From left, Mike Raymond, Marty Dixon and Ben Alexander stand beside the "Whirligig" designed and built to help automate the processes at Linked Manufacturing Solutions in Minco.

Minco, Oklahoma

Linked Mfg. Solutions U.S.A. LLC

Throughout his extensive career in Manufacturing, Marty Dixon has done his fair share of planning. But planning a start-up business was something that came about while trying to fill the needs of his employer. With significant expansion in his employer's business, Dixon's passion drove him to find a solution to help support their growth. It led to the launching of Linked Mfg. Solutions U.S.A. LLC in 2016.

Linked Mfg. is in Minco, a small central Oklahoma town. In Dixon's journey to find a location for the startup, he came across an empty military armory built in 1936 by the Works Progress Administration. As fate would have it, the building built in 1936 by the WPA to put people to work would put people back to work in 2016.

Linked Mfg. Solutions contract packaging and fulfillment specialties include polyethylene bag sealing and packaging, bar coding, and product inspection and sorting. The company's pick and pack services include kitting, repackaging, bundle wrapping, private labeling, bagging, heat sealing and wrapping. Linked Mfg. Solutions warehouses its clients' products and packages and ships them as required.

"We work with the client to create the system that works best for them to process their orders," said Dixon.

One of Linked Mfg.'s main products comes spooled in long linear footage with requirements to cut to specified lengths and then package.

That's when Dixon met Mike Raymond, a manufacturing extension agent for the Oklahoma Manufacturing Alliance. Raymond happened to have another client in Minco and was introduced to Dixon. Raymond is one of 15 field agents working in communities across Oklahoma. At the time, Raymond was sponsored locally by Canadian Valley Technology Center in El Reno.

"Our original goal was to develop a machine that would make spooling the material more efficient," said Raymond.

Raymond called on Ben Alexander. In partnership with Oklahoma State University, Alexander is one of three applications engineers the

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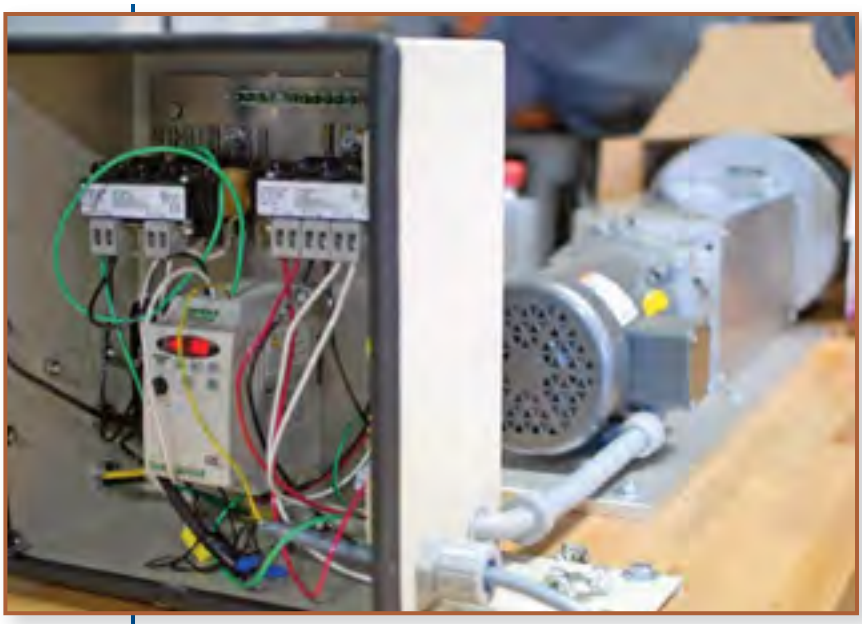
Oklahoma Manufacturing Alliance has on staff to assist companies on a variety of projects, including process equipment design.

Alexander designed a propriety device they dubbed the "Whirligig," a piece of machinery capable of winding 20 feet of product at a time.

Alexander said there are challenges with every project, and that's just one of the many things he loves about his job.

"The customer has a problem and we work through the processes until we solve the problem," he said. "We help the small to medium-sized manufacturers that don't have an engineering staff or access to engineering services. That's rewarding to me. I'm honored they called us in to help with this project."

Building on success, a second machine was developed. It's dubbed "The Beast" with a capability of winding much longer lengths of material.



The "Beast" was designed with the capability of winding much longer lengths of material.

A team from the Manufacturing Alliance, which now includes manufacturing extension agent Scott Smith and applications engineer Micah Robinson, is currently working on the plant layout for a new building in Minco. Dixon hopes to be moved into the new facility by summer of 2019.

"The armory's location in the middle of a neighborhood makes expansion difficult if not impossible. While the new building will be comparable in size, we will have improved efficiency and visibility" Dixon stated. He can see a time soon where expansion will be necessary as his customer base grows.

A drawing of the "Whirligig" now in place at Linked Mfg.

The armory has served its purpose, according to Dixon. "Working with the Minco City Council, we mutually agreed that investing in improvements would someday leave the armory in an improved condition for future community events. I have nothing but high praise for the Minco City Council and the support they have given to get us where we are today."

Dixon's goal is to expand the current 11 work stations to 16. While expansion is an exciting prospect, it's the changes in design to the new plant that Dixon most looks forward to. "Applying the Lean Manufacturing philosophies to a building built from scratch is one that will bring many advantages to our process layout. To get better and keep improving, you must continually look forward. If you're not changing and striving to always improve, you're dying."

Dixon said his relationship with the Oklahoma Manufacturing Alliance has helped him make positive changes, not only with machine and process development, but also with training, which their small business doesn't have the staff to provide internally.

"A small business can't always afford to have an engineer on staff," he said. "That's why it's so nice to partner with Oklahoma Manufacturing Alliance. The process advancements we've made wouldn't have been possible without the help of the Oklahoma Manufacturing Alliance. Their mission to help small businesses is an important role and one that only those in the trenches of a startup or expansion of an established business can fully appreciate."

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