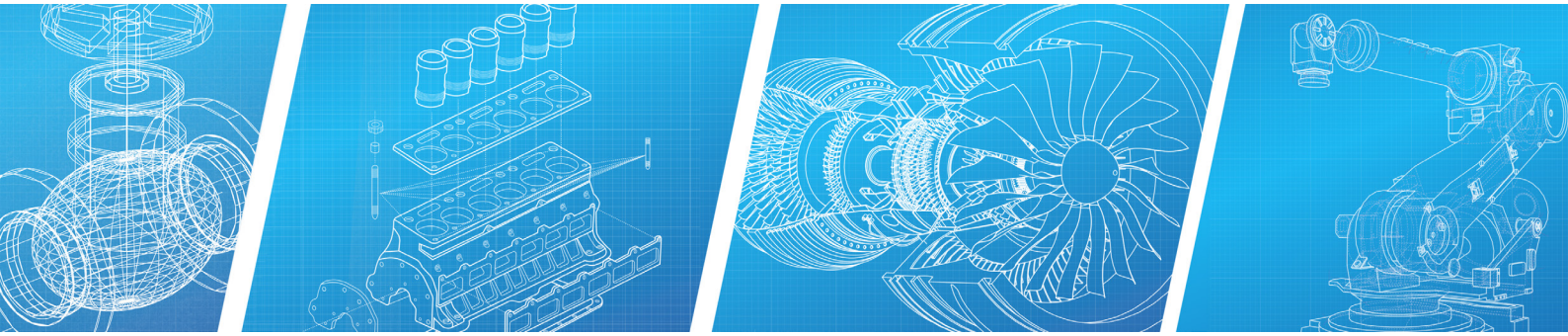
# Bowers Group Case Study

# Addmore Engineering



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| **Company Name** | Addmore Engineering | **Industry** | Subcontract CNC Machining |
| **Location** | Stewartby, Bedford, UK | **Product** | Bowers Group Air Gauging System |

## APPLICATION BACKGROUND

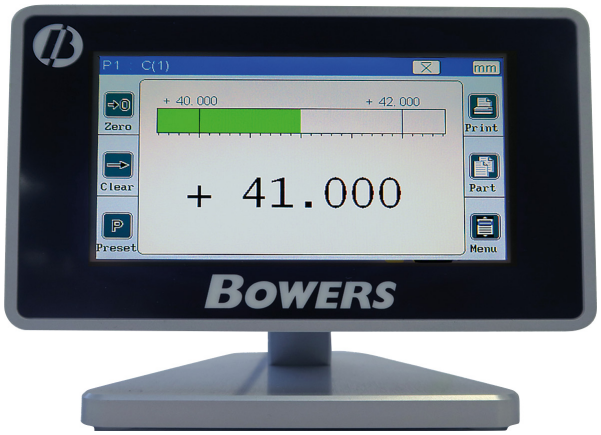
Addmore Engineering is a family run business which has supplied precision CNC turned and milled components for over 40 years. Using the latest CNC machining technology, Addmore Engineering works with all size of customers supplying precision components and sub-assemblies into the aerospace, automotive, hydraulic, autosport, fastener, instrumentation, oil & gas, and medical sectors.

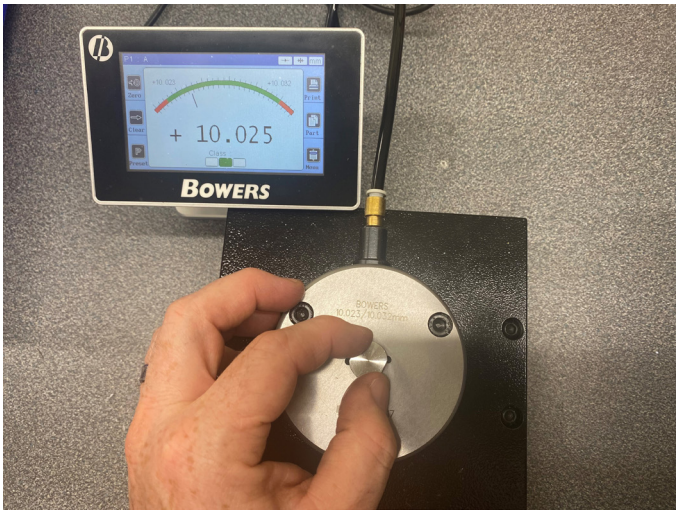
With a machine shop consisting of 25 CNC turning machines, 14 CNC milling machines and 3 centreless grinders, the business offers the highest quality components to meet any specification and delivery requirements.

## THE CHALLENGE

Addmore Engineering machines a wide range of components ranging from 0.5mm diameter to over 350mm in diameter which are supplied into a variety of markets. Operating out of 3 buildings, each with its own inspection departments, the philosophy of the business is that each department is fully autonomous and has all the equipment required to measure the specific components manufactured within that building. By investing heavily in automating processes with equipment such as a CMMs and optical measuring machines, Addmore Engineering has already made much progress in its inspection departments across the business.

As part of its inspection process, Addmore Engineering need to measure bolts, which are critical components on braking systems. It is, therefore, imperative that 100% of the parts produced are within tolerance. However, when using micrometers to measure components they found that different operators were experiencing differing readings. As a result, they were looking to find a system that standardised the process and eliminated the potential for human error.






## THE SOLUTION

The air gauging system from Bowers Group provides the perfect solution to ensure that the performance critical parts manufactured by Addmore Engineering satisfy customers requirement to 100% inspect safety critical characteristics and meet tight tolerances.

Addmore Engineering manufacture in excess of 10,000 of the bolts every month, therefore a fast, user friendly and reliable solution was key. The Bowers air gauging system allows many members of the team to check component diameters in a short space of time, and the touchscreen display with its customizable display interface is easy to read and interpret results.

Using air flow volumes and pressures to measure parts, air Gauging is a reliable, repeatable technology well suited for applications that demand sub-micron precision tolerancing. Air gauging technology is flexible; enabling measurement of not only dimensions, but geometric and relational characteristics, such as squareness, parallelism, ovality, taper and straightness. Bowers air gauging systems provide a simple yet robust method of measurement with a myriad of measurement capability, and its small footprint means it's perfect for the busy shop floor. The Bowers air gauging system at Addmore Engineering is used by inspectors and machine operators on a daily basis.

## COMMENT

Ben Vasquez, Managing Director at Addmore Engineering Ltd said:
"The Bowers air gauging system the perfect solution for us because it standardises the measurement process and eliminates the potential for human error. The system allows multiple operators to accurately check the diameter of the components in minimal time, and the modern control panel gives a quick yes/no output that allows each bolt to be checked with guaranteed high precision results in a matter of seconds.

Personally, I have always been aware of the benefits of air gauging. During my apprenticeship I regularly used the older dial/clock-based systems. The advantage of the modern digital display is that anybody can see if the component is correct just by looking at the colour.

The sales and technical support from Bowers has been first class and we have already begun discussions about further projects."