra, Noratel and Flux – leading manufacturers for a broad variety of components – bring a wealth of technical expertise in their product and application ranges.

Custom Services for Magnetic Components
If you are looking for a more specialised design, especially in the mid-frequency power range, our Custom Services team can help you. Our design and application specialists have long-term expertise in materials, component design and production, direct contact with material suppliers, and a comprehensive technology network, so they can find the best solution for you in terms of performance, quality, costs, logistics and timing. They can support you anywhere in Europe quickly and reliably.

Choose Acal BFi
We take pride in delivering outstanding service, excellent engineering and access to the latest in transformer and inductor technology. Contact us today to find out how we can help you.
## Key partners overview

Acal BFi work with the leading manufacturers in their field, offering you a complete solution for your magnetic components needs.

<table>
<thead>
<tr>
<th>Company</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Acal BFi</td>
<td>Application engineering and design team are at the heart of Custom Services for Magnetic Components. We design and supply a wide range of customised magnetics, including chokes, inductors and transformers, offering our customers a complete service built on knowledge and expertise.</td>
</tr>
<tr>
<td>Amogreentech</td>
<td>Manufacture inductive components, such as common mode chokes for power supplies and renewable energy. They have established a leading position in the magnetic components market of high-performance, soft-magnetic, amorphous-based new materials.</td>
</tr>
<tr>
<td>API Delevan</td>
<td>Are a leading-edge US manufacturer of inductors, power inductors, RF coils, chokes and transformers. Their products are designed to meet the highest quality standards as evidenced by MIL-PRF-39010, “R” failure rate accreditation.</td>
</tr>
<tr>
<td>Flux</td>
<td>Specialise in the design, development and mass production of coils, inductors and transformers, particularly for high-end industries where failure is not an option.</td>
</tr>
<tr>
<td>Gowanda</td>
<td>Design and manufacture application-specific and standard inductors for RF and power applications in the OEM marketplace. Their technical expertise, capabilities, and industry certifications have established them as a leading supplier of high-performance magnetic components.</td>
</tr>
<tr>
<td>Laird</td>
<td>Are a leading global supplier of magnetic ceramic products such as chip beads, cable cores and common mode chokes for use in wireless handsets, data devices, printers, computers and consumer electronics. Their nickel-zinc ferrite parts are used extensively in the suppression of EMI in the transmission, reception and processing of electronic signals and data.</td>
</tr>
<tr>
<td>Myrra</td>
<td>Are a globally recognised provider of custom magnetic components, specialising in the production of high-quality, high-reliability transformers, inductors, chokes and coils.</td>
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<tr>
<td>Noratel</td>
<td>Are one of Europe’s leading suppliers of transformer products and expertise. In particular, they are known for high-quality wound components.</td>
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<tr>
<td>Sagami</td>
<td>Are a Japanese manufacturer of flyback transformers and other wound products, concentrating on the fields of power and RF (only sold in UK, Ireland and Italy).</td>
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<tr>
<td>Toshiba</td>
<td>Pioneered the development of Cobalt (Co)-based amorphous magnetic alloys for electronic applications. They offer Cobalt amorphous magnetic beads for noise suppression, mag-amps, snubbers and pulse transformers.</td>
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</table>
Transformer Technology

**High-frequency application**

- **Flyback**
  - Low-power (< 500VA) application
  - Multiple output voltages
  - Ferrite or powder cores

- **Forward**
  - Medium power (up to ~1kVA)
  - Single and dual-transistor
  - High efficiency

- **Push-pull**
  - Higher power (kVA range)
  - Full-bridge and half-bridge
  - Ferrite or cut cores

- **Resonant LLC**
  - Safety-isolating
  - UL materials
  - THT and SMT

- **Pulse**
  - Gate driver application
  - Low leakage / fast rise time
  - Work with most common controller

- **Line coupling**
  - For power line communication
  - Modem circuit adapted
  - UL approved materials

**Low-frequency application**

- **Encapsulated 50 Hz**
  - Full range of standard E-I sizes
  - VDE, UL, EN61558 certification
  - PCB and side mounting options

- **Isolating**
  - Auto
  - Variable
  - Safety-isolating / medical

- **Toroidal**
  - Power from 15VA to 1000VA
  - Custom designed up to 15KVA
  - IEC61558, UL506 and VDE0551

- **Transient suppression**
  - Portable up to 2300VA
  - Fixed up to 3300VA
  - Electrostatically shielded

- **Three-phase**
  - Medium voltage for up to 6MVA
  - Low loss
  - Water cooling available

- **Current**
  - High accuracy
  - Very low losses
  - Long-term stability
### Inductors

**Common mode chokes**
- One phase
- Three phase
- Stacked for pull-through cables

**Differential mode chokes**
- Wide frequency suppression
- Toroidal, E-core, planar
- Many core materials

**Storage chokes**
- Wide frequency range
- Several powder core materials
- Amorphous cut cores

**PFC chokes**
- Low losses
- Powder toroids
- Gapped ferrites

**Coils**
- Air core
- On bobbins
- Free standing

**Board-level inductors**
- Automotive grade
- Class D audio amplifiers
- Ferrite beads

**Reactors**
- One and three phase
- Amorphous and nanocrystalline
- Up to IP54 protection grade

**Antennas**
- RFID
- Keyless entry
- Wireless charging

<table>
<thead>
<tr>
<th>Component</th>
<th>50 Hz transformers</th>
<th>Transformers for SMPS</th>
<th>Reactors / chokes for power applications</th>
<th>EMI chokes</th>
<th>Current sensing transformers</th>
<th>RF / communication / signal transformer</th>
<th>High-rel, space grade component</th>
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<tbody>
<tr>
<td>Acal BFi</td>
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Technical information
- Reactors / Chokes
- Marine, Oil and Gas
- Networking and Communications
- Military and Security
- Energy
- Scientific