

Engineering A Partnership

EMCO CHEMICAL DISTRIBUTORS REALIZES THE GOAL OF OPENING A NEW MANUFACTURING FACILITY
WITH THE AID OF ANDERSON PUMP & PROCESS AND BLACKMER® GX SERIES SLIDING VANE PUMPS

By Jack Pitts



With more than one million gallons of on-site liquid storage and the ability to handle various types of chemicals simultaneously at its new facility in Pleasant Prairie, WI, USA, EMCO Chemical Distributors, Inc., needed to identify and implement pumping technology that could satisfy a wide array of operational parameters. The solution was acquiring 74 GX Series Sliding Vane Pumps from Blackmer®.

In 1967, after relocating to Chicago, IL, from Boston, MA, Edward Polen was working as a salesman for the Big Ben Chemical & Solution Co. Polen worked for Big Ben until the company was sold in 1971, at which time he decided it was time for another change. This one, however, required a bit more work than just finding a new home.

Now, having moved to the suburbs, and using his garage as a base of operations, Polen incorporated E-M Co. and began filling chemical orders while packaging chemicals into small containers. From those modest beginnings, E-M Co.—which Polen renamed EMCO Chemical Distributors, Inc., in 1985—has grown into of the top 10 largest privately owned distributors, blenders and custom packagers of industrial chemicals, specialty chemicals and fine ingredients in the United States, and the 44th largest in the world, with more than \$300 million in annual sales.

By the end of its first year of operation, Polen had relocated his nascent company to a small manufacturing plant in North Chicago, IL. After four decades of continuous growth, which included the creation of three additional processing facilities in the Midwest, four new warehouses, a Canadian distribution hub and a network of satellite sales offices, EMCO had finally run out of room. So, in 2010, plans were unveiled to outfit a new corporate headquarters and manufacturing facility in

QUICK FACTS

- Company:** EMCO Chemical Distributors, Inc.
- Location:** Pleasant Prairie, WI, USA, facility
- Market:** Chemicals
- Distributor:** Anderson Pump & Process
- Challenge:** Needed highly reliable, versatile pump that could load/unload railcars, tankers, totes and drums
- Solutions:** Blackmer GX Series Sliding Vane Pumps
Blackmer Engineered Package Solutions



Tasked with designing and equipping EMCO's new facility were, from left, Stuart Levy, Vice President, Maintenance; B.J. Korman, Vice President of Engineering; and Mark Serdar, Facilities Maintenance Manager.

Pleasant Prairie, WI. The site was located 14 miles north of North Chicago, just across the Illinois-Wisconsin border near the city of Kenosha.

To house its new facility, EMCO acquired a former resin and ink plant that had been used to produce materials for the printing industry. EMCO's expansion plans were fully realized on Aug. 6, 2013, when a ribbon-cutting ceremony, which was attended by Wisconsin Gov. Scott Walker, was held at the new site.

"We are thrilled to be expanding our company by opening this new facility in Pleasant Prairie," said Polen at the dedication event. "Although we have been doing business in Wisconsin since 1971, we are excited to have a physical presence with the opening of our state-of-the-art manufacturing/distribution facility and corporate headquarters...This expansion allows great opportunity for EMCO to grow."

Finding The Perfect Partners

Traveling from the Point A of project conception in 2010 to the Point Z of a finished facility in 2013 took large doses of vision, cooperation, communication, patience and hard work. Tasked with designing the layout of the new facility from the EMCO perspective were B.J. Korman, Vice President of Engineering; Stuart Levy, Vice President, Maintenance; and Mark Serdar, Facilities Maintenance Manager. The trio benefited from the fact that the structure was vacant. This meant they were able to work with a blank slate when it came to determining the overall layout, from the location of the tank farms and loading bays to the storage areas and computer rooms.

"We bought a shell building and put everything in ourselves, more than 10 miles of stainless-steel pipe, 64 miles of wire, in an area approximately 300,000 square feet," explained Korman. "When it was finished we moved our industrial chemical division to Pleasant Prairie and kept our custom-packaging operation in North Chicago. We get orders in Pleasant Prairie and create bulk quantities of chemicals, 11,100 gallons on down to five-gallon containers."

A pivotal section of the new facility is its delivery area complete with 25-car railroad siding and side-by-side



EMCO designed its facility so that tank trucks and railcars could be loaded and unloaded side-by-side. Adding to the efficiency of this design are a series of Blackmer® GX Series Sliding Vane Pumps.

transport-truck and railcar loading/unloading docks. There, a steady stream of railcars and tank trucks deliver the raw materials that are necessary for EMCO to blend and package finished end-products. To handle the large quantities of materials that are arriving daily, the facility features two bulk-storage areas, one with 50 tanks and 850,000 gallons of storage and a second with 17 tanks and 250,000 gallons of storage.



The clean room at the new EMCO facility utilizes a stainless-steel SNP Series Sliding Vane Pump to transfer chemicals with unique handling characteristics.

Because of the critical nature of these storage areas, it was imperative for EMCO to identify the right brand and style of pump that would be used to unload railcars of raw materials and load totes, drums and IBCs with finished products. For the answer, EMCO turned to its long-time distributor partner, Anderson Pump & Process. Headquartered in Brookfield, WI, USA, since 1958 Anderson has been an industrial pump and hose distributor that provides practical and cost-effective solutions for its customers.

“When EMCO wanted to expand, they knew us and came to me to ask my thoughts on what pumping technologies to use,” said Joe Cervantes, Pump Sales Engineer for Anderson Pump & Process. “They could have used gear pumps, but, historically, gear pumps are just metal on metal. It’s just one of those things where sliding vane has always been the pump style of choice for the solvent industry or when pumping very thin liquids.”

More specifically, Cervantes recommended the GX Series Sliding Vane Pump from Blackmer®, Grand Rapids, MI, USA, which is a member of the Dover Corporation’s Pump Solutions Group (PSG®), Oakbrook Terrace, IL, USA. Besides the operational benefits of the GX pumps—cast-iron construction, compact design, excellent self-priming and dry-run capabilities, adjustable relief valves, and easy maintenance and vane replacement—they had two other important advantages going for them: they had previously been used in EMCO’s North Chicago facility and they are proudly “Made in the USA.”

“It helped that Blackmer is one of the only companies still around with its own foundry, it’s located just over the pond (Lake Michigan) and it’s an American company, while Mr. Polen is a very patriotic person,” explained Cervantes.

A True Team Effort

Armed with that recommendation, EMCO put in an initial purchase order for 74 3-inch GX Series pumps. But that’s hardly where the relationship and cooperation between client, distributor and pump supplier ended.

“The reason we went with Blackmer was its partnership with Anderson,” said Korman. “It was a collaborative effort between all of us to help in the design of the piping and instrumentation of the system at the new facility. We completed a majority of the engineering in-house, so we relied on suppliers to get us the information and answer the questions that were required to do in-house design. We even went to the Blackmer facility and worked with them to basically come up with the design of the whole pumping scheme. Blackmer set the criteria and helped select the best pump to meet or achieve the flow rates we needed. We try to buy as many American products as we can. We saw the foundry at Blackmer, saw where the pumps were made and we liked what we saw.”

Because the storage areas were being designed from scratch, the engineering team was able to specifically locate the pumps near the actual tanks. This allows the pumps to perform at their highest level without the need for long or complicated piping runs, while all of the pumps would benefit from the incorporation of mass flowmeters and variable frequency drives (VFD), which would be controlled by a Programmable Logic Controller (PLC) in the computer center. When the layout was agreed upon, Blackmer was able to deliver the pumps as part of an Engineered Package Solution consisting of the pump, motor, coupling and coupling guard, all of which were attached to a baseplate for easy installation.



Creating the layout and outfitting the new EMCO facility was a true collaborative effort between, from left, Joe Cervantes, Pump Sales Engineer for distributor Anderson Pump & Process; Jack Pitts, Regional Manager for Blackmer® and the Pump Solutions Group (PSG®); and EMCO’s Mark Serdar and B.J. Korman.



Blackmer® delivered the GX Series Sliding Vane Pumps to EMCO as part of an Engineered Package Solution that consisted of the pump, motor, coupling and coupling guard, all of which were attached to a baseplate for easy handling and installation.

“We were able to locate the whole pump in its sweet spot so it can perform at its best and still meet our pumping requirements in terms of flow rate,” said Serdar. “We put a pressure switch on and we oversized the motor with a VFD. As users call for product, the pump ramps up, and as the order is filled, the pump slows down. It’s a very efficient way to pump. As far as the maintenance side of it, it’s a very simple pump to take care of and maintain.”

After eight months in operation, the Blackmer pumps have met every expectation and need at the new facility.

“We get sales orders in continuously and fill most orders by the next day, so you need pumps that won’t break down, and the Blackmer pumps are reliable and versatile with the different products we use them on,” said Korman. “We’re at 200 gallons a minute (flow rate) when we’re loading tankers, but we also have the drum-filling area where we’re filling 55-gallon drums at much slower flow rates. Traditionally, this may take two or three pumps to do what we can accomplish with one pump.”

The cooperative team effort has extended to the after-sales service that Anderson and Blackmer offer EMCO.

“When you buy the amount of pumps we’ve bought, you will have some issues, but another reason for choosing Blackmer was the way they have handled and stood behind their products,” said Korman. “We have created a relationship where we can go right to the source. They

even did training on preventative maintenance and repair on-site for our maintenance guys.”

“I’ve been with EMCO for 32 years and all that time we’ve used Blackmer pumps,” added Levy. “Our past history with Blackmer has been very positive, but no project goes perfectly and Blackmer has stood behind us all the way. That defines a team, how they handle it when there’s a problem and the way Blackmer has handled it has been fabulous. They are a true partner.”

Conclusion

Dreams may begin with an individual thought, but they only become reality through the assistance of many different constituencies. EMCO Chemical Distributors has grown from Edward Polen’s solitary vision into one of the world’s most significant chemical distributors, blenders and packagers. Reaching his goals has required developing partnerships with a wide array of outside forces. The result for EMCO is a shiny new distribution facility that promises to keep the company at the forefront of its industry well into the future, with the aid of distributors like Anderson Pump & Process and equipment manufacturers like Blackmer.

“The moral of the story is that if you team up with the right people and design systems per the requirements, you’re going to get a great result, and in our situation it has exceeded our requirements,” said Korman. “We will choose Blackmer in the future and are looking forward to working with them on future projects. Their reliability and service have made them a partner forever.”

About the Author:

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