



CASE STUDY

Setting a New Pace for the Medical Device Industry

Norwalt Speeds Up Production to Deliver Higher Volume and Lower Costs for Manufacturers

In April 2020, during the height of the COVID-19 pandemic, Norwalt was approached with a very time-sensitive opportunity. The customer needed a high-speed, high-volume automation system that could assemble 350 parts per minute (PPM) for COVID-19 rapid test kits. The system also needed to include 14 vision inspection systems, six laser marking systems and integration into a flow wrapping machine.

In response to a nationwide demand for fast and accessible testing, Norwalt needed to find a way to speed up production for the medical device industry, one that has yet to truly utilize automation and other high-speed methodologies. This posed a unique challenge for Norwalt that extended beyond the realms of the pandemic. The longstanding lack of speed in medical device production had created a void within the industry. And it was now Norwalt's responsibility to fill that void in this time of urgency.

Not only did the customer need a fully custom machine, but they needed it delivered in rapid time. From design to build, the scope of the project would normally take Norwalt approximately 40 weeks to complete. The client needed it done in 12 weeks, and the clock was ticking.

 **350+**
Parts Per/Min.

 **14**
Vision Inspection Systems

 **6**
Laser Marking Systems

 **12**
Week Turnaround



Norwalt's Solution

Immediately after getting the green light, Norwalt assembled its team and scheduled out the project day by day. The engineering team quickly went to work on the design and used concepts from other industries that rely heavily on automation such as consumer goods and food and beverage. Now, Norwalt needed to take these elements and mold them to fit the medical device industry.

Throughout the course of the project, Norwalt leveraged several of its long-term industry relationships. Experts in programming, machine vision and robotics were all brought on board to collaborate and assist as-needed. In order to build the machine within 12 weeks, Norwalt divided the build into subgroups of individual teams. Under a normal build, one primary machine would control the various submachines. But knowing that the workload needed to be efficiently divided, Norwalt built each component as a primary so the teams could run their machines independently until the end when everything would merge together.

The project required deviating from the traditional indexing machines that are common in medical production facilities. These machines operate in a stop-and-start capacity, which ultimately limits the ability to achieve a high PPM. With the new design, Norwalt utilized single-stream feeding, continuous motion and robotic integration to drastically increase operational speed and volume output. After completing the buildout and acceptance testing, it was time to deliver the machine to the client.

To learn more about how Norwalt can help you achieve high-speed, high-volume production for your manufacturing facility, [visit norwalt.com](http://norwalt.com) or call **973.927.3200**.



Results

Over the course of 12 weeks, Norwalt was able to successfully quote, design and build a custom automation system that can reliably deliver 350 PPM. The machine was designed for efficiency as much as speed and can assemble seven individual parts in half of the square footage requirements of a conventional line. Following the build, Norwalt provided 24/7 support over the next several weeks to assist the client as-needed. Ultimately, the client was able to meet production goals at the speed and volume that Norwalt promised. Since the completion of the project, Norwalt has applied for a patent on the design in the hopes that it can be replicated to improve production speeds for the medical device industry.

Though the stakes for this project were especially high, Norwalt CEO Mike Seitel reflects on the level of teamwork and comradery that emerged through the challenge. The collaboration was evident not only amongst his own team, but also with outside suppliers who would normally be considered competitors:

"Three different builders around the country (one of them being us) teamed up to get this done in time. Normally, we'd be competing against each other for a project like this. But in the end, we're all on the same team and we worked together to help support our country in a time of need. It is our hope that the work we did this past year will carry over into the future and create new potential for medical device manufacturers moving forward."