

Application Case Study: OEM Instrumentation for Medical Contract Manufacturing



Medical testing is a fascinating industry segment that sits squarely at the crossroads of human biology, clinical laboratory science, and industrial engineering. Facing a series of major projects, a leading Medical Device Packaging Equipment manufacturer recently contacted Whitman for support, looking specifically for a reliable instrumentation supplier that understood the critical nature of their PCR Test Kit packaging applications.

This OEM faced a series of large projects to help their customers (medical device contract manufacturers) scale up operations, and Whitman was eager to explore ways to help both the OEM and the end users in one fell swoop.

About Us

As a veteran-owned small business, Whitman Controls is dedicated to supplying premium quality, reliable, technologically advanced instrumentation for use in nearly any application. Our Bristol, CT manufacturing facility embodies over 40 years of engineering, fabrication, and customer service expertise, serving both end-user and manufacturing customers nationwide through direct and distribution channels.

Application Summary

Polymerase Chain Reaction (or PCR) tests are a type of medical diagnostic test referred to as “sample-to-answer”, in which a sample can be collected from a patient, inserted into a rapid development instrument, and produce a result within a matter of hours or even minutes. Packaging equipment used for these PCR test kits therefore must be extremely reliable, hygienically constructed, and highly automated so as to remove the potential for human-transferred contamination into the sterile package. Process control instrumentation makes all of these goals achievable, especially in the key instrument types of pressure, vacuum, flow, weight, temperature, and position sensors.

Challenge

Recent global health interests have driven a large jump in public health awareness, resulting in heavily increased demand for diagnostic testing for both proactive screening as well as ongoing monitoring uses. Reacting to this uptick in demand, multiple PCR test kit contract manufacturers turned to the equipment market in search of new packaging gear to add to their operations. Whitman’s customer – one of these major equipment OEMs – received several of these inquiries, and immediately found themselves facing two problems.

First, the customer’s equipment line up needed to expand into larger models that could handle the production rates they were being asked to serve. Second, they needed to once and for all eliminate instrument procurement issues that had plagued them for years, stemming from too many variations of sensors sourced from too many suppliers. The OEM quickly realized that

they needed extensive support on the instrumentation front. They needed consulting for technical guidance on how to standardize and simplify instrumentation specifications for their new designs at scale. In addition, the OEM required a true instrumentation partner that could step up to serve their needs with personal attention, quick delivery, and dependable support into the future.

Lastly, they needed all of this help from a supplier that offered a robust instrument catalog that encompassed the accuracy, repeatability, and hygienic requirements of their end-users' PCR packaging applications.

"We cut our instrument parts list down from over 40 different models to about 8 by having Whitman's help to look at our lineup, standardize models, and custom-spec the oddballs. Even better, we can now actually get the instruments when we need them, which has really cut down a lot of our ordering stress that was almost entirely due to instrument [availability] issues." - **Lead Technical Buyer, Confidential Medical Device Packaging Equipment OEM**

Solution

Knowing that we were dealing with hygienic, washdown-rated packaging equipment, Whitman Controls produced a shortlist of suitable products that would directly fit about 80% of the OEM's instrumentation needs right off the shelf. The remaining 20% we custom specified. The entire path to a complete solution took approximately two weeks from initial inquiry to first delivery, covering the below steps:

- The customer provided a list of their equipment types and the common instrumentation, which we reviewed in detail to learn about their exact needs, wants, and technical requirements.
- Whitman produced a submittal document set of our Ultra Pure instrument lineup, listing individual part numbers against each of the customer's equipment models. Most items were standard part numbers, and the remainder were custom models well within our available range of options.
- In terms of fluid and gas instrumentation, the customer's medical device packaging equipment mainly utilized pressure, vacuum, and temperature sensors that were a perfect match to Whitman's catalog.

- Addressing questions about our long term support capabilities, we took extra time to discuss our directly-controlled manufacturing process, maintained inventory levels, predictive inventory replenishment, and in-house technical support staff.
- Satisfied with our commercial capabilities, the customer placed an initial order, which arrived at their doorstep five business days later. The initial order mainly contained both standard and custom W117LG Ultra Pure NEMA 4 Pressure Switches and W117LV Ultra Pure NEMA 4 Vacuum Switches, selected for their heightened resilience and helium-leak checked washdown-rated housings.
- Our support engineers called the customer to check in that same day, handling a few questions right then and there. All items were received in good order, PDF installation manuals were sent via email, and a follow-up call was scheduled for the week after.

Results

In a later discussion, the customer expressed their thorough satisfaction with Whitman's personal touch, clear interest in understanding their needs, and commitment to the OEM's success through follow-ups even after the first order was delivered. The technical capabilities of our Ultra Pure W117LG Pressure and W117LV Vacuum sensors proved a perfect fit to the customer's various equipment needs, embodying the same attributes and benefits that their equipment offers to their medical device packaging end-users. Whitman has since added several of this OEM's custom models to our standard stock, keeping units on hand in preparation for urgent needs that they or any other of our clients may have. Further, the customer's end users have indirectly benefited as well, now needing fewer spares, fewer maintenance service calls to recalibrate instruments, and fewer training regiments thanks to Whitman's standardization efforts.

Data Bullets

- **10%** faster overall equipment delivery time due to quicker instrument procurement
- **100%** reduction in missed equipment shipping dates due to instrument availability
- **16%** reduction in customer's spare part inventory needs due to standardization of instruments
- **1-2 Week** Custom Order Shipment



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Here at Whitman Controls, our values drive us to provide the highest level of servant partnership that you can find. To discuss your applications or to learn more about our capabilities, please contact us at (866) 556-5634, via email at info@whitmancontrols.com, or online at www.whitmancontrols.com.