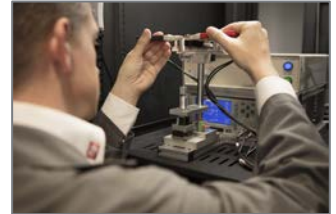


# Precision Microdrives Mechanism Case Study

Medical Laboratory Testing Equipment, USA

## THE CHALLENGE

Our customer was challenged in designing a new Food and Drugs Administration (FDA) Class II medical laboratory testing device, requiring a new motor mechanism. Compounding their challenge was the issue of trying to source a manufacturer with the right level of technical knowledge and expertise within the medical devices sector. They required a motor manufacturer who could adapt to change in design quickly and who could deliver an end-to-end solution with verified motor performance levels.

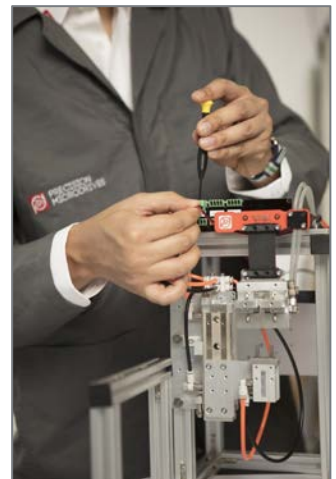


## THE SOLUTION

We were tasked with designing a high-precision mechanism to position a sensor within a piece of medical analysis equipment. Our mechanism solution, capable of micron-accuracy was based around a miniature 12mm gear motor, high accuracy encoders, and an integrated alignment motion control system. After reviewing our proposal and completing a supplier quality audit of our Hong Kong manufacturing facilities, our customer agreed to proceed with the project to mass production, setting a tight completion date for launch.



After scrutinising their specifications, assembling and testing prototypes, we identified issues with the original concept. This resulted in the design and specification having to be adapted halfway through the project to ensure the time scale remained on-track. Our flexible approach to the design and manufacturing process, enabled our engineers to re-design, re-validate and manufacture a new mechanism assembly. We met the revised requirements, and still delivered the component module on time.



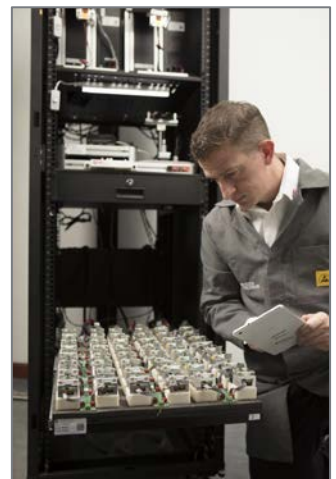
The customer had insufficient in-house testing facilities. Therefore, in order to meet their quality criteria, Precision Microdrives created bespoke and serialised testing equipment for product validation. This ensured ultimate quality control and product traceability.

## THE RESULTS

- The design and manufacturing process delivered a superior performing mechanism at a lower total life cost, than the previous generation of machine.
- By investing in the creation of bespoke, automated testing equipment the entire production remains reliable, and we deliver every production batch to spec.
- The solution was fit for purpose and price. We understood what components were critical & which were not. This made achieving the specifications less costly.

## OUR RELATIONSHIP

Our customer appointed Precision Microdrives as An Approved Supplier and long-term partner, based on our medical sector knowledge and experience of managing risk through the whole process.



We were fast-tracked through their rigorous supplier and partner process due to our audit transparency, flexible manufacturing methods and documentation support.

**WE CAN SUPPORT YOUR APPLICATION & MANAGE YOUR RISK**

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