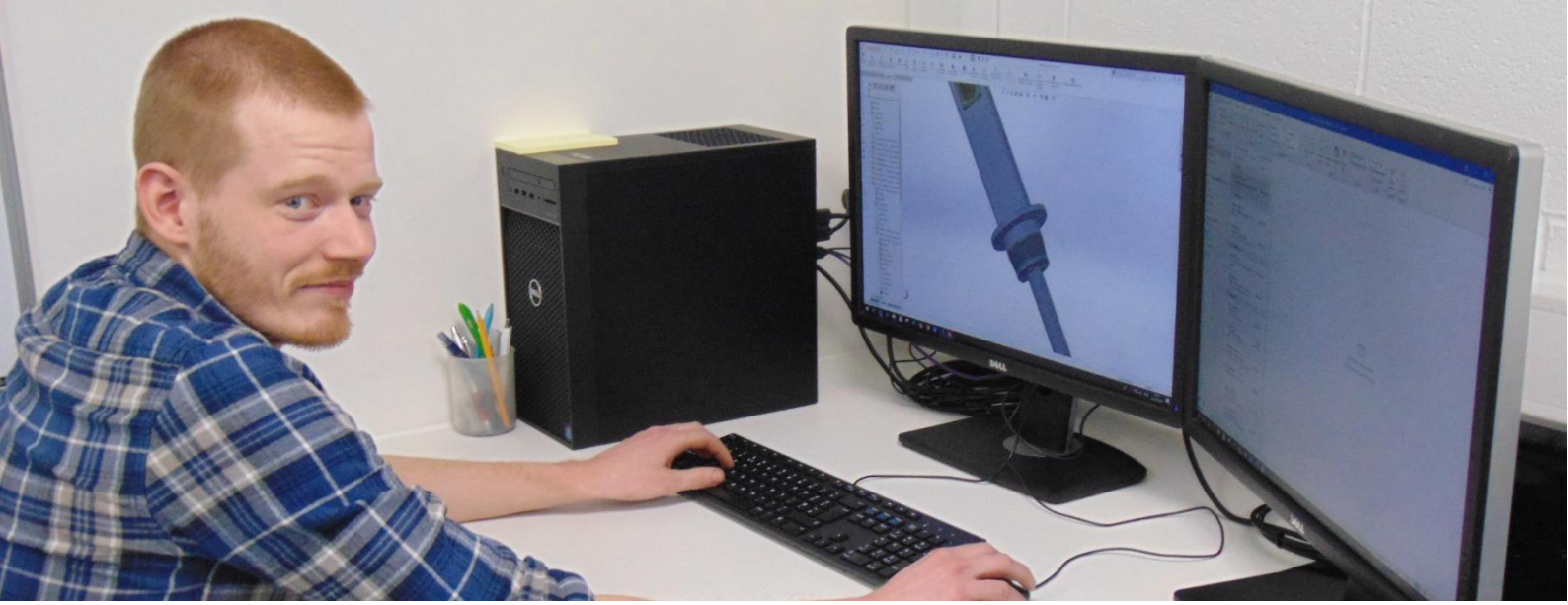

#TeamTalks: David Bestford

David is a mechanical design engineer here at Clavis, which sees him taking projects from initial concept stages through to detailed design, prototyping and production runs.

David's varied role sees him working with various teams across the business, supporting project work and new product development.

Collaborating with others

Co-ordinating with different members off staff, including: electrical engineers to ensure all the required electrical components fit in the final part and guarantee ease of wiring; machinists to ensure parts can be physically manufactured easily and on spec.; and working alongside manufacturing staff, providing drawings and part knowledge as well as assembling products – both prototypes and supplied equipment.

It's a real team effort at Clavis and as well as ordering material, tooling and other items for the machine shop where required, David fills in on machines if people are away, expertly machining components for both prototypes and final products.

David has not only contributed to the expertise of the team, but has learned a lot from everyone too – from machine setups in manufacturing to electronics components and wiring, it's the team ethic and culture of continuous improvement that enables each team member to cover new ground and overcome obstacles along the way.

Optimising results

David covers multiple projects at any one time and focuses on the mechanical product development as well as overseeing and aiding the production of protypes on most mechanical products which go through the company. He is instrumental in testing production equipment at both the prototype stage and the production level equipment for fitment and operation before it leaves ready for the customer, in particular hand brake setting equipment.

A typical day could see David testing tool fitments and making required improvements to ensure the best end result. Utilising an array of technical software and hardware ranging from CAD and designing in SolidWorks to virtually designing parts and assemblies ensuring final parts fit together and everything works; David's mechanical design engineer role touches on many aspects of the business' product and service development.

2019 highlights

Reflecting on the last year, a highlight of 2019 for David was carrying out the design and manufacture of the North American 5 tonne transit brake setting equipment. This involved a drum and hat rear brake which required a new style of tool due to fitment constraints. This was the first full new design of hand brake setting equipment at Clavis that David had got involved with and he relished carrying out the design work from initial concept through to completion in 2019. The inclusion of a force multiplier within the handbrake cabling system required us to adapt our standard process and tooling to accommodate this extra complexity. Our Handbrake systems do not only set the final brake position, but also perform a high-tension pre-setting bedding/stretch process which is known within the field as scragging.

Surrounded by innovation

As a small company with worldwide clients, it was the talent and growth potential that attracted David to work at Clavis.

Working in an innovative environment with a close eye on the fast-paced sectors the company services, there is always something new to work on and a constant new challenge/learning curve to overcome. Clavis manufactures an array of products from hand brake setting equipment to belt tension and now diversifying in to laser alignment systems.

With new research projects plus enhanced systems and processes, there are always opportunities to get involved in new projects and product development. For example, 2020 will see further development of a new pulley alignment service tool which uses lasers to ensure the centre lines of pulleys are aligned correctly. This alongside numerous other new product developments will keep David and the team busy.