

## Job description

<b>Job title:</b>	<b>Mechanical Design Engineer</b>	<b>Department:</b>	<b>Operations</b>
<b>Location:</b>	<b>London</b>	<b>Type:</b>	<b>Permanent</b>
<b>Reporting to:</b>	<b>Engineering Manager</b>		

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You will be excited about joining a rapidly growing, global company with market leading products, developing solutions to challenging engineering and manufacturing issues. Your role will be an essential part in the development of new and existing products that delight our customers and help this energetic company meet its challenging growth targets.

### **Purpose of the job**

To engineer the products to meet performance, testability and manufacturability requirements. This will include ensuring that all manufacturing and engineering issues are considered and innovative solutions found at every stage of the development process.

You will be part of an engineering team providing all parts of the business with advice on topics associated with our products engineering and manufacturing. You will be the go to engineer for structural and strength analysis of components using Finite Element Analysis (FEA) and optimising designs to ensure they are cost effective. You will have a comprehensive knowledge of engineering principles and manufacturing processes and stay up to date with any developments in these areas.

During the transition from Concept to Manufacturing you will be responsible for producing manufacturing drawings and ensuring that the critical to quality specifications are identified appropriately. You will then take development parts and ensure that they are manufactured to required specifications and the final product meets the market needs.

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### **Specific activities to include (but not an exhaustive list):**

To take ownership of the products and ensure engineering involvement from concept through to products in-stock.

This role will include but not be limited to;

- The design of ergonomic solutions for interaction with technology, including theoretical mathematical evaluations of design and relevant issue resolution, writing specifications, innovative mechanical design, sourcing hardware, testing and report writing
- Optimising designs of components and assemblies through FEA to ensure they are structurally sound and cost effective

- Ensuring engineering support is given to products in transition from prototyping through to production, working closely with our manufacturing systems team to ensure the best manufacturing solutions are instigated
- Work closely with our global design team, ensuring timely and thorough responses to queries and the continual development of our capabilities
- Maintaining the integrity of new and existing products in terms of performance, specifications, and quality
- Create solid models, assemblies and detailed drawings for the manufacture of components and assemblies by subcontractors
- Clearly communicating relevant information and ideas to all parts of the business, partners and customers as required
- Support and maintain quality protocols
- Undertake Value Engineering (VE) activities to ensure that the most effective cost reduction and or performance enhancements are achieved
- Confidently carry-out and analyse calculations of tolerance stacks, GDT systems and have a good understanding of manufacturing tolerances
- Developing parts and products to meet the appropriate International Ergonomic and Safety Standards, and the Company's internal performance and environmental requirements
- Contribute to the development process demonstrating ideas through discussion or practical media
- Ensure that all documentation is prepared and supplied with all drawing changes in accordance with the Engineering Change Notice (ECN) procedure
- Building relationships with all the Operational and Design teams to continually refine and improve the process of reducing time-to-market opportunities

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**Competencies:**

- HNC in Mechanical Engineering and/or a bachelor's degree in a Mechanical Engineering or similar discipline
- 2-3 years minimal experience in new product development or manufacturing environment
- Proficient use of CAD packages (preferably Solidworks); 3D modelling, 2D technical drawings and rapid prototyping

- Comprehensive knowledge of FEA and using ANSYS and/or Solidworks Simulations
- Experience of Design for Manufacture and Assembly with background in production
- Strong theoretical engineering ability, able to generate mathematical solutions to difficult engineering issues
- Strong team working ethics with the ability to work individually when required
- Requires good listening, strong written and verbal communication skills and the ability to explain technical matters to non-technical audiences
- Must have initiative, self-motivation and the confidence to make decisions
- Must be diligent in work, paying special attention to detail
- Proficient in MS Excel and Word

**Preferred (Key Knowledge, Skills & Abilities):**

- Good knowledge and experience of plastic injection moulding or Aluminium die casting techniques. Ideally have proven experience seeing component parts through design and development to mass manufacture
  - Able to identify and mitigate risk through problem solving via modelling, proof of concept, simulation etc
  - A practical mechanical experience including bench fitting, prototype assembly and modification
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