



Harnessing Technology,
Delivering Solutions





Introduction

With over 20 years' experience, Phoenix Dynamics is a leader in delivering world class electrical cable assemblies into some of the most challenging environments. As a business, we invest in our customer's challenges and are able to provide a wide range of services from research and development, consultancy and design through to assembly and post-delivery support. This allows our customers to be delivered higher performing products and improved quality assemblies, while reducing the time and effort for them to find a solution.

We see the relationship with our customers as more of a partnership, where our customers explain their business or technical challenges and we provide robust solutions that allow them to deliver world class products. We are passionate about using our knowledge and experience to provide the best engineered solutions and use our multi-site locations in the UK to assemble your products, either built to order or supplied as scheduled shipments to your production lines.

Whether you're in the initial design phase and need to leverage off our research and development team to incorporate new technology, or our design team to push the design envelope, we are the partner of choice. Or maybe you have a fully defined design and just need a responsive supplier to assemble and deliver on time; Phoenix Dynamics are the ideal choice.

Our services

Cable Assembly

Cable assemblies are the core of our businesses. We offer our customers the advantages of reduced build times, improved quality and on-time delivery of cable assemblies that are integral to their production line. We have built a reputation within the market as the partner of choice for all types of electrical cable assemblies. Our experienced team manufacture all products in an AS9100/ISO9001 environment and are fully trained to IPC/WHMA-A-620, a standard widely recognised within the industry as the code of practice in ensuring manufacturing excellence of cable and wiring harness assemblies. All our cable assemblies are built to meet or exceed the acceptance criteria of this standard, including Class 3 High Performance Electronic Products for critical systems often required in Military, Aerospace and Medical applications.

We support customers with a wide range of cable assembly types from fully sealed wiring harnesses and open wire looms through to electro-mechanical assemblies, power cables, battery leads, RF cables and fibre optic assemblies to name a few. It is not just with our manufactured products that we can support you and your business with. We also provide a complete overhaul service to revitalise existing equipment and provide line replaceable products to support existing programmes, as well as the testing and quality assurance of 3rd party products. With capability split over two sites and a responsive external support team, we have the capacity to support both regular production supply and project surge requirements.



Electro-Mechanical Assembly

The combination of electrical and mechanical assemblies to deliver customers sub-assemblies that can fit into larger applications is the best combination of our skills and knowledge. Customers are able to maximise the cost reductions of multiple assemblies into one location while relying on our high quality standards and our commitment to on-time delivery. All our electro-mechanical assemblies are manufactured within an AS9100/ISO9001 environment by our experienced manufacturing team. Due to our deep understanding of the electrical requirements to maximise function and optimise endurance, we are able to advise and deliver enhanced electro-mechanical assemblies that improve the performance of the final product.

Customers that allow us to be both their electrical and mechanical assembly provider gain a key partner that is committed to reducing overall program cost, improve lead times and enhance quality. This combined with high capacity and capability over two sites means we can support customers with small run project work as well as continuing scheduled demand.



Our services

Overmoulding

The joining of cables to connectors and each other is normally the natural point of weakness within a cable harness or electrical system but at Phoenix Dynamics we see this as the perfect opportunity for improvement. Our in-house moulding and overmoulding facility provides the ability to reduce cost, reduce weight and reduce the component count all in one step. We provide low pressure moulding to protect the key components of an assembly, as well as providing a rugged enhancement to the original connection. With many years' experience of tooling design we are able to create mouldings that have large design freedom to incorporate clipping, mountings and grips to name a few.

Customers rely on us to provide mouldings from initial design concepts to geometrical precise mouldings that are used to locate, hold and protect cable assemblies. It is the wide range of flexibility that we offer with our low pressure moulding system that means that we can quickly create a sample for testing and then deliver a consistent product through our robust manufacturing processes. This is most appreciated with products that have high complexity and / or are exposed to harsh environments. Combined with the protection that mouldings can provide to PCB's and other sensitive components, it has become a key offering for many of our customers.



Fibre Optics

The weight and space saving combined with improved performance has made fibre optics the main stay for a lot of our customer base. We support projects from large industrial installations to specialist high integrity applications. We help our customers with the design of their complete optical link systems, to incorporate fibre optics into their build process by blending with more traditional electrical cable assemblies. Some organisations see fibre optics as a black art but we see it as simple science and the application of engineering know-how.

We work with our customers to fully understand the application and project then use our skills and knowledge to select the best components to deliver the right performance. But it is the skills of the operators that terminate the cables with constant repeatability that make us a long-term partner for a number of customers on fibre optic projects. This has led us to deliver systems that can go underwater, underground, on land, in vehicles, in the air or even in space.





Our services

Design

For projects that are still at the design stage, we provide a comprehensive partnership service working hand in hand with your design team to create the best fit for purpose wiring harnesses and electro-mechanical assemblies for your project. This includes the concept design, prototyping, testing and quality assurance for the final design. This allows you and your project team to benefit from the thousands of cable assemblies we have already manufactured and will allow you to reduce costs, improve performance, maintain quality and reduce the overall product development time.

With such a pedigree in cable assembly design and manufacture, we offer much more than a selection of off-the-shelf items to form a new product. We are able to design and develop next generation technology and manufacture an enhanced product that is also cost effective. Due to our wide range of on-site manufacturing capabilities, from cable assemblies, electro-mechanical assemblies and overmoulding, we can deliver prototype designs via our 3D modelling software or deliver 3D printed rapid prototype samples into your engineering team's hands quickly to turn your design into reality, tested and production ready.

Consultancy

Sometimes customer's projects end up in trouble for a multitude of reasons from design, production, quality or supply issues. We help these customers and projects by providing experienced engineers to troubleshoot the problem and provide robust, repeatable and reliable solutions. This can include solutions at inception such as specification writing or project scoping, to problem solving, trouble shooting, testing and validation. We support customers around the world as a 3rd party looking at their existing products and helping them to improve performance, fix problems, reduce cost or simply confirm that their products are fit for purpose.

Consultancy is the delivery of non-biased support that helps improve a product, process or programme. We are able to do this by using over 20 years' experience of designing, manufacturing and improving cable assemblies that are integral to the overall performance of the end product.

Sectors

Over the last 20 years, Phoenix Dynamics has supported thousands of projects in a wide range of sectors. Our customers value our professional approach, high integrity and focus on quality. We support customers with delivering quality engineered solutions and reduce the risk of mission critical assemblies.

Aerospace

Phoenix Dynamics' deep understanding of high precision cable assembly products makes us the perfect partner for Aerospace primes and manufacturers across the UK. We supply products into a number of military and civil aerospace applications, including harsh environment wiring harnesses designed to meet the ever-increasing data and power demands in modern aircraft. We have also been able to apply our knowledge of high precision cable assembly products to support the growing use of Unmanned Aerial Vehicles (UAVs), helping our customers to keep up with market trends with reduced weight, reduced lead times for new products and rigorous quality testing.

Our dedication to high quality, robust cable assemblies has earned us AS9100 Rev D certification, yet another reason to choose us as your Aerospace manufacturing partner. We are devoted to maintaining excellent standards and continuous improvement of production processes, saving our clients time and money with high quality, reliable products.



Defence

The reliable, professional values running through Phoenix Dynamics has helped us to form strong partnerships with key companies within the Defence sector. We are proud to be actively involved in a variety of military programmes with the Armed Forces of several NATO countries, alongside a number of Defence Prime Contractors, in the support of Land Vehicles, Weapon Systems, Mine Clearance & Detection, Soldier Technology, Communication Systems and many other Military, Aerospace and Naval electrical applications.

Phoenix Dynamics has extensive knowledge of the components and materials regularly used in key Defence products and the fully sealed Mil-Spec Wiring Systems that include connectors, backshells, screened cables and heat shrink tubing. We have designed and developed products that address specific issues within the sector which reduce weight, lower life costs, improve performance and allow for increased production rate, helping to get key Defence products to critical locations without delay.



Sectors



Automotive

We supply a range of bespoke products to the Automotive sector, including custom-made wiring looms and battery cables. Our products are specifically designed to reflect demand in the industry; our design team is currently focussed on developing products which support powertrain and transmission systems, electric vehicles and hybrid propulsion systems. As the demand for more sophisticated and higher performing wiring harnesses increases our extensive knowledge makes us the ideal partner of choice.

Our consultancy services are exceptionally well received within the Automotive sector, we work in partnership with you to improve your products and anticipate developments in the market. We are proud to uphold our professional commitment to deliver robust and reliable solutions into the Automotive sector, to your specific engineering requirements.



Energy

Systems within the Energy sector need to be robust and reliable in order to endure all sorts of conditions. We understand that even a small amount of downtime can be costly, particularly within off-shore energy systems. Our priority is to provide you with reliable products that consistently perform, even in the harshest of conditions. We supply high power cable assemblies and earth leads directly into the Energy sector; our highly efficient manufacturing cell has the capacity to produce thousands of cables week after week.

Our research and development team have worked on wind energy projects with major partners within the sector and are proud to have been able to deliver cost-effective, complete solutions every time. We use our extensive experience within the Defence sector to provide quality solutions directly into the Energy sector.

Sectors



Industrial

Phoenix Dynamics supply high quality wiring looms and cable assemblies directly into our key partners in the Industrial sector. We work alongside our clients to establish their unique requirements and develop the most appropriate solution, reducing weight and improving product performance. This, combined with our commitment to match build rate with direct supply, allows us to integrate our manufacturing direct into our customers' upstream processes.

We understand that high quality, reliable products are critical in high pressure Industrial environments, and adhere to the IP (Ingress Protection) Rating where required. All our products are manufactured within an AS9100/ISO9001 environment and go through rigorous quality testing to ensure our clients receive the highest quality components, directly into their supply chain.



Marine

We supply a multitude of products directly into the Marine sector and have a number of longstanding, loyal clients who appreciate our commitment and attention to detail. We understand that it is crucial that each component delivered into the Marine supply chain is of the highest quality, and is ready to withstand even the harshest of environments. Our Marine customers value our overmoulding capabilities, which allow us to deliver fully sealed, bespoke components fit for use above and below water.

Our experience in both the Defence and Industrial sectors has helped us to develop advanced monitoring systems that are reliable in mission critical, brutal conditions, leaving our customers safe in the knowledge that the technology will not falter when they need it the most.

Sectors



Medical

Phoenix Dynamics are committed to supporting the Medical sector with products of the highest quality; we understand the importance of delivering high performance, reliable components into each medical device. Each of our engineers are trained to IPC-620 standards and follow rigorous AS9100/ISO9001 quality procedures to ensure every product is robust and dependable. We follow rigorous ISO 13485 practices to make sure our clients feel satisfied with the quality of each delivered product.

We work with a variety of medical companies and support our clients with their research and development projects thanks to our proven record of producing high quality precision cable assemblies. We combine their medical knowledge with our experience in design and manufacture to produce finished components that reduce waste, save money and perform.



Motorsport

Phoenix Dynamics have been proudly supplying bespoke electrical cable assemblies into the Motorsport sector for many years. We support our customers with vehicle wiring looms as well as communication and trackside/pit lane monitoring equipment. Phoenix Dynamics have a deep knowledge of Motorsport electrical systems, including top specification wiring harnesses built using Raychem System 25 and Viton materials.

We currently support the Motorsport sector across a number of disciplines including Formula 1, Superbike and Rally. Phoenix Dynamics are set up to support the sector in a variety of ways, from vehicle manufacturers through to engine, transmission and electrical sub-system suppliers. We rely on our vast knowledge in this area to help us select the most appropriate materials and method of production, using high temperature cables with protective heatshrink sleeve coverings for critical components in demanding conditions.

Sectors



Rail

Our capable engineering team have 20 years' combined experience in the design and manufacture of expert high power cable systems for use in the Rail sector. We leverage off our historical success within Defence projects and transfer those skills into expert technological solutions which can be applied throughout the Rail sector. We supply cables for applications on both rolling stock and trackside equipment directly to our clients. We know how important it is to deliver safety critical components, manufactured to exact specification to meet the demands of harsh applications. Our extensive knowledge makes us the ideal partner for your Rail requirements, be it via a one-off batch or repeat build to order.



Security

Phoenix Dynamics are committed to providing the Security sector with expert applications including traditional copper wiring looms, ethernet cables, co-axial cables and RF cables. Our dedication to supporting our Security clients with the most up to date technology has led us to develop our fibre-optic capabilities, to reflect the increasing demand in high speed data rates in critical systems. We use our wealth of experience to select the most appropriate materials for manufacture, providing our clients with high quality products with increased life cycles and reduced weight. We apply our extensive experience within the Defence sector to all our Security projects, using our detailed knowledge of mission critical applications we work with our clients to develop high performing, reliable components for supply directly into build lines across the UK.

Quality

Phoenix Dynamics is built on a strong foundation of quality and quality management that is practised at all levels of the business. We provide all our services within an ISO9001 and AS9100 environment which ensures the quality and reliability of your products and designs. We implement a 100% inspection culture as we understand the role that we play within the supply chain and the integrity that our delivered products require.

Over the years we have been awarded a number of customer approvals so that we exceed the requirements of both ISO9001 and AS9100. These additional quality awards are based more around specific project requirements and improved integrity. As a business we are always ready to receive our customer's challenges and deliver the best quality product and solution.

Customers

Phoenix Dynamics is proudly associated with its collaborative partners.

These include:

BAE SYSTEMS
INSPIRED WORK


DANISH MINISTRY OF DEFENCE
ACQUISITION AND LOGISTICS ORGANISATION


Formula 1

**GENERAL
DYNAMICS**

 **GE POWER**


**Ministry
of Defence**





Harnessing Technology,
Delivering Solutions

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