



Precision & Innovation

Sustainable manufacturing for the world's best brands.





World-class plastic injection moulding & manufacturing

Over 50 years of manufacturing excellence has taught us how easy it is to overlook the obvious.

At Nordell, our work is primarily injection moulding. However, we are able to provide a range of services including toolmaking and maintenance, product assembly, ultrasonic welding & testing.

Our clients are in a wide range of sectors including Industrial, Medical, Automotive and Oil & Gas. Our collective experience and industry knowledge of over 1000 years, combines

to not only bring tangible savings to your new projects, but also helps to refine and develop existing products.

Whether you have a new to market concept, an evolution or development of an existing product, or are looking to relocate UK or overseas work to benefit from a world-class production service, we can customise an offer to meet your needs.



Industries & Sectors

Nordell provide market leading solutions in partnership with you.

Manufacturing excellence for a growing range of sectors

Our clients, customers and partners operate across a wide variety of sectors and global

markets. We have a growing reputation for being able to apply our skills and knowledge across sectors and industry types and love the challenges this diversity brings.



RENEWABLES & SUSTAINABILITY

Nordell have a long history of manufacturing for the Environmental sector supporting the UK drive to net zero 2050.

Nordell manufacture specialist parts used in Rotary Vane vacuum pumps. These vacuum pumps are used in many different industries including the manufacture of Solar panels.

Our history with wind turbines to produce electricity for the domestic market extends over nearly a decade.

With Environmental Sustainability and carbon reduction critical in the drive to net zero, Nordell is proud to be partnering with one of the UK's fastest growing renewable technology companies. Nordell manufacture parts for the EV (Electric Vehicle) Charging and Solar technology markets.



MARINE

Nordell manufacture parts for the Marine sector including Marine Safety and Marine Propulsion. Material selection is critical to ensure all parts meet strict industry standards and environmental conditions.



MEDICAL

Nordell's state of the art ISO Class 7 Cleanroom operates 24hrs a day. These manufacturing facilities support clients, and products in the medical sector. The Ultra-Low Particulate Air filter units (ULPA) provide 60 air changes per hour.



OIL & GAS

Products created by Nordell are used in some of the most extreme environmental conditions and need to meet regulations such as ATEX. This keeps us at the cutting edge of what can technically be injection moulded and helps provide our clients with design refinement, part performance and a competitive edge. Nordell is experienced with the exceptional materials this sector demands, whether it is for environmental protection, safety systems or production of technical components in specialist materials such as PEEK.



MANUFACTURING

Nordell is both ISO9001 and ISO14001 accredited and totally committed to manufacturing to exceptional quality standards and to protocols which reduce waste through an effective environmental management system. We have a detailed and robust plan to ensure our sourcing and manufacturing protocols exceed legislative environmental guidelines. We are passionate about delivering long term, sustainable environmental targets through our innovation and maximising the awareness of technological advances in materials and moulding techniques.



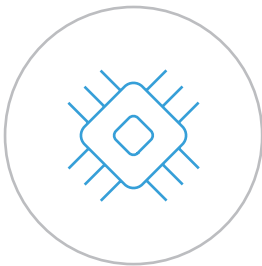
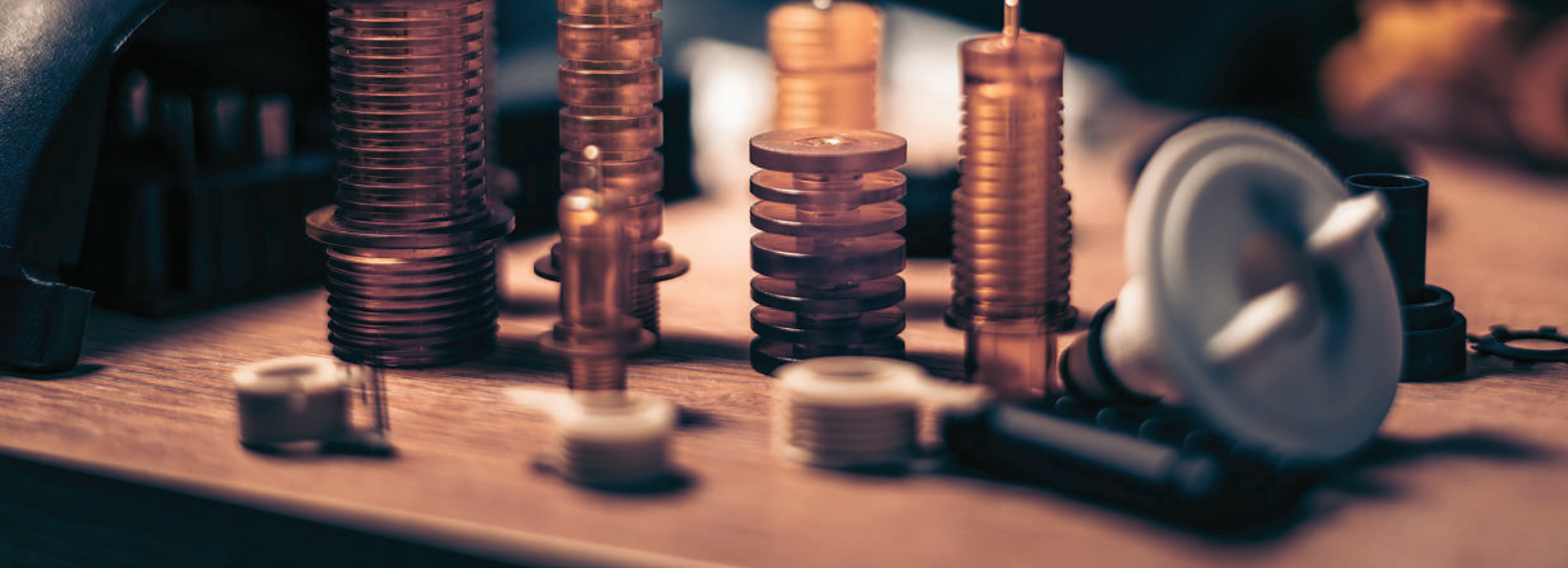
MASS PRODUCTION

Nordell is well placed to service high volume production requirements with 24hr production across our core processes including Injection Moulding, Finishing and Assembly. We will work closely with you to agree forecasts using our fully integrated ERP system to ensure your orders are met on time and in full. We have the scale to manufacture in batches of over a million parts, but if you have smaller requirements, don't worry, we can do that too! As part of our service, we identify and manufacture bespoke automation for product manufacture, test and assembly needs where automation will deliver an improved return on your investment.



CONSUMER GOODS

Nordell manufactures plastic moulded parts for the consumer products market. The consumer products category is wide and diverse and includes merchandise and other items of common or daily use, ordinarily bought by individuals or households for private consumption.



ELECTRONICS

Nordell has been manufacturing for the electronics sector for over 40 years. Our combined and in depth knowledge of the electronics sector has led us to develop many innovative products to meet the sectors needs.



INDUSTRIAL

With over 50 years of business in the industrial sector, Nordell has supplied millions of products and assemblies globally into Industrial operations as diverse as semiconductor markets, solar panel production, flat-screen manufacturing and gas measurement. With complimentary component sourcing both domestically and globally, the strength and depth of our solutions in this sector are world class.



SPECIAL PROJECTS

Innovation and “can do” attitude are all part of the Nordell culture. Its our Nordell E.D.G.E. Our special project team has expert manufacturing knowledge in multiple sectors and will provide you with great value and timely solutions. We have a long history of delivering solutions for some of the most creative and demanding projects and product concepts.

Capabilities & Services

Providing world-class innovative solutions for global customers.

In both the UK and Asia, Nordell has a wide range of services to offer. At the heart are plastic injection moulding, technical services and tool making.

We complement these with extensive assembly and finishing operations including ultrasonic welding, printing, soldering, machining and more.

We also bring testing, component sourcing, equipment and manufacturing services, assistance with design for manufacture and R&D from its innovation pipeline.

Offering 24-hour round the clock production, we cater for all our customers' needs.

Plastic Injection Moulding

High and medium volume solutions for a range of sectors.

Our award-winning business, supported by ISO accreditations in 9001 (Quality) and 14001 (Environmental) alongside our accreditation to UL746D, has been at the forefront of the plastics industry for over 50 years. Our team, combined, have more than 1000 years of industry knowledge and experience. Manufacturing operates 24 hours a day, servicing a wide range of markets including Renewables & Sustainability, consumer products, industrial, electrical, marine and medical sectors.

Our modern Injection Moulding facility houses more than 30 moulding machines including the latest Electric and Servo Hydraulic moulding presses, offering capacity from 25T to 380T. Nordell are experienced in a wide range of materials, from commodity to engineering polymers and have experience with many of the niche materials used in specialist applications. All our moulding machines are monitored in real-time and fed back to our ERP system, providing instant information to our Production teams.

We manufacture in the UK and supply products to every corner of the globe, operating a fully traceable system, giving agility to provide replenishment programmes suited to our customers' needs. With our highly trained and experienced Quality team, our parts are supplied right first and every time.

Plastic injection moulding is the most widely accepted way to produce large volumes of finished plastic parts for every kind of commercial and industrial use. Injection moulding is additive manufacturing, only using the volume of material required to make the part. Nordell can manufacture high volume, mass production parts or specialist low volume parts in small quantities. A single run cycle can take from a few seconds to minutes depending on part complexity and size. Volume and cycle time are the two largest costs in production parts manufacture. We will agree minimum order quantities and we are happy to quote you a variable price dependant on production batch size.

As well as producing core parts on our main injection moulding machinery, we also have capability to overmould cables and wire assemblies or overmould inserts on our vertical moulding machine. Vertical moulding is also ideal for low volume batches with the advantage of low cost tooling. It is used in many product developments, where small quantities are required for trial run purposes.

Class 7 Clean Room

Dedicated clean air production.

Nordell's state of the art 300m2 Class 7 Cleanroom is certified to ISO 14644 standard. The technology significantly decreases the chances of product pollution and provides a clean air area for production using over 50 ULPA (Ultra-Low Particular Air Filtration) filters delivering 60 air changes per hour. ULPA efficiency rating removes 99.999% of airborne particles.

Further contamination is prevented through the use of Cleanroom PPE such as gowning, hair nets and overshoes, reducing fibres and potential contaminants from entering the Cleanroom and interfering with production and research.

Nordell operate the latest, high speed, electric presses in our ISO class 7 Cleanroom. Nordell also offer cleanroom assembly options, allowing us to build parts for your within a controlled air environment. Nordell's clean room was designed and built by TCA of Redhill, Surrey.

While more than 30 different industry sectors use clean rooms for specialist manufacturing, the majority of cleanroom manufacture is centred around Lifesciences, Medical Devices, Pharmaceutical, Semiconductor, Electronic Components, and Aerospace.

Nordell's vast knowledge of a wide range of sectors puts us in a great position to support our customers with projects that require Class 7 cleanroom manufacturing.

“Phil Godden and his team at TCA did a fantastic job in delivering 2 bespoke cleanroom solutions which met our needs within six weeks. They were able to seamlessly guide us through the process and offer workable solutions to any build challenges”

Paul Mason, Managing Director, Nordell

Mould Tooling Manufacture

Nordell has a fully equipped toolroom in our factory in Worthing.

Our tooling capabilities include bespoke Injection Mould Tooling, Modular Tooling, Assembly and Production Fixtures, along with testing jigs and ultrasonic welding horns.

Why our Tooling service?

All tooling is manufactured to ISO9001 standards at our UK site by our team of specialist toolmakers and also at our Nordell Xiamen site in China.

We are able to offer you a flexible solution to meet your needs. Getting your parts into manufacture quickly is important, and using our scale, we are able to manufacture in excess of 20 mould tools a month.

Mould tools can be manufactured and delivered within 12 weeks of design sign-off. It may be possible to provide a shorter lead time and a lower-cost Modular tooling option for low volume pre high volume production.

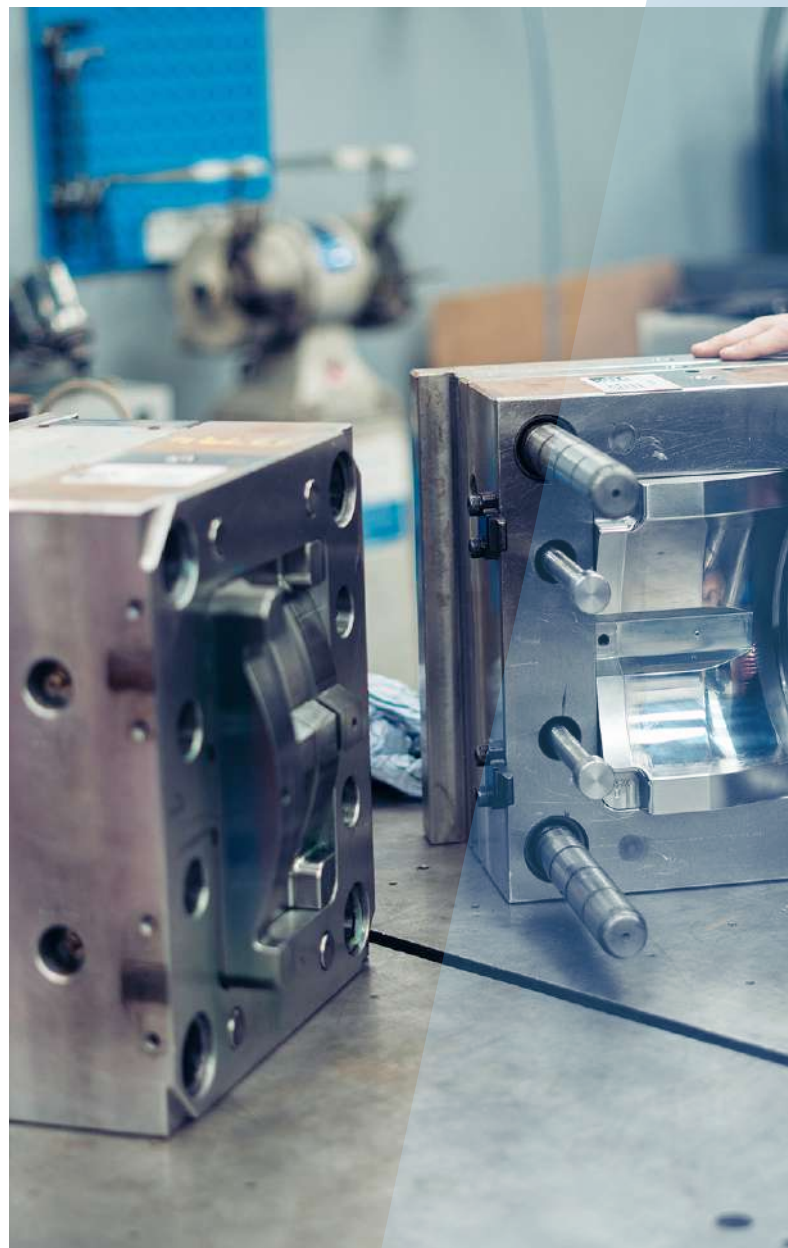
Nordell Modular Tooling System (NMTS)

Our Modular tooling option allows you to manufacture a low to medium volume of parts without the full cost of purchasing a mould tool. The lead time from design sign off to parts manufacture for a modular tooling system is around 8 weeks.

By manufacturing a modular tool, you can manufacture your component in the material of your choice and with your chosen surface finish. Your tooling investment will be in a modular insert system which will be inserted into one of our universal bolster sets. We manufacture the cavity and core details that form the component, which has its own ejector system.

This is one of the most cost effective solutions for tooling if you're looking to manufacture a component that exceeds the constraints of rapid prototyping.

At Nordell, your tool will be professionally maintained & serviced by our toolroom specialists as part of our regular preventative maintenance programme.



The Tool Design and Build Process

Every project starts with a design. Ideally you will have a technical drawing, a prototype and a 3D drawing that we can use to manufacture your mould tool. We will review the 3D drawing and convert it into a 3D tool design using our Solidworks design software.

Using our Mould Flow analysis program, we will ensure your tool can manufacture parts efficiently to your design. We may have to suggest some minor design tweaks to be able to successfully mould your part. We will guide you through the DFM (Design for Manufacture) process where we will propose a tool design that will deliver high quality parts and an efficient and repeatable manufacturing process.

Depending on the stage of your project we may suggest different tooling options that will deliver you a return on your investment.

Nordell guarantee

Nordell guarantee there will be “no additional costs within the agreed life of your mould tool”.

At Nordell, your tool will be professionally maintained & serviced by our toolroom specialists as part of our regular preventative maintenance programme.

Product Assembly & Finishing

Nordell offer a full range of product assembly options giving you the flexibility to purchase a complete or part assembled product allowing you to focus on the final product build and reducing the need for additional specialist teams.

We gain a deep understanding of your requirements through collaboration with you during the design process, allowing us to offer value-added solutions and cost control through in-mould secondary processes or post moulding product build.

Our range of services include building assemblies and sub-assemblies, icable preparation assembly and overmoulding, inserting, ultrasonic welding, mechanical and electrical testing, component sourcing, printing, spot welding and soldering, gasket & seal insertion and packing of spares kits.

We can help you to reduce your own supply chain complexity and risk through sourcing of complementary components and processes from our wide network of suppliers on your behalf, allowing you to focus on the main elements of your product build. Our experienced team can help you to find the best solution for your specific requirements.

Our procurement team will manage the tactical sourcing element of the supply chain allowing your sourcing teams to focus on your more strategic sourcing goals. Nordell are able to use our combined scale to leverage competitive pricing from our specialist suppliers and in turn provide you with a highly cost competitive solution.

Our finishing operations at Nordell provide technically-specific solutions. We offer a range of finishing operations which provide high-end, prestigious products to customers. Our range of services include fabric covering, along with hand finishing, potting and sealing, treating, painting and assembly.

Nordell's full time team of specialist technicians have many years of experience of finishing parts to your specific requirements and tolerances allowing us to provide you with a cost effective and simplified solution to your main build.

Specialist Technical Services

Nordell offer a full range of technical services to complement your requirements. From 'Design for Manufacture' and project management of the launch process through to automation and product testing. Our technical team will engage with you at the start of the process and work with you to deliver a solution that meets your needs.

Value Added Quality Service

Nordell offer a full range of value added services including product assembly, Component sourcing & contract operations, Ultrasonic Welding, Pad & Foil Printing and VMI, Kanban and DLF (Direct Line Feed). We will work with you to build a package that best meets your requirements and delivers you a simplified solution.

Pressure Die Casting

Nordell offer alloy Die Casting through our partner in Asia.

Nordell Xiamen can complement your plastics requirements or as a standalone service. If your project requires a combination of plastic injection moulded parts and alloy castings and you want a simplified supply chain, why not drop us a line to find out how Nordell can help you.

Pressure die casting provides the fastest and most competitive method from molten metal to completed component compared to other forms of die castings. By injecting molten metal into a hardened steel mould we can manufacture a high quality casting with an excellent surface finish, ensuring a consistency beyond any other casting process.

The casting process is quick and very repeatable, and in simple terms is performed by the die casting mould being sprayed with lubricant and closed. The lubricant both helps control the temperature of the die and it also assists in the removal of the casting. Molten metal is then shot into the die under high pressure; once the die is filled the pressure is maintained until the casting has solidified. The die is then opened and the casting are ejected from the die.

In many cases alloy castings can be replaced and manufactured using lighter weight specialist plastics giving the same performance. Our specialist technical team are happy to discuss the most suitable options for your project.

Seals & Gaskets

A gasket is a mechanical seal which fills the space between two or more mating surfaces.

Gaskets are generally used to prevent leakage from or into the joined objects while under compression. Gaskets allow for “less-than-perfect” mating surfaces on machine parts where they can fill irregularities. It is usually desirable that the gasket be made from a material that is to some degree yielding such that it is able to deform and tightly fill the space it is designed for, including any slight irregularities. Some types of gaskets require a sealant be applied directly to the gasket surface to function properly.

Nordell manufacture Seals and Gaskets including MIP (Moulded In Place), in moulding and over moulding, compression moulding, transfer moulding and profile cut to your bespoke design. The over moulding process means we can seal the materials onto a carrier moulding by injection moulding.

Nordell manufacture injection moulded gaskets at our Worthing and Xiamen sites. All other types of seals are manufactured or sourced from our Xiamen site. Speak to our team of experts who will be able to recommend the right seal/gasket and material choice for your specific product, sector specifications and usage requirements.

Our Seals and Gaskets service can save you time and reduce cost when coupled with our in-house assembly operation where we can insert your gasket as well as offering part or full assembly of your product.

Cable Assembly

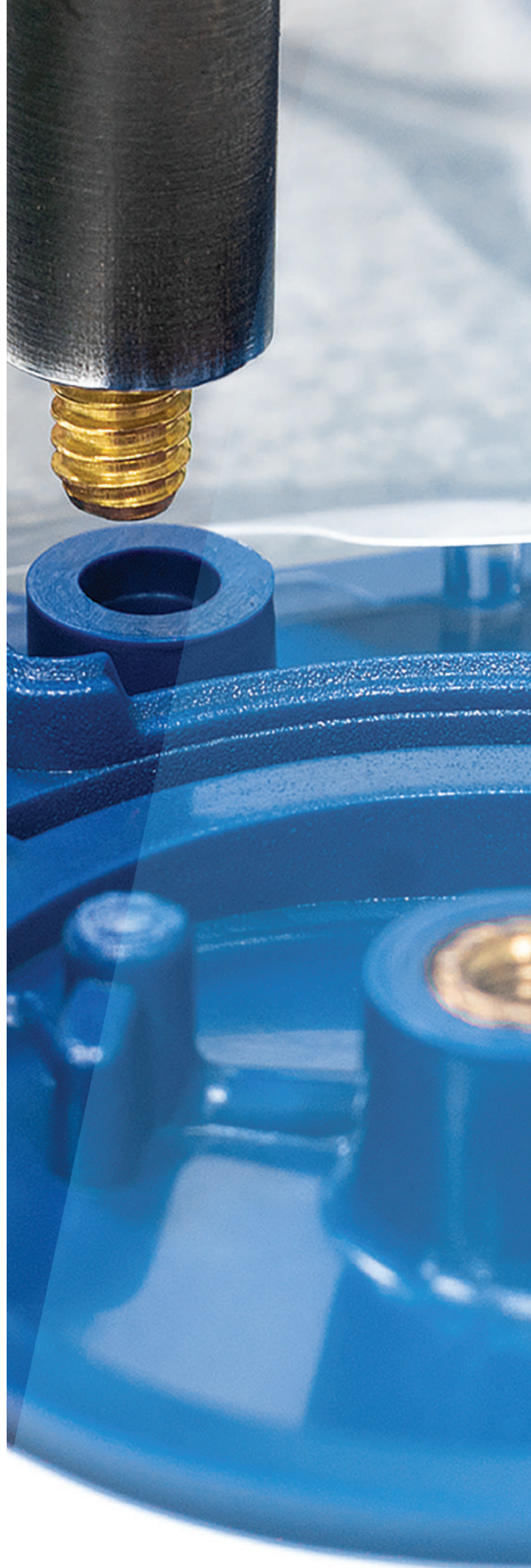
Nordell's UK factory provides Electrical cable preparation, cable assembly and cable overmoulding services. We supply our services to a number of market sectors including Industrial and Aviation.

We work to IPC620 Standards, an industry developed program for individuals and companies engaged in the manufacture, use and installation of cable and wire harness assemblies and are accredited to ISO9001.

Nordell are specialists in injection mouldings that incorporate sensitive PCBs and other electronic components where it is imperative that the heat, pressure and chemical processes involved in the moulding process are managed to eliminate potential damage.

Nordell have been overmoulding cables, components and connectors for many years and continue to invest in equipment to give us the capacity required for the growing demand.

The cable overmoulding process involves placing the cable assembly components within a mould then encasing them by overmoulding in plastic, protecting the connection of the underlying wires and connectors.



Production Part Approval Process (PPAP)

PPAP defines the approval process for new or revised parts, or parts produced from new or significantly revised production methods.

PPAP confirms that the production process has demonstrated the potential to produce products that consistently fulfil all requirements while operating at the customer demand rate.

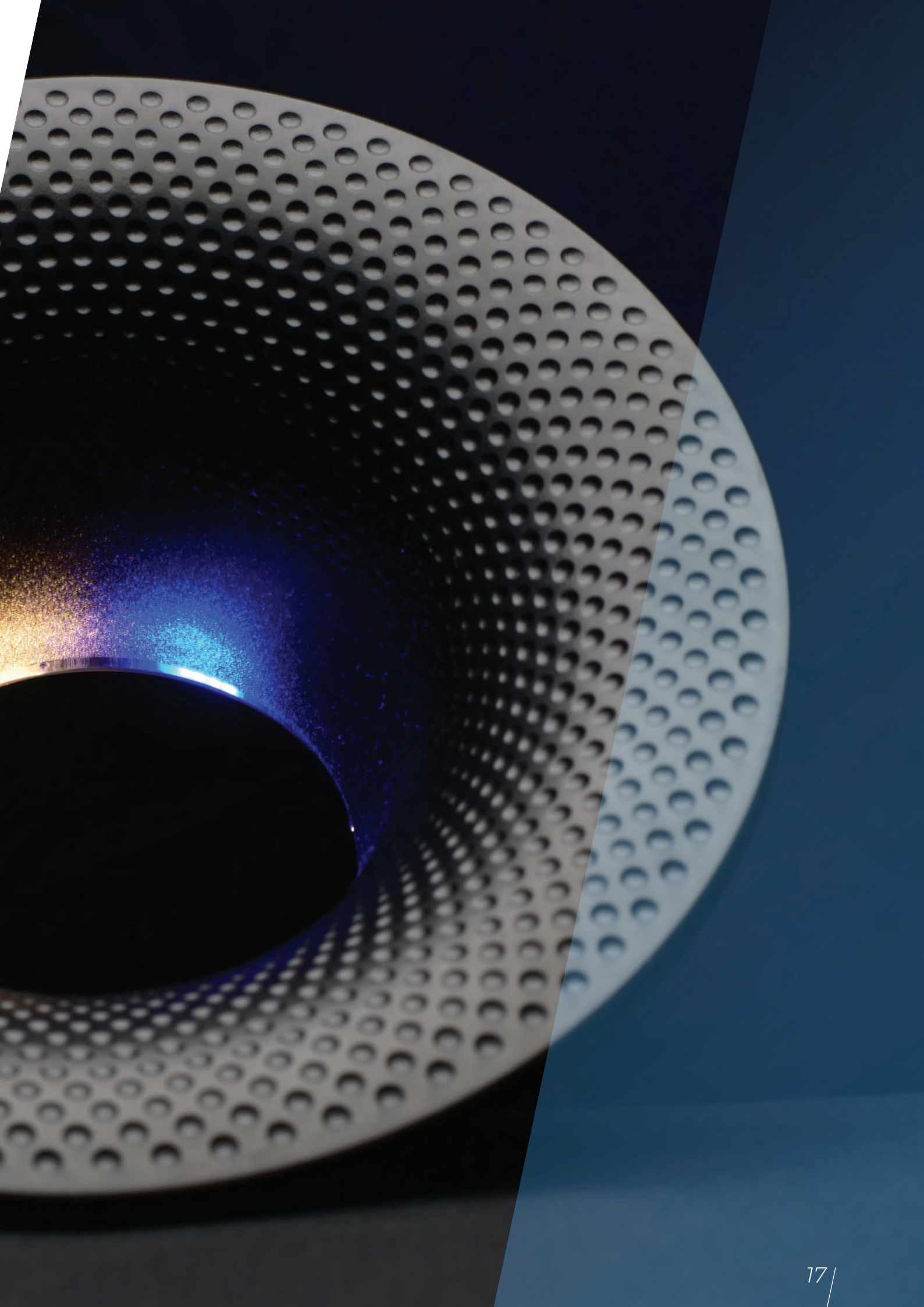
Production Part Approval Process (PPAP) is a standardized process commonly used in the automotive and aerospace industry, more recently being deployed into medical devices manufacturing, that helps manufacturers and suppliers communicate and approve production processes and designs.

Requirements for PPAP Submission, Review and Approval are flowed down from our customers based on:

- Risk
- Complexity
- Contract terms
- Past quality performance, including past history of similar product

Depending on the level of complexity determined by our customers, Nordell can provide the best fit for your business; from Level 1 that involves the least amount of documentation up to a full Level 5 package.

Nordell have developed our management systems to the most strict standards in order to adapt our deliverables for any type or industry or requirements.



Metrology – Measuring Excellence

Metrology can be defined as the science of measurement and its applications. It is an objective means of evaluation of the quality of a product.

Metrology includes all of the theoretical and practical aspects of measurement, no matter what the uncertainty of measurement and the area of application.

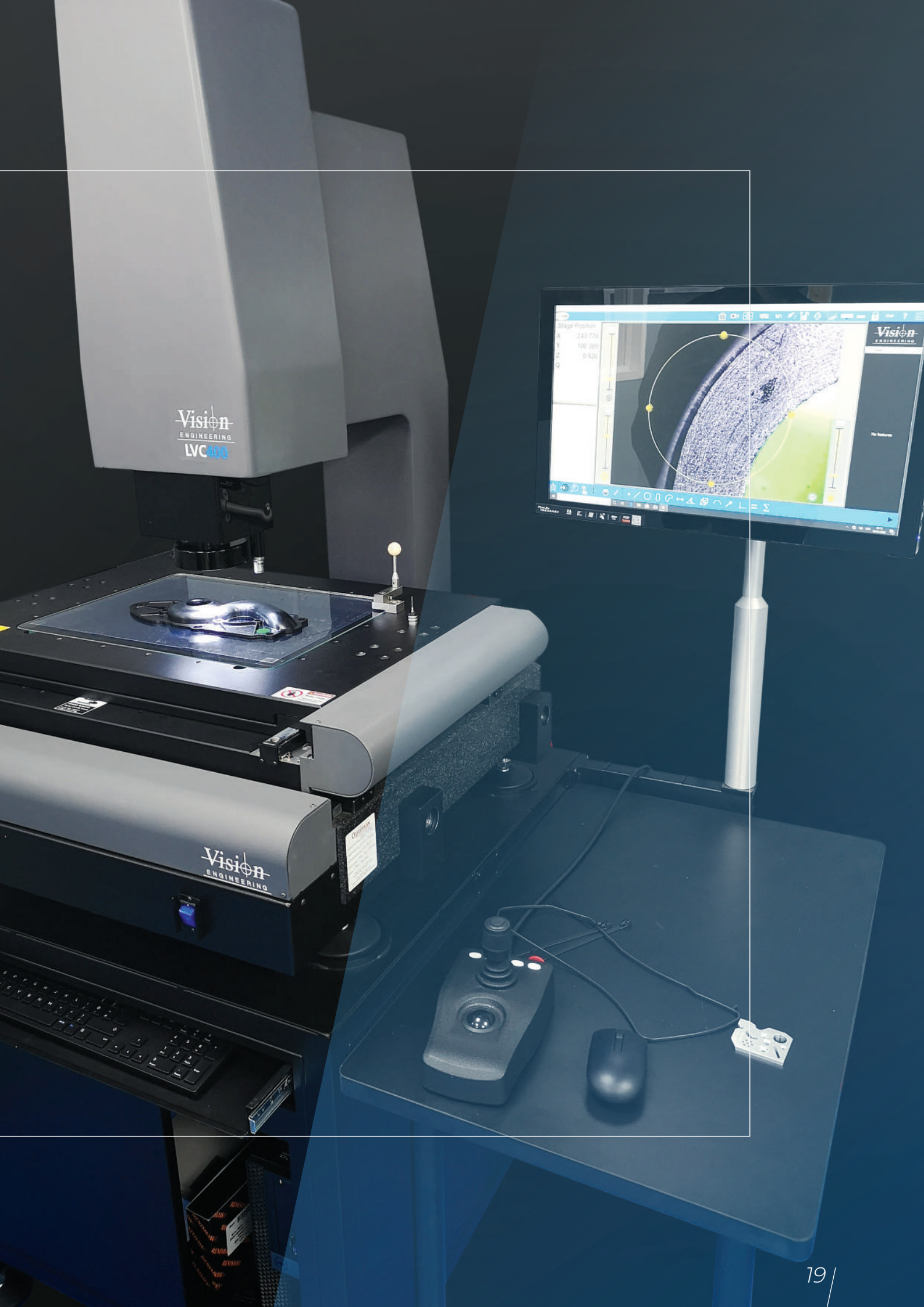
Nordell's Vision Measuring (VMM) and Co-Ordinate measuring (CMM) machines allow us to check exact measurements on some of the most complex parts ensuring we always manufacture parts to your specification. Nordell archive real time data to provide us performance data over time.

VMM is a non-contact type of measuring machine which uses Optics as the source of inspection and provides measurements to an accuracy of 1 micron. Typically, small light weight components with high accuracy are the best applications for such devices.

The Nordell VMM gives us Statistical Process Control. Statistical Process Control (SPC)

is an industry-standard methodology for measuring and controlling quality during the manufacturing process. Quality data in the form of Product or Process measurements are obtained in real-time during manufacturing.

The Nordell Coordinate measuring machine (CMM) is a device that measures the geometry of physical objects by sensing discrete points on the surface of the object with a probe. Various types of probes are used in CMMs, including mechanical, optical, laser, and white light. Depending on the machine, the probe position may be manually controlled by an operator or it may be computer controlled. CMMs typically specify a probe's position in terms of its displacement from a reference position in a three-dimensional Cartesian coordinate system. Like our VMM, the CMM provides measurements to 1 micron accuracy and is typically used on larger parts.





Environmentally Conscious

Nordell is ISO14001 accredited and totally committed to manufacturing to protocols which reduce our environmental impact through an effective environmental management system. We promote sustainable and low impact solutions for our customers consideration. Injection moulding is an efficient, low impact, additive manufacturing process, where we only use the volume of raw material required to make the part.

Some of the initiatives to reduce our impact on the environment include:

- **Getting it Right first time** through process mapping and training ensures costs are controlled, waste is kept to a minimum and production planning is not compromised. "We do what we say we do and we do it well"
- **Switching to Electric moulding machines:** All electric are more sustainable and have less of an impact on the environment than hydraulic injection moulding machines. All Electric moulding machines have consumption figures up to 70% lower than the equivalent hydraulic machine.
- 800 **Solar Panels** installed across our 4 manufacturing units generate 270KW of energy accelerating our journey towards a more sustainable future! Solar energy provides around 30% of our energy requirements with a further 42,000KWH of excess exported onto the National Grid when our energy production exceeds our demand.
- **Recycling and Reusing** materials where we can. All materials that we cannot reuse internally are collected by a commercial plastic recycler for reuse elsewhere.
- **LED Lighting** is installed throughout the factory and offices. PIR sensors have been added to all lighting and in some areas, lighting switched off completely.
- **Timers** added to key equipment such as material dryers and heaters.
- We will meet or exceed all legal and environmental legislation.
- Our raw material suppliers are independently audited to ensure their production processes meet or exceed industry standards and do not impact the environment.
- We employ LEAN methodology and Continuous Improvement practices to reduce waste and energy usage.
- We have clear QMS processes and recycle where possible.
- We include environmental goals in our Business plans.
- We train our employees and ensure they are regularly updated on our environmental policy and goals.
- We will implement the Nordell **ENVIRONMENTAL GOOD SENSE** guided by our Core Values of Creativity, Pride, Achievement, Support, Strength, Respect & Trust.

Nordell's commitment to the environment is part of our **Environmental S.E.N.S.E** policy which ensures all the Nordell team work to achieve a minimum environmental standard:

Bio Plastics

Nordell remain at the forefront of new raw material developments, working with leading manufacturers to trial and develop new "Green" Bio-plastic solutions. Although at this stage Bio-Plastics may not be suitable for all applications, our Technical team can assist you in finding the best solution to meet the performance needs of your product. Speak to us now, so that we can advise you of our Bio-Plastics solutions.



Meet the Team

Our team is paramount to our and your success.

Our greatest strength is our team, with great people we have built a great company and we work to be brilliant and we train to be better. We recruit and develop highly motivated and competent

people. Our team is our most valuable resource. We challenge ourselves and support each other to be our very best, with total commitment to exceeding our customers demands.



Paul Mason

**Managing
Director**



Paul Rowe

**Technical
Director**



Andy Hodge

**Commercial
Director**



Emma Penn

General Manager



Stuart
Woolford

Head of Production



Mark Briggs

Head of Finance

Over 50 Years of
reinvention &
innovation has
enabled us to offer
a **world-class**
manufacturing
solution to our
UK and Global
customers.





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