

A cut above the rest:

The western world's oldest scissor manufacturer develops sharp new generation of blades after teaming up with AMRC.



William Whiteley & Sons (Sheffield) Ltd, the family owned scissor manufacturer which has been in operation in Sheffield since 1760, has recently teamed up with the AMRC's Design and Prototyping Group (DPG) to create an innovative new state-of-the-art design for their hand-crafted EXO range of scissors.

William Whiteley's, the oldest documented scissor and shear manufacturer in the western world, are world-renown producers of professional and industrial hand-made scissors.

After attending the Advanced Manufacturing Show in Birmingham in 2015, scissor-smiths and company directors Jeremy and Sally Ward (née Whiteley) envisaged a new way to manufacture their scissors, but found to make the improvements was proving cost and labour intensive.

"Due to being a small family-run company, we don't have our own in-house design team. The directors have

therefore designed many new products over the years, often with input from our skilled craftsmen," said Jeremy.

"We approached the world-renowned AMRC, which is on our doorstep here in Sheffield, and with the help of their engineers we were able to develop our ideas and sketches into professional computer aided designs (CAD) ready for production."

The company had ambitious plans to transfer the method of manufacture for their EXO scissors to an investment-casting route, which would give them the required surface finish for their new product.



“The assistance of the AMRC has been vital to help us realise the perfect design and ergonomics of the new scissors.” **Jeremy Ward**, director, William Whiteley & Sons.

AMRC Project Engineer Mike Locking said that for a small company to invest in untested designs and new production tooling, it can be an expensive risk: “Utilising the skills and capabilities we offer ensures designs can be effectively proved out before investing in the equipment needed to upgrade a manufacturing process, minimising the risk.

“We worked with scan data of the traditional scissors to produce detailed CAD and graphical renderings of the new design and use rapid prototyping technology to prove out the designs before the company invested in expensive new tooling.”

Jeremy said: “The assistance of the AMRC has been vital to help us realise the perfect design and ergonomics of the new scissors. They produced 3D printed production-quality prototypes of the handles and blades for us to test. Their input was critical for helping us mitigate the risk of launching a new product.”

The company is now celebrating after exceeding an initial target of raising £54,000 through crowdfunding to allow production of this new generation of scissors which are due to start shipping in May 2018.

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