



Electromagnet COILS

AT BUCKLEY SYSTEMS WE PRIDE OURSELVES ON OUR ABILITY TO FIND RELIABLE, OPTIMISED SOLUTIONS FOR EVEN THE MOST DEMANDING OF ELECTROMAGNET COIL APPLICATIONS. COILS ARE A CRITICAL PART OF ANY ELECTROMAGNET, AND AT BUCKLEY SYSTEMS THEY'RE NEVER AN AFTERTHOUGHT.

TRIED AND TRUE

For over three decades, we have been manufacturing copper electromagnet coils. Our coil shop has developed robust and consistent techniques for this specialized product. Your coils will be manufactured with extensive knowledge of materials and forming, resins and fillers, vacuum impregnation and tooling. That means you get proven quality, longevity and consistency.

SPECIALIST DESIGNERS

Whether working from scratch or optimizing an existing design, our team of specialist coil designers can contribute extensive input into coil design. We will find optimum solutions based on requirements like current density, efficiency, physical tolerances, manufacturability and tooling costs, reliability, cooling restrictions, and thermal characteristics – always with a goal of providing the best value coils.

AN EXTENSIVE REPERTOIRE

Buckley Systems has manufactured a huge range of different coil types. Whether your copper coil design is basic or exotic, grams or tons, from one-off prototypes to production runs, Buckley Systems has the skill and capacity to deliver.





COIL TYPES

Solid conductor coils are an excellent choice for low power-density designs, as they are simple and cost-effective.

Strip wound coils are a Buckley Systems speciality, being highly reliable and consistent, and offering excellent price-performance characteristics.

Hollow-conductor coils can be formed into any geometry, for the most demanding applications.

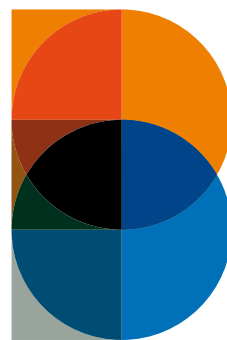
A range of vacuum encapsulation, potting and casting techniques are available for both coils and entire assemblies. Epoxy vacuum impregnation produces mechanically robust composite structures that stand the test of time.

FULLY TESTED

Coils are carefully examined, tested and documented throughout the production process to ensure defect free operation and traceability. A suite of calibrated test equipment allows us to test coils for interturn shorts, ground insulation resistance, coil resistance, inductance, flow, pressure drop and thermal performance under operational conditions.

PROJECTED FIELD MAGNET

By working with Buckley Systems, GMW Associates were able to deliver a product with strict space constraints, requiring current densities in excess of $30\text{A}/\text{mm}^2$. That took extensive analysis, prototyping, and novel manufacturing techniques developed by Buckley Systems to improve thermal properties of strip-wound coils.



**BUCKLEY
SYSTEMS**

Ingenious at work

To understand how we can forge an ingenious partnership with you, contact us on +1 978 948 3403 or +64 9 573 2200, visit www.buckleysystems.com, or email sales@buckleysystems.com

