

A Firm Grip



Weck, a division of Teleflex, uses innovation and its supplier base to secure its place as an industry leader. Jennifer Monroe speaks with Freddy Cannady to learn the company's winning tactics.

Each year, surgeons around the world use more than 120 million ligation clips, 80 million staples, and other closure devices in a wide range of procedures that were manufactured by Weck.

Weck was the first company to develop and patent the ligating clips used for occluding vessels. Established in 1884, it is a division of Teleflex, a diversified company with manufacturing capabilities in automotive, aerospace, marine, and industrial markets. Currently, Weck holds more than 116 globally registered patents and has 14 new patents pending.

At its facility in Research Triangle Park, North Carolina, the focus is on medical closure systems, says Freddy Cannady, vice president of operations. Other Teleflex facilities focused on surgical products are located in Wisconsin, New Jersey, and Pennsylvania. The Research Triangle Park facility is also the global distribution center for Weck's surgical group. According to Cannady,

Weck holds a 70% manual ligation market share in the US and has been gaining in the European and Asian markets.

Weck manufactures both implants and external staplers at its Research Triangle Park facility, with a volume of just fewer than 400 complete SKUs and nearly 2,000 individual components to make the closure products. All Weck devices are produced to stock, and the company is just-in-time to key customers. "Our customers rely on the availability of these products," Cannady said. "They expect us to have immediate availability."

Weck products include Horizon clips and appliers, Visistat staple guns, and the Omniport, used in hand-assisted laparoscopic surgery. Weck's smallest product is a metal clip made of titanium, tantalum, or stainless steel that is so small that six to eight clips could fit on one finger tip. Since 2000, Weck Closures also has served as the exclusive distributor of Dexterity Surgical's ►



PneumoSleeve and Protractor products in the US.

Its total focus on ligating devices enables Weck to develop systems tailored to the unique needs of surgeons. Along with design and manufacturing engineers, Weck lists its on-staff physician as a key resource. Product line expansions, such as the addition of an external skin stapler used to close long incisions in general, cardiovascular, and other specialty surgeries, are done with the physician in mind. "We maintain close relationships with leading surgeons," Cannady said, "while focusing on providing new products for the surgical marketplace. Our fundamental strategy emphasizes the need to anticipate customer expectations and to create value for those customers."

With the exception of administrative offices, one half of the 150,000 square-foot facility is dedicated to metalworking and CNC machines and the other half to a class 10,000 clean room. In the production of its metal implants, Weck's capabilities include wire shaping and forming, electro-polishing, Teflon coating, aqueous cleaning, fixture and tooling design, high-energy material removal, networked



SPC, vacuum heat treating, CNC machining, electroplating, metal surface finishing, riveting, laser marking, and nylon coatings.

In its clean room manufacturing, Weck uses both manual and automated assembly and kanban systems. Specifically, it employs ultrasonic welding, pad printing and multivac FFS, alloy blister, and chevron pouch packaging. The final phase for all Weck products is sterilization, with the company using both gamma and ethylene oxide in this process.

Weck makes extensive use of custom injection-molded plastic and metal stamping components. It also recently redesigned the flow of its processes for producing its applicators.

With 108 years in the industry, Weck continues to create products to make surgery safer and less invasive. Its newest product, a polymer ligation clip it calls the Hem-o-lok, is designed with teeth that lock it into place and a flexible hinge that allows it to be implanted in the body through a very small

incision. It can be used in a wide range of surgeries, especially laparoscopic procedures. Weck introduced a one-size Hem-o-lok for open surgery in 1999 after dedicating 23 years of work to its research and design. The Hem-o-lok was immediately lauded by the industry. In the spring of the following year, the Hem-o-lok device won the Medical Design Excellence Gold Award in the surgical equipment, instruments, and supplies category as well as the North Carolina Governors award for innovation.

Cannady said Weck plans to release several additional Hem-o-lok products, including applicators, and its least invasive version of the 5 millimeter polymer automatic ligating device is scheduled for launch in the first quarter of 2003.

"This product is both good for the patient and good for the doctor," Cannady said. "It makes the procedure easier for people, which is what our business is about. With well over 120 million of these types of devices implanted in people globally every year, we have to be almost perfect."

Not only do Weck products need to function flawlessly, but they must be crafted from high-quality materials. Cannady noted the company is dependant on a strong supplier base that manufactures items ranging from forgings and stampings to tyvek lidding and folding cartons to Weck specifications. "We use top-end suppliers," he said. "They are all tier 1 from a quality standpoint." These partnerships are vital. For example, when Weck discovered it was unable to mold the Hem-o-lok clips on site, it extended its relationship with GW, a very good component supplier for complex moldings. "We have successfully launched polymer ligation technologies with Aim, our clip prototype house," Cannady added, "then to GW with production tools. Both are key to Weck's growth."

As advances in technology assist Weck in the development of its products, they also demanded changes in its operations.

Just two years ago, its manufacturing operations ran under what Cannady described as a "home-grown" MRP created internally. "It was a good fit," he admitted. "But Y2K came along, and we decided to move to a client-server relationship with core servers networked to PCs throughout the facility." Today, Weck's IT data management systems are the backbone of manufacturing. Flat

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panel screens are at the center for every focus-factory on the shop floor.

Shop employees who input and have access to real-time data help to manage the information that is critical for ERP.

At the heart of Weck's data management is its Pilgrim system which handles all electronic training and document control. "It handles most of our electronic training," Cannady said. "Along with documents, most drawings are approved electronically through viewers for programs such as AutoCAD, Pro E, and SolidWorks."

Weck also is the first user to combine the use of Kronos Shoptrac as its MES system with QAD manufacturing. Weck launched the use of this system at the beginning of 2002 after more than a year of preparations. With this design, all time and workorder labor transactions are managed on the shop floor and are all tied to a work order. "It is managed by our employees," Cannady noted. "We have very accurate and automated data collection based off of actual information."

Since Weck devices remain implanted for the life of the patient, accurate documentation for each product made is essential and regulated by the FDA. Weck's new data management system creates electronic routing records, which are included with a device history file which can trace the production of any device. ►

This focus on data management is part of Weck's continuous improvement program, and the company is molding the software to meet its best practice goal. "We are looking at non-value added activities within data management," Cannady said, "such as the number of key strokes required to complete a transaction." To reduce this, Weck created its own front-end screens, which "bolt" onto QAD. "Information that used to reside on four or five different screens is now all on one that looks like a work order," he noted.

Weck's operational changes are gaining attention across the industry. In September 2002, Weck earned the Iron Mountain/ARMA International Award of Excellence. This award recognizes the accomplishments of information management departments in supporting the overall mission of the corporation. It is awarded to records and information management departments that make significant contributions to their organization's success through a broad-

based and comprehensive information management program. "We are very proud of our quality group's efforts to streamline document management," said Cannady.

According to Iron Mountain/ARMA, Weck was chosen because of its "focus on strategic planning, innovative use of technology, and tying records and information management to institutional goals."

Weck also has been asked to share its best practices with companies in North Carolina for early 2003 via NC State Universities Forum for Competitive Advantage, in which about 25 companies are expected to participate.

Cannady says the award acknowledges Weck's commitment to continuous improvement. "Our objective is to remain competitive using state-of-the-art technologies and methods in all areas of production, facility, personnel development, and more," Cannady concluded. "Through these efforts, we plan to improve quality, reduce cost, shorten lead times, and improve customer service." ●

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