PBC Linear Actuators Put Medical Testing on the Fast-track

Rockford, IL – February 11, 2009

Clean-room dependant linear motion can be the most painstaking for a product to excel. Grease, oil, and other common lubricants have no place in this environment. For medical testing, keeping a sterile environment becomes even more critical. A slight disturbance could alter test results and cause the need for retesting, wasted money, and lost time. Recently, PBC Linear was commissioned to design a gantry system for a completely automated, clean-room dependant medical analyzer. Taking all aforementioned factors into consideration, PBC Linear recommended using their MT series belt-driven actuator to accomplish the task.

Accurate positioning in three (3) axis over a work area ranging 1830 mm X 3050 mm was critical to this manufacturer of biological analyzers. Utilizing a gantry configuration, PBC Linear provided its high-speed belt driven MT Series actuators preassembled and tested in the 3 axis configuration for easy installation by the customer into their platform.

Sealed against contamination, PBC Linear’s MT series actuators are perfectly suited for the clean-room environment—keeping potential contaminants and internal components that could damage the sensitive samples inside the system. Assembled into an XY gantry, the MT actuating system was responsible for test or storage of sensitive biological samples. The gantry was also designed with special mounting components to facilitate precision and rigidity when moving the
samples. For example, a highly precise gripper was attached to the end of the smaller MTG actuator with an accuracy of 2mm within the work area. This mechanism acted as the “arm” of the gantry while the remaining three MTB actuators were used to quickly move around the system as a whole.

Before the system is shipped out, PBC Linear puts the MT series gantry through rigorous testing. Measuring accuracy, repeatability, speed, and distance, PBC Linear fine tunes every aspect of the system to ensure quality service for the end user. Using a portable CMM analysis device, PBC Linear can ascertain any potential problems and swiftly tweak the system.

This equipment is used to test for everything, from delicate genetics analysis to substance abuse detection. Using PBC Linear’s designed gantry system to provide the accurate movement and transportation of the samples, the medical analyzer reduced testing time from days to hours. For more information on the MT series actuators, other examples of where they have been used, or information on any other products, please call 1.800.729.9085 or email to marketing@pbclinear.com.