



# Excellence in injection moulding – every day

## INJECTION MOULDING

As one of the UK's leading trade plastic injection moulders, our comprehensive range of injection moulding machines gives us the flexibility to fulfil the diverse scope of our customers' requirements. Processes we carry out include conventional injection moulding, over-moulding, insert moulding and cleanroom moulding.

We select and source high-quality materials from proven suppliers and have experience in processing most thermoplastics. We manufacture a huge variety of injection moulded parts, including housings, aesthetic parts, two-part mouldings, clear mouldings/lenses, internal technical parts and high-tolerance parts.

### Our machines

We have 30 injection moulding machines, ranging in size from 25 to 400 tonnes, giving us the flexibility we need to meet our customers' individual requirements. Most of our machines are manufactured by Arburg and Krauss Maffei. Our engineering team provides the expertise and capability needed to maintain the machines on a day-to-day basis, using a TPM programme to maximise machine utilisation and reliability.

### Automation and 'Lean' flow

We operate fully automated six-axis robot cells on our machines, undertaking added value operations, cutting labour costs and gaining advantages in cycle time and consistency. We use robots for a range of applications, including quality control, packing and assembly tasks.

Our factory layout is optimised to offer an exceptionally 'Lean' flow of materials, from receipt of raw materials to despatch of finished product. Our automated material handling system reduces raw material requirements to a minimum, and ensures complete separation of raw materials from the factory floor.

### Cleanroom moulding

Our factory is a clean environment suited to most plastic injection moulding procedures. However, for high-sensitivity moulded components, we provide cleanroom moulding operations within a Class 7/10,000 cleanroom. We undertake product and environmental bio-burden monitoring to guarantee achievement of rigorous quality standards. Our quality control systems are accredited to ISO9001 and ISO 13485.



Industrial moulding production area

## GENERAL, INDUSTRIAL & CLEANROOM ASSEMBLY

Our purpose-built moulding assembly areas are designed and laid out to provide the best possible material flow and are set up for standardised operations. We use MOST analysis to set standard times and monitor output, enabling us to deliver consistently high-quality plastic injection moulded assemblies for all applications, from medical mouldings to industrial components, at competitive rates.

Our general assembly area is well equipped with tools for carrying out many added-value assembly operations.

Our Class 7/10,000 cleanroom assembly area provides the ideal environment for production of high-sensitivity or plastic medical moulding assembly tasks.

### General Assembly

General assembly, by individuals and on production lines by teams

Hotplate welding, hot stake welding, hot air cold staking, screw-sert and heat-sert

Ultrasonic welding of plastic components and of filter materials to plastic components

Four-colour tampo printing, label printing and application

Manual assembly of components to build up sub-assemblies or finished assemblies

Inserting: triserts and heat staking

Pressure and vacuum testing of hermetic seals

Sterilisation, via trusted specialist subcontractors

Packing

### Cleanroom Assembly



Cleanroom assembly

Sonic welding

Bonding with adhesives

Printing

Packing



Example of a "high value add" completed assembly

## TOOLROOM EQUIPMENT AND CAPABILITY

Our in-house toolroom is equipped with the latest technology, and is staffed by experienced mould toolmakers who work closely alongside our design team. Our tooling manufacturing capabilities extend from soft prototype tools through simple single impression P20 steel tools, to fully hardened steel multi-cavity full hot runner tools. The toolroom also fabricates prototype and development mould tools and jigs, fixtures and gauges for production.

Our toolroom offers all the principal toolmaking capabilities of spark erosion, CNC machinery, wire erosion, grinding and turning. We have instant access to a highly-skilled resource that is able to offer a rapid response to any requirement, for example, tool modification or repair. Our tool maintenance programmes use service interval levels based either on frequency of production run or on number of shots made. Our tooling database tracks your tool through its life, recording all modifications, repairs and tool work carried out on it. This history provides valuable information for improvement in design if the component is re-tooled and to further our knowledge.

### Tooling design

Our engineers specify how each tool is manufactured, ensuring correct steel selection and feed location for optimised mould fill and best cooling and ejection methods. We use 3D CAD software to review your designs and assess their suitability for manufacture. Every mould tool design is signed off by a multidisciplinary team; all our expertise is used to vet it before it is manufactured and sampled. Our robust systems mean transparent reporting from the point of ordering and cover the design review process, tool specification, general approval, sampling and modification stages, right through to full part approval.

The experience of our toolmakers adds huge value to our design consultancy and tooling development function, as tooling staff work closely alongside our design team to contribute from a tool-making perspective.

## PRODUCT DESIGN AND DEVELOPMENT

Do you have a product concept you would like to develop further? We can work with you to project manage your plastic injection moulded product from concept to completion, using our expertise to deliver a robust design solution for you.

### Concept to completion

Our in-house Tooling and Design, Engineering and Quality departments provide the complete injection moulding solution for new product development and production. From concept or initial design we can help manage your product through prototyping and testing into launch and on to manufacturing. If required, two vital archives, a Design History Record and a Device Master Record can be generated during this process.

### Design for Manufacture

Early involvement in your project allows us to optimise the design to eliminate waste in the manufacturing process and build effective automation downstream of the moulding machine where assembly, added value or packing operations are needed. This meticulous approach ensures that we achieve a high-quality end product that is manufactured in the most cost-effective way possible.



Complex high-precision multi-cavity tooling for the medical sector. Each cavity is individually temperature controlled. This tool runs in a 350-tonne injection moulding machine.



Our tool room – capable of producing and servicing complex mould tools



Examples of completed medical devices moulded and assembled in our cleanroom

## IT IS THE MISSION OF THIS COMPANY

to provide nothing less than excellence in service, quality, technical support and consultancy in the supply of technical plastic injection moulded components and assemblies for OEMs in Medical, Electronic and other similarly demanding sectors.



Paul Wightman, Managing Director

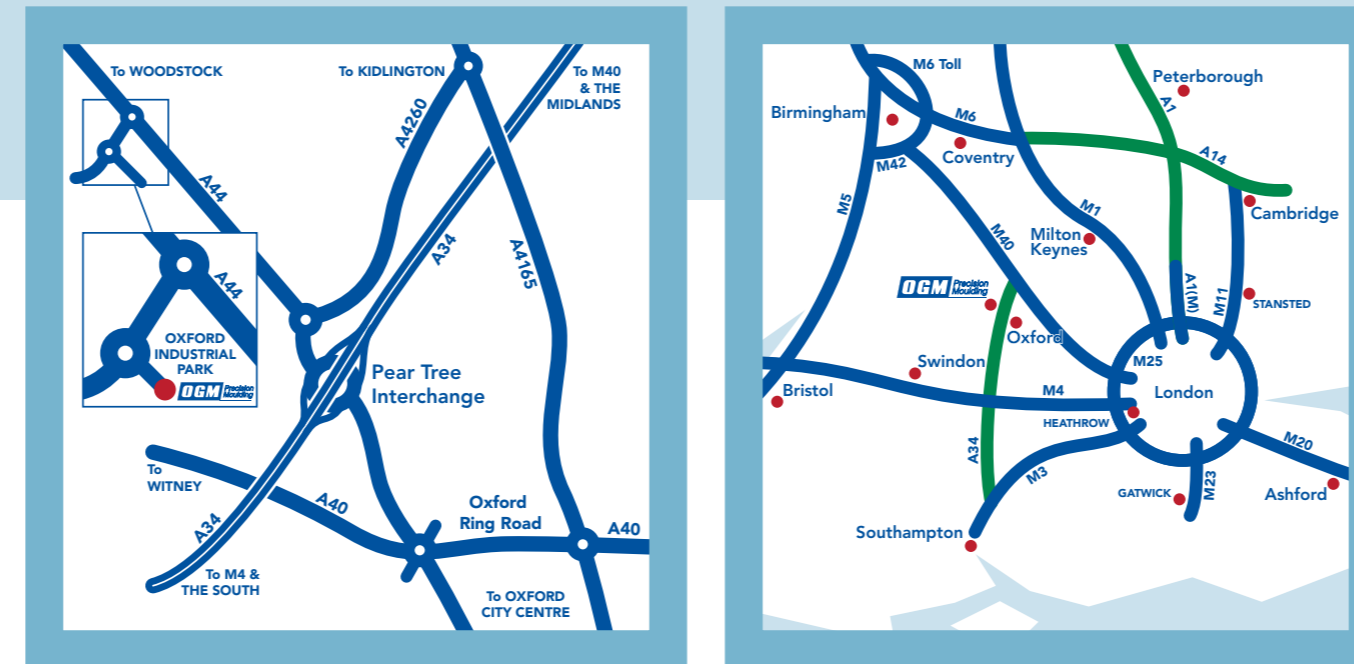
## QUALITY AND INNOVATION

A focus on quality and innovation is at the heart of everything we do, and our quality and environmental management system is accredited to ISO 9001, ISO 13485 and ISO 14001.

Manufacturing Environments	In-house Metrology Capability
General assembly, by individuals and on production lines by teams	Contact and non-contact CMMs (Co-ordinate measuring machines)
GMP (Good Manufacturing Process) Areas	Optical measuring equipment
Qualification Plans for medical products	Product quality planning
Design for manufacture	FMEA (Failure Mode and Effect Analysis) risk assessment
Mould tool design	Control plans
Tool Trial / Optimisation	Process Optimisation
Initial Sample Inspection Report	PPAP (Production Planning Approval Process) / ISIR (Initial InSpection Report)
Installation Qualification	Measurement System Analysis / Gauge Repeatability and Reproducibility
Operational Qualification	Capability Studies
Performance Qualification	Process Performance Charts
Final Compliance Report	

## HOW TO FIND US

OGM is located just north of Oxford, very close to major transport links, ensuring quick and easy accessibility to all parts of the UK and Europe.



[www.ogm.uk.com](http://www.ogm.uk.com)

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SCAN TO VISIT OUR WEB SITE

