

Solutions@Mecmesin

Injector Pen Training Aid Testing

Specification

Crux Product Design is an innovative design agency which sees products through from a creative idea to production reality. One field the company focusses on is the engineering of medical devices and the associated lab testing, verification and evaluation services. Products including inhalers, needle-based injection devices, surgical tools, medical diagnostic equipment and training aids are required to be rigorously quality tested. Increasing success and demand for the company's skills required some efficiencies in the testing procedures, as much of the test equipment was custom-designed in-house. By migrating to established testing systems, Crux were able to achieve time and cost savings by eliminating the design/development and trouble-shooting that could occur with internal solutions. The flexibility of force test systems and versatile fixturing capabilities afforded by Mecmesin ensured that Crux could continue to meet standards, such as ISO 11608, as well as their own stringent internal demands with a reduced overhead of maintaining unique equipment.



Fixtures designed by Crux Product Design

Solution

Mecmesin supplied a single-column computer-controlled universal test machine, loadcells to handle the force range levels with optimum accuracy, and a variety of proven, standard accessories. The number of tests that the system performs also necessitated a set of custom-designed grips and fixtures, developed by Crux Product Design. Various strength and performance requirements are tested in a broad range of items that the company's evaluation service handles. The software-based system allows the engineers to write specific test protocols, saved in library files, to measure these requirements in a reliable and repeatable way. The Emperor™ programming environment allows interfacing with external inputs and custom reporting of the test results directly from the recorded data, in formats suitable for sending to clients or for internal documentation purposes. The system's ease of use simplifies the training of staff and the MultiTest's compact footprint adds portability to the versatile solution, complementing the time and cost efficiencies of the transition.



Injector pen training device in upper multi-jaw grip and lower bespoke fixture

System

- MultiTest 2.5-i PC-controlled test stand
- 5 N, 50 N and 500 N intelligent loadcells
- Various fixtures (approximately 30), bespoke and Mecmesin-supplied

Testimonial

"Having developed a medical device from a blank sheet of paper to a prototype level, we entered into a significant programme of test and development. The test programme involved some 40 evaluations, to be conducted in a very condensed timeframe."

Stephen Gilmore, Principal Mechanical Engineer, Crux Product Design

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