



JOB DESCRIPTION

Job title	Senior Design Engineer
Department	Design and Development
Responsible to	Head of Product Development
Salary	Competitive
Hours	40 hours per week

About the Company

Our mission is to transform the way people live in cities. With over 16 million possible combinations of gears, colours, handlebars and accessories, we make more than just a bicycle, and we are more than just a bicycle company.

We continue to make the Brompton in West London, where we started in 1975, but our product has travelled far - we now export 80% of our bicycles to 44 countries. In the past 36 months we have invested in a new purpose-built production facility, transformed our digital architecture, opened new flagship stores and had our biggest product launch in company history and we're not stopping there...

To change urban living, we need passionate, innovative and talented people that want to challenge the status quo and make an impact.

The role

The Brompton is the iconic product of its type, a unique bike used and loved in over forty countries around the world. Sales have grown rapidly over the last ten years, making us the largest bicycle manufacturer in the UK, with our products still designed and made by hand right here in London. Despite this we feel like we're just getting started and there is huge potential to make the bike lighter, more capable and more fun to use.

As a design team we are passionate about making the best bike we can and approach this in an unusual way; we design all our own components, so they are exactly what we want and need them to be. Brakes, gears, tyres, luggage, frame parts and almost everything else. Brompton is created by us from nose-to-tail. Each project is therefore different; in some you'll be designing a part for minimum weight and high stiffness, other projects will emphasise ergonomics, or making Brompton intuitive to use.

The Person

We are seeking a passionate and imaginative designer with industry experience in product development and manufacture to join our team to create and manage new products. You will work within the team on all stages of design from research and conception through to manufacture here in London.

The ideal candidate will help to drive Brompton's ambition to innovate sustainable transport solutions

through ingenious product design. Ensuring their engineering experience and knowledge helps to make advances in our product ranges that are of real value to our customers.

Main responsibilities

- Lead the generation of new concepts from project briefs.
- Create and manage project specifications, working with the broader Brompton team to ensure that these are robust, ambitious and deliverable.
- Conduct research and drive design direction on relevant project areas covering:
 - Bicycle ergonomics.
 - Anthropometric considerations.
 - Current and future industry trends and technology.
 - Target creation and setting of project relevant performance criteria.
 - Technical aspects of mechanical principles involved, including frame strength and stiffness.
 - Appropriate manufacturing methods based on Brompton capabilities and state of the art methods.
- Design leadership, liaising with key Brompton teams outside of design and engineering. Therefore, ensuring effective and efficient cross team decisions with:
 - The purchasing team, to ensure design concepts meet the financial targets set out for the projects
 - Production engineering, to ensure designs are efficient for manufacture and meet the capabilities of our suppliers and the internal production team.
 - Quality, to help generate inspection plans in line with the critical design requirements.
 - Marketing and sales, to ensure they are informed and consulted on the designs as they develop.
- Design management with third party suppliers. Ensuring Brompton values are delivered, communicated and design intentions are realised and manufacturable.
- Present and evolve new ideas through sketches, hand-made prototypes and CAD visualisation for review and selection by the senior management team.
- Define and manage project deliverables to deadlines.
- Carry out detailed mechanical design including.
 - 3D CAD modelling using Solidworks.
 - 2D critical dimension drawings.
 - Simulation (Finite element Analysis) where appropriate for validation.
 - 3D prototyping (using internal and external resources).
- Follow design verification plans to physically validate concepts and designs in line with internal test procedures and industry standard requirements.
- Agree the mechanical, aesthetic and ergonomic approach with the design lead and senior designers within the team.
- Creation and management of bills of materials to document proposed product changes.

Skills and Requirements

- Experience of project ownership from concept through to mass production and beyond.
- You will be able to demonstrate experience of designing and evolving concepts to manufacturable levels.
- Proven record of successful management of projects from pitching the business case and ensuring financial viability through to implementation.
- Portfolio demonstrating experience in product and mechanism design.

- Experience in a similar role ideally within automotive, aerospace or consumer product development.
- Experienced in FMEA process, contributing and facilitating.
- Experienced with 3D CAD software (preferably SolidWorks) and will be able to demonstrate modelling, assembly and engineering drawing to a high standard.
- Tolerance stacking experience of detailed assemblies and part designs.
- Experience of FEA is an advantage.
- Understanding of designing for electrical component integration desirable.
- Proven ability to produce and manage designs to specified lead times and costs.
- You will be able to work independently, directing your own research and learning when needed but you will be supported and inspired by others, so a social friendly outlook is required.
- We desire someone who is genuinely passionate about product design and the cycling industry and able to take satisfaction from seeing your efforts make a visible contribution to the ongoing success of Brompton Bicycle Ltd.
- Exposure to and experience of relevant manufacturing techniques is an advantage:
 - CNC
 - Injection moulding
 - Die casting
 - Forging
 - Fabrication
 - Welding and brazing
 - Paint and coating application
 - Surface treatment
 - Heat treatment
 - Spring specification

Education

Master's or Bachelor's degree in mechanical or product design engineering.

A minimum of 7 years of relevant industry experience.

A keen interest in cycling is highly desirable for this role.

Benefits

Brompton offers you a very excellent working environment with enthusiastic colleagues who get along very well, communicate and cooperate with each other. The working climate is informal, but we work hard. Next to good terms of employment Brompton offers you the opportunity to work in a responsible and challenging job within a dynamic, international and ambitious environment. We are all proud to be part of Brompton Bicycle; we all share the same passion and dedication to the company and embrace differences in cultural backgrounds and skills.

- Huge discount on your very own Brompton (family and friends get discount too)
- Position to thrive. Whether you're early in your career or an experienced professional, Brompton provides you with everything you need to excel in your job and for personal growth. You will be actively encouraged to increase your skillset and to attend relevant events
- 20 days holiday plus Bank Holidays, increasing the longer you stay with us
- Workplace Pension Scheme, Season Ticket Loan, Flexible Working, Cycle to Work Scheme to name just a few.....
- Birthday Breakfast, Family Fun Days, Christmas Parties, London to Brighton Bike Rides, Charity Raffles, Volunteering with the local community all go towards creating a working environment that is fun and enriching

If you feel that you fit within the Brompton team spirit and you can bring talent, innovation and enthusiasm to our workforce then please email your CV and covering letter to the People team, at

Applicants must have the right to work in the United Kingdom.

The Company reserves the right to vary or amend the duties and responsibilities of the post holder at any time according to the needs of the Company's business.

The statements contained in this job description reflect general details as necessary to describe the principal functions of this job, the level of knowledge and skill typically required and the scope of responsibility. It should not be considered an all-inclusive listing of work requirements. Individuals may perform other duties as assigned, including work in other functional areas to cover absences of relief, to equalize peak work periods or otherwise to balance the workload.