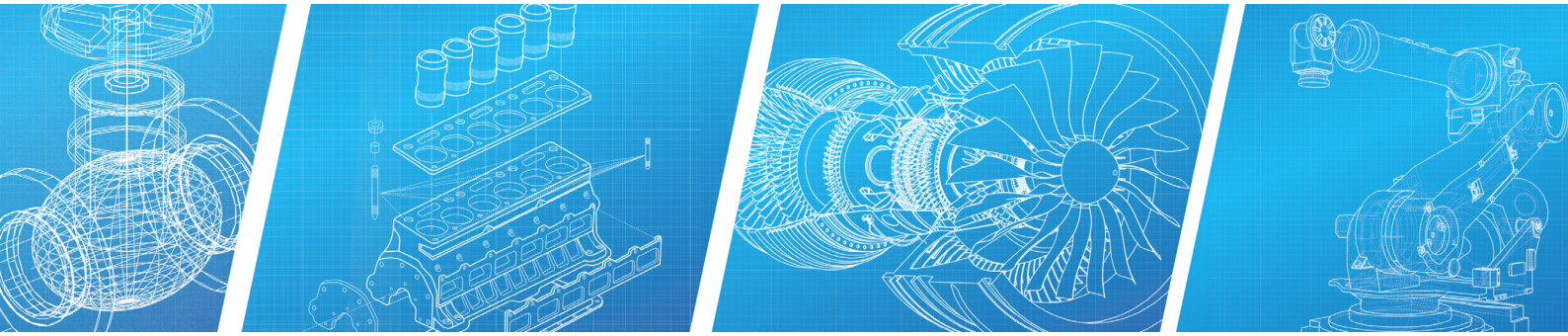
Bowers Group Case Study

Bowers Group Manufacturing



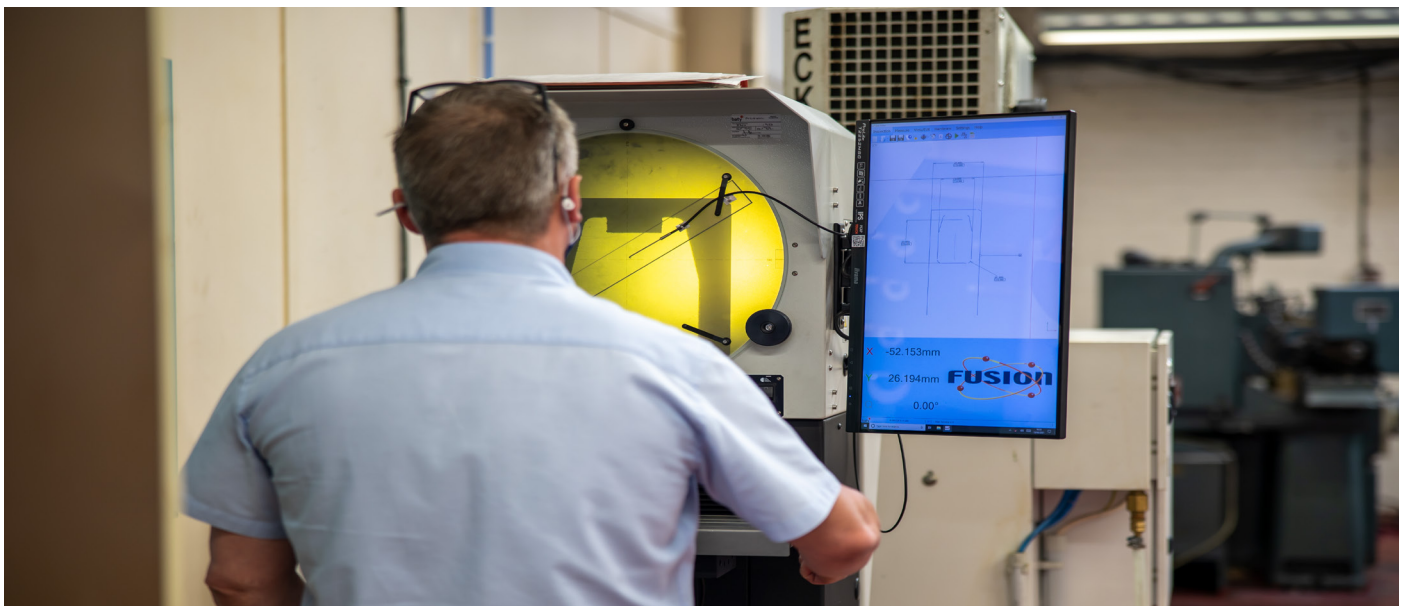
Company Name	Bowers Group	**Industry**	Precision Measurement
Location	Bradford, UK	**Product**	Baty R400 Profile Projector and Fusion Software

APPLICATION BACKGROUND

As a leading supplier of quality metrology instruments to organisations throughout the world, Bowers Group is a respected global leader in the field of measurement. Providing a wide choice of cost effective, quality measuring instruments, including its own range of high-quality gauges, Bowers Group also offers UK customers products from many preeminent metrology companies such as Trimos, Sylvac, Gagemaker and Wyler.

THE CHALLENGE

Bowers Group manufactures its world-famous bore gauges at a dedicated manufacturing facility in Bradford, West Yorkshire. As a global leader in bore gauge manufacture, Bowers Group's range includes both analogue and digital bore gauges, as well as Bowers' market-leading XT3 Digital Pistol Grip Bore Gauges. It also offers a range of both standard and bespoke measurement solutions for a variety of gauging applications, and the extended mechanical travel of the XT range means that special heads can also be manufactured to accommodate even the most awkward measuring problems.



Measuring heads for threads, grooves, splines, sphericals, and deep holes are manufactured by the Application Gauging team at Bowers Group, in addition to completely bespoke custom gauges to solve complex measurement problems for a variety of applications.

These application heads can be fitted directly onto the XT range of internal micrometers to create a flexible, modular measuring system.

During the manufacture of Bowers bore gauges and measuring heads, parts must be measured to ensure the highest levels of accuracy and quality.

THE SOLUTION

Bowers Group ensures the accuracy of its world-famous bore gauges using a Baty R400 Profile Projector and Fusion Software. This bench mount profile projector combines high-accuracy, non-contact measurement and inspection with a large 300mm x 150mm measuring range. The bench mounted profile projector boasts a long list of standard features, such as a 400mm screen with 90° cross-lines, chart clips and digital angle measurement with a resolution of 1-minute of arc.

Optimum profile illumination is delivered by an efficient lamp with a green filter with surface illumination achieved via high intensity fibre optics. The R400's sturdy work-stage features two machined T-slots to allow even the most awkward or fragile workpieces to be held securely throughout a measuring routine. To facilitate accurate thread form projection, the R400 also allows for a helix adjustment of the light source.

Anvils are ground at Bowers Group's manufacturing facility in Bradford, with measurements checked on the Baty profile projector to ensure accuracy and quality. The radius is measured, as well as angles and lengths to ensure accuracy to 3 decimal places.

Acquired by Bowers Group in 2010, Baty offers a range of metrology instruments from hand tools to vision systems. The Baty 'Shadograph' series has become an industry standard in profile projectors, with products still manufactured in Sussex, England.

COMMENT

Pav Maan, Application Gauging Supervisor at Bowers Group said: "We use the Baty R400 Profile Projector and the accompanying Fusion Software to check the quality of our manufactured products on a daily basis, including our 3- or 2-point anvil heads.

The Baty R400 Profile Projector produces a focussed, sharp image, allowing us to measure the shape and form of anvils, as well as using the software's sophisticated graphical reporting to create dimensioned drawings. Dimensions within the specified tolerance are shown on the screen in green, whilst any dimensions out of tolerance are shown in red. That means we have an immediate visual status of the measured part.

Accuracy is very important to us here at Bowers Group. The Baty R400 makes measurement easy and saves a huge amount of time and effort by offering accurate, repeatable, and fast measurements."