

3D Printing Experts voxeljet Halve Measurement Process Time with Trimos Height Gauge

3D printing system manufacturer voxeljet UK Ltd has cut its measurement processing time by 50% using a Trimos height gauge supplied by Bowers Group.



As a group, voxeljet produces 3D printing systems, with the subsidiary in the UK offering services on these printers, including the production of sacrificial moulds used in the casting process. voxeljet offers services for a variety of sectors, including the aerospace and automotive industries. As industries renowned for their precision component parts, quality is extremely important; therefore high levels of accuracy and traceability must be met.

In order to measure the parts that they produce, voxeljet previously used large, heavy calipers. Measurements would then be entered manually, which not only took a significant amount of time, but mistakes occurred due to natural human error. Bowers Group provided voxeljet with a Trimos V5 height gauge has allowed voxeljet to streamline its measurement process, reducing measurement times by 50%. The height gauge allows operatives to effectively measure the complex geometry typically dealt with within the business in a much more reliable and repeatable manner.

Jonathan Wright, Research and Development Engineer at voxeljet said: "Due to the nature of the industries we serve, quality is of the highest priority for us. We found that entering measurements by hand was time-consuming and prone to error, but this system has completely eradicated those problems.

The height gauge is very easy to use and does not require a significant amount of training to understand. All of our employees in the production department have picked up its use and functions with ease, and use it on a daily basis. They all agree that it has helped them to streamline their work and free up their time to take on more responsibilities.”

Employees at voxeljet previously found some of the complex geometries they had to deal with particularly difficult to measure due to the lack of flat surfaces to measure from. The height gauge has allowed voxeljet to find and measure the exact point on a curved surface in a more reliable manner. The Trimos height gauge has also allowed voxeljet to measure very large components that could not previously be measured using calipers.

The overall dimensions (X, Y, Z) of each part produced are now being measured with high accuracy, precision, and reliability, as well as recording measurements in finer detail than was previously possible.

Bowers Group also supplied voxeljet with a Sylcom kit that is used similarly with the height gauge, but with capabilities for smaller dimensions. For example, the width of a part (sideways measurement) and the diameter or depth of a hole is an awkward angle for the height gauge to reach properly. The height gauge has, however, been more than suitable for the majority of the parts that voxeljet measure. The Sylcom Bluetooth module has also allowed voxeljet to eliminate the opportunity for human error, because it allows for instantaneous entering and recording of measurement data into the business’ templates.

Jonathan Wright continued: “The service we’ve received from Bowers Group has been fantastic. We had an issue with a loose grub screw a few months ago, which we couldn’t diagnose, and Bowers was extremely prompt in sending a technician to quickly solve the problem for us.”

voxeljet is a leading global supplier of additive manufacturing systems and services for industrial applications, utilising innovative binder-jetting technology that offers the geometric freedom required for complex designs. The UK subsidiary produces sacrificial moulds used in the casting process, which allows voxeljet to deliver metal parts for a fraction of the cost of direct-metal printing systems, greatly reducing the cost and lead-time involved in producing the moulds compared to more traditional methods.