

Bowers Group Universal 'Snap' Gauge

Case Study - January 2018



BOWERS GROUP



Company Name
Location

Exalto Bearings
Derby, UK

Product Installed
Industry Process

Bowers Group Universal 'Snap' Gauge
CNC turning and milling of high end precision components

APPLICATION BACKGROUND

Exalto Bearings manufactures high quality, rubber lined and composite cutlass bearings for the pump and marine industries. Based in Derby, the company manufactures all bearings from its in-house workshop, specialising in the production of non-standard sizes up to 900mm in length, 270mm ID, and 320mm OD.

In business for over 20 years, Exalto Bearings works with some of the biggest pump manufacturers and pump repair companies in the world.

Technical experts at Exalto Bearings work with engineers to create custom-made pump bearings to suit the required application. Non-standard items can be produced with little or no extra tooling cost using the company's innovative modular production tooling system.

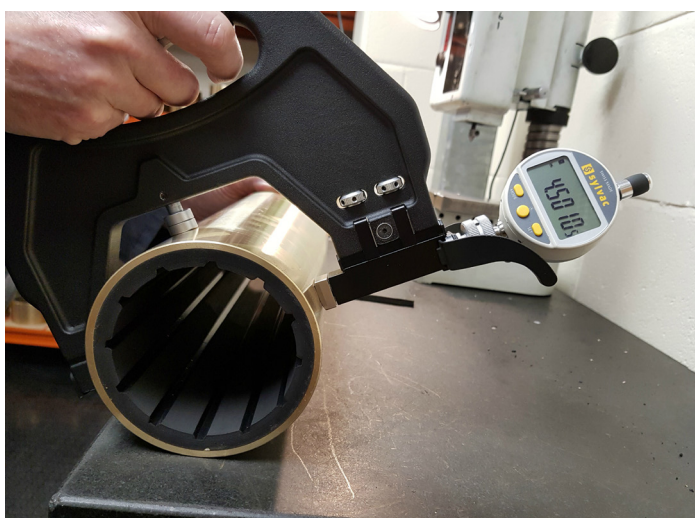
Exalto Bearings also works with businesses of all sizes in the marine industry. Customers include major marine chandleries, leading propulsion manufacturers and ship repair yards, to small marina shops and individuals buying parts for their own leisure boats. Exalto Bearings also stocks standard marine bearings in a range of sizes to accommodate quick despatch, but can equally manufacture special non-standard sizes on request.

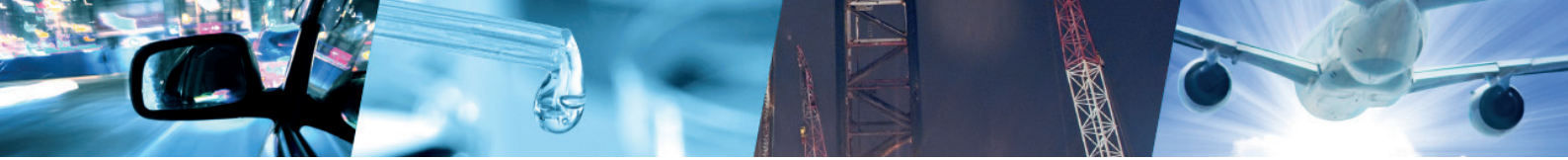
With an excellent reputation for friendly and professional service, including quick delivery of stock marine bearings, Exalto Bearings prides itself on outstanding technical expertise and high quality products.

CHALLENGE

Exalto Bearings regularly manufactures marine bearings to precise interior diameters, outer diameters, and length measurements. Particular emphasis is placed on ensuring concentricity and parallelism of components, with exceptionally tight tolerances as standard.

After a request from a customer involving the manufacture of bearings to a tighter tolerance than Exalto Bearings' usual specification of +/- 0.025mm, a review of the company's quality procedures was prompted. As the measurement for the outer diameter was critical to the customer, an exceptionally accurate and repeatable method of measurement was required.





Exalto Bearings, therefore, needed to be able to maintain the specification bands without any deviation whatsoever. After visiting the premises of the new customer, Business Manager at Exalto Bearings, Mark Chesher, observed the use of 'Snap' gauges as a method of inspecting the diameters of the bearings. Naturally, Mark was interested to find more out about these precision gauges and the benefits that they could bring to Exalto.

SOLUTION

Exalto Bearings contacted Bowers Group to discuss its measurement requirements, resulting in Exalto buying 6 Bowers Universal 'Snap' gauges appropriate for measuring bearings 50–150mm in diameter. The Bowers Universal 'Snap' Gauges have been specially designed for the quick, reliable and accurate measurement of external cylindrical diameters.

Exalto Bearings uses the snap gauges to measure the outer diameter and parallelism of its marine bearings, therefore improving the accuracy of the components by eliminating the possibility of human error in measurement. In turn, the quality of the manufactured bearings is improved, as well as the efficiency of its inspection department.

Bowers Universal 'Snap' Gauges are particularly suitable for use in series production. The instrument is tough and solid enough to use on the machine in the workshop, and flexible enough to be used in the measuring room for sample and final measurements. The measuring surfaces are made from top-quality tungsten carbide mounted on a no-maintenance spring-operated mechanism.

COMMENT

Business Manager Mark Chesher said: "I'm delighted with the brand new Universal 'Snap' Gauges from Bowers Group. Not only are they lighter, easier to use and quicker than using a comparator, they fully eliminate the danger of human error when measuring to 0.001mm. We are now able to measure our marine bearings more effectively, and the gauges have improved our quality inspection procedures in terms of both accuracy and efficiency.

They make inspection quicker by enabling us to measure the whole bearing in one operation while also supplying us with a confident measurement the first-time round. There is no need to re-check, and there is no risk of discrepancy in readings between inspectors. They are also easy to use; requiring minimum training and enabling the operator to easily switch between metric and imperial measuring systems without re-setting. This is a big time saver for Exalto Bearings as we produce bearings to sizes across both measuring systems.

The gauges also allow us to store two nominal sizes at once, enabling us to measure two different batches of bearings without re-setting the gauge. Again, this saves us time and makes our whole process more efficient.

"I'm delighted with the gauges supplied by Bowers Group, as well as the excellent service and support we've received. Bowers Group visited our premises at short notice and provided a comprehensive demonstration for our staff on more than one occasion. The gauges themselves have benefitted the company as a whole, and our inspection has never been more accurate or efficient."

