Startup Gets Jump Start with Versatility™ Universal Handle

CUSTOMER SITUATION
A cardiovascular startup company engaged Nordson MEDICAL to help develop a steerable device for an embolic protection application in transcatheter aortic valve replacement (TAVR) and other left-heart procedures.

According to the Chief Executive Officer (CEO), embolic protection will play an increasing role in these procedures due to recent changes that have broadened the scope of what is considered a stroke. “Embolic protection is the new frontier in cardiovascular devices,” he said.

One of the challenging design features of this complex device was deploying a self-expanding filter for capturing embolic debris. “It looks like a 4-inch wind sock,” the CEO said. “The filter opens just proximal to the first artery and expands the complete circumference.”

“We didn’t truly understand the mechanics of opening and closing the filter,” the CEO said. “We needed a handle that would be able to do that.”

OUTCOME
Nordson MEDICAL estimated that leveraging the Versatility handle and Nordson MEDICAL’s advanced components to build a high-fidelity steerable device saved more than $75,000 and shaved nine weeks off the schedule for achieving a critical feasibility milestone—a time and cost savings of more than 80%.

“[The Versatility handle] definitely accelerated the process. We needed that handle to get where we are now,” said the CEO. The handle design has come a long way since those early stages. “The finished handle Nordson MEDICAL has developed for us is far more sophisticated and sexy,” he said. “There are about 25 different components in the handle—it’s doing a lot of things.”

The company plans to go to market with the finished device within the next few months. “We’re very pleased,” said the CEO. “Nordson MEDICAL has all hands on deck, they’re fully engaged, and they’re doing a great job.”

NORDSON SOLUTION
Nordson MEDICAL’s Versatility Universal Handle allowed the company to get proof of concept for a steerable deployment device faster and at less cost than traditional methods by eliminating the need to design and tool a handle in-house.

“[The Versatility handle] worked great,” the CEO said. “It got us through our first three animal labs and gave us the opportunity to see if the concept worked.”