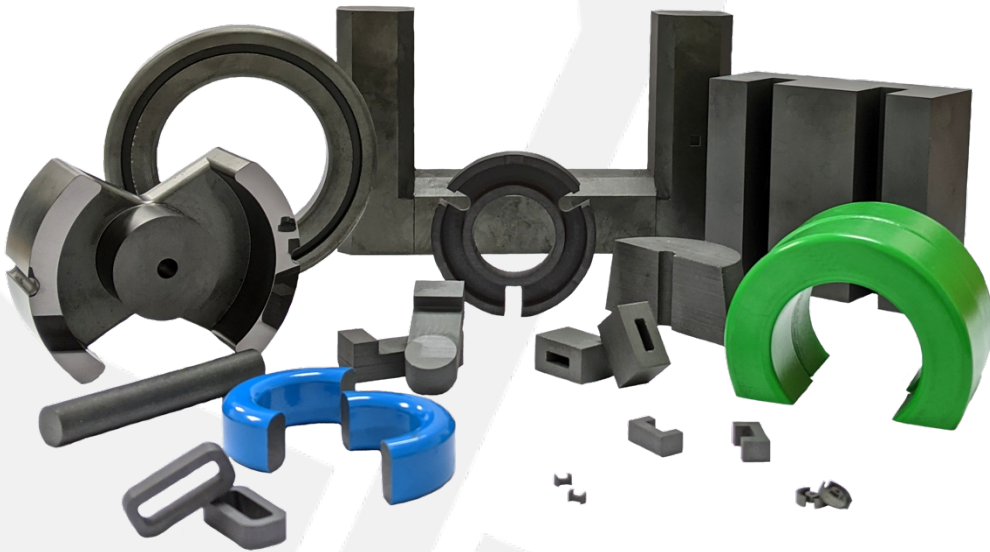


Revolutionising New Product Design: The Power of Bespoke Ferrites

In the world of modern technology and innovation, the demand for smaller, faster, and more efficient electronic devices has never been higher. To meet these demands, engineers and designers are constantly exploring new materials and technologies. In this blog, we will explore the benefits of bespoke ferrites and their crucial role in shaping the future of new product design.

The Power of Customisation

Unlike off-the-shelf ferrites, bespoke ferrites can be tailored to meet the specific requirements of a particular application or product. This level of customization allows engineers and designers to trial small batch volume pre-production runs to achieve optimal performance and efficiency in their designs without the expense or potential waste of purchasing manufacturer minimum order quantities.



Advantages of Bespoke Ferrites in New Product Design

1. **Size and Shape Optimization:** Bespoke ferrites can be designed in various shapes and sizes to fit seamlessly into a product's form factor. The Gateway Machine Shop team are currently working on projects with Ferrites ranging in size from
2. **Frequency Range Matching:** Different applications require ferrites that operate at specific frequencies. Bespoke ferrites can be tuned to match the desired frequency range, ensuring optimal performance in each application.
3. **Improved Efficiency:** Now ferrites can be designed to meet specific requirements for ongoing projects where traditionally a re-design of a board might be needed to

accommodate a standard ferrite, the machine shop can customise that standard part to meet the requirements of the specific output.

4. **Speed to market:** Standard manufacturer lead times have remained anywhere between 14 and 24 weeks from receipt of order, with the largest stock in Europe of potential base parts and blocks, Gateway can reduce this to as low as 4 weeks for standard grinds.
5. **Ease of purchasing:** Gateway ships globally, offering quotations in Sterling, US dollars or Euro's and is experienced in packaging this delicate product range, making sure you receive the parts in pristine condition.
6. **Cost Efficiency:** While the initial cost of designing bespoke ferrites may be higher than purchasing off-the-shelf components, the long-term cost savings, improved product performance, and reduced redesign cycles can make them a cost-effective choice.

Applications of Bespoke Ferrites

Gateways unique machine shop is also able to offer tolerances far tighter (down to +/- 0.005mm) which would be impossible to achieve with traditional "pressed" manufacturing and is partnering with University Engineering departments around the globe to offer bespoke parts for new research and development projects such as:

1. **Consumer Electronics:** From smartphones to wearables, bespoke ferrites play a pivotal role in ensuring compact, high-performance devices.
2. **Automotive:** Custom ferrites are used in vehicle electronics to enhance safety features, improve fuel efficiency, and reduce emissions and in EV charging stations.
3. **Medical Devices:** In medical equipment, customized ferrites help maintain precision and reliability in critical diagnostic and treatment devices.
4. **Telecommunications:** Bespoke ferrites are used in the telecommunications industry to optimize signal processing and transmission.
5. **Renewable Energy:** Ferrites are vital in renewable energy systems like wind turbines and solar inverters, where they improve energy conversion and reduce losses.

As technology continues to advance at a rapid pace, bespoke ferrites have emerged as a key enabler of innovation in new product design. The Gateway Machine shop ability to be customized for specific applications is giving engineers and designers the ability to create products that are not only smaller and more efficient but also more reliable and cost-effective, ultimately shaping a brighter future for technology and innovation.