

### President's Message It's all about picking your partner



Jack Phelan  
President

#### To get the right results

As we all know, the fixed bid process typically means the buyer is trying to solve a problem at the cheapest price, and in some cases with solutions provided by bidders who are acting as unpaid consultants. Unfortunately the solutions suggested might look good on the surface, but often do not address the core issues of the buyer. What went wrong? You only have so much time, and the time demands involved in the bidding process for a large project are often extensive. Too much time being spent with each of the potential suppliers talking about issues and dealing with the bidding and evaluation process. What is missing is the focus of your time on the analysis of your issues and the development of the potential solutions. None of us wants to have a "V-8" moment after your

■ *Continued on page 6*

### The difference is in the engineering



John T. Phelan,  
Jr., P.E., COO

The core "product" of any material handling system is its engineering. Simply put, proper engineering makes certain a system delivers the desired results.

TriFactor is one of a few material handling system integrators with an in-house engineering group. It brings together all the competencies necessary for even the largest, most complex installations.

#### Vice President of Operations

The leader of the engineering group is Craig Bertorello, the Vice President of Operations. He holds a BS degree in Industrial & Management Engineering from the University of South

■ *Continued on page 5*

### Effectively slotting a warehouse or distribution center

Paul Hansen - Senior Project Engineer • Kelvin Gibson - Project Engineer

Whether operating an existing warehouse or preparing for a new distribution center, an efficient slotting plan developed from an in-depth slotting analysis is an essential element of effective distribution center and warehouse operations.

Properly slotting a facility reduces expensive labor costs and dramatically improves throughput by increasing pick and replenishment efficiencies, increasing order accuracy, and reducing ergonomic risks associated with improper picking and replenishment operations. A successful slotting plan also

improves the capability to meet inventory rotation requirements, such as FIFO (First In First Out) and LIFO (Last In First Out).

When discussing effective slotting, the focus should be on determining the level at which the product will be picked (full pallet, case pick, or piece pick), the storage medium from which the product will be picked (pallet

rack, shelving, carton flow, etc...), the tools that will be utilized to facilitate the order picking process (paper pick sheets, voice-directed picking, pick to light, etc...), and the method of picking to be executed.

The primary consideration when conducting a slotting analysis and making these determinations is a company's SKU or product data.

SKU information such as product dimension, weight, and on-hand quantity are all key factors when determining the proper storage medium and handling methodology.

Though getting your hands around the collection of

the full range of product data for each SKU may appear to be a daunting task (especially for organizations that distribute thousands of SKUs), recent advances in technology have greatly simplified the data acquisition and manipulation phase of the slotting analysis.

One such technology used by a number of companies has the capability to not only calculate the

■ *Continued on page 3*



Lower level pick module  
for order fulfillment



## TriFactor Helps Exactech Achieve its Goal While Becoming "Eco-Friendly"

For Exactech, Inc. of Gainesville, FL, a company that develops, manufactures, and markets orthopedic implant devices, related surgical instrumentation and biologic services to hospitals and physicians in the United States, the mission was simple: improve its labor-intensive hand-picking system so it could fulfill orders as quickly and efficiently as necessary. But at the same time, try to establish an "eco-friendly" workplace environment for its more than 200 employees.

The challenge for TriFactor system sales engineer Brad Radcliffe, and his team, was to accomplish this mission in Exactech's relatively small 12,000 sq. ft. warehouse. Adds Brad, "To achieve this objective, it was necessary for Exactech to change the way it handled distribution, particularly with accuracy and speed driving the process. As a result, the larger facility allowed for more automation, which was needed to eliminate as many 'human touches' as possible."

According to Kevin Godwin, Exactech's Director of Customer Operations, there were certain guidelines that had to be adhered to, in order for the project to work.



Brad Radcliffe, System Sales Engineer, TriFactor; and Kevin Godwin, Director of Customer Operations, Exactech.

"We had established during our Needs Analysis that there was not sufficient warehouse space for hand-picking," explains Brad. "We also determined that a shift of the

Continued on page 6

## United Stationers Supply Company: TriFactor planned maintenance reduces costs

With more than 20 years of managing material handling facilities, Eric Sisneros, Operations Manager at the United Stationers Supply Company's Queen Palm Drive distribution center in Tampa, FL, says that TriFactor Care sets the standard for planned maintenance.

"Working with the TriFactor service team is better than having your own maintenance crew," says Sisneros. "They bring such a wide range of experience and skills that they can identify and solve problems quickly."

He points out that TriFactor's Installation and Service Manager Thomas E. Betts designed a customized program for United Stationers. "It was just the right fit for us," Sisneros reports. "And, quite honestly, it actually reduced our overhead." He was particularly impressed with the way the service team acted as consultants. "They systematically identify and resolve issues. And on top of that, they don't let us spend money for anything that isn't necessary," says Sisneros. "That's almost unheard of today and it sure builds trust."

Life was quite different before TriFactor came on board. "All too often, I stayed at night to do repairs

and even on weekends to make sure the conveyors would be operational when the crew came the next day," says Sisneros.

He appreciates the way the TriFactor people call to his attention potential issues that deserve attention. "They are proactive, not reactive," notes Sisneros.

When he started out with TriFactor, Sisneros admits he wondered how it would be not having an on-site maintenance person. What would happen if there were a problem or an emergency? "I didn't need to worry," he says. "Their response is always quick. Couple that with their excellent diagnostic skills and you have a superior arrangement."

Sisneros also appreciates the way the TriFactor service personnel always leave records so he knows what has been done. "They also make note of things that should have attention, so that I am never in the dark or blindsided."

For Sisneros, TriFactor offers the complete package. "The service technicians are always respectful, uniformed and neat. Everyone likes having them around. Best of all, you know you are dealing with experts."

### TriFactor Care planned maintenance

TriFactor Care is designed to meet specific customer objectives:

- Minimize downtime during production hours
- Maintenance performed according to your schedule
- Custom designed plan to fit your budget
- Identify and correct issues before they become a problem
- Extend life of equipment
- Provide a cumulative service record
- 24/7 emergency response
- Budget control with predictable service costs
- Total cost less than employing a full-time person

For more information on TriFactor Care, contact Tom Betts, Installation & Service Manager at [tbetts@trifactor.com](mailto:tbetts@trifactor.com).



(L-R) Thomas E. Betts, Installation & Service Manager for TriFactor, and Eric Sisneros, Operations Manager for United Stationers Supply Company, look over plans for an upcoming project.

length, height, width and weight of an item, but will also feed these data records directly into a mainframe or PC host. The tasks of collecting and entering the dimension data can be completely automated, resulting in a significant reduction in the time, cost, labor, and potential human error that would normally be associated with performing the tasks manually.

Another important factor in the slotting analysis is the SKU or product velocity. Product velocity refers to the quantity and frequency of the SKU picked over a designated period of time. Some rules of thumb when considering the velocity of a SKU are:

1. Determine fast, medium and slow movers and place them in the appropriate storage medium (i.e. pallet flow, carton flow, shelving, etc.)
2. Examine both average and peak-picking days.
3. Store high-velocity SKUs in a readily accessible and ergonomically friendly area for ease of both picking and replenishment.
4. Establish whether individual SKU velocities are affected by seasonality or special promotions.

Attempting to effectively slot your distribution center or warehouse requires careful consideration of many factors and is frequently made more complex by incomplete and/or inaccurate order fulfillment data. Good data leads to positive results; bad or incomplete data to poor results. Some common oversights often made by supply chain professionals when developing a slotting plan on their own:

1. *Not designing a system with sufficient flexibility to accommodate changing SKU's or space needs.* A fatal flaw for companies dealing with continuously changing SKU velocities or experiencing significant growth within the three to five year horizon.

2. *Not taking the characteristics of their product into consideration.* When slotting, the velocity of a SKU must be considered in order to increase pick and replenishment efficiencies. Size and weight of the product must also be taken into consideration to ensure proper pallet or load building.

3. *Not providing a clear path for pickers.* A congested route not only poses a safety hazard, but also increases the time needed for an employee to fill an order.

4. *Not choosing the proper storage medium for each SKU.* The characteristics of each SKU (SKU data) should be the primary consideration when choosing the storage medium for a

particular SKU. Choosing storage medium based on other factors often proves to be an expensive mistake.

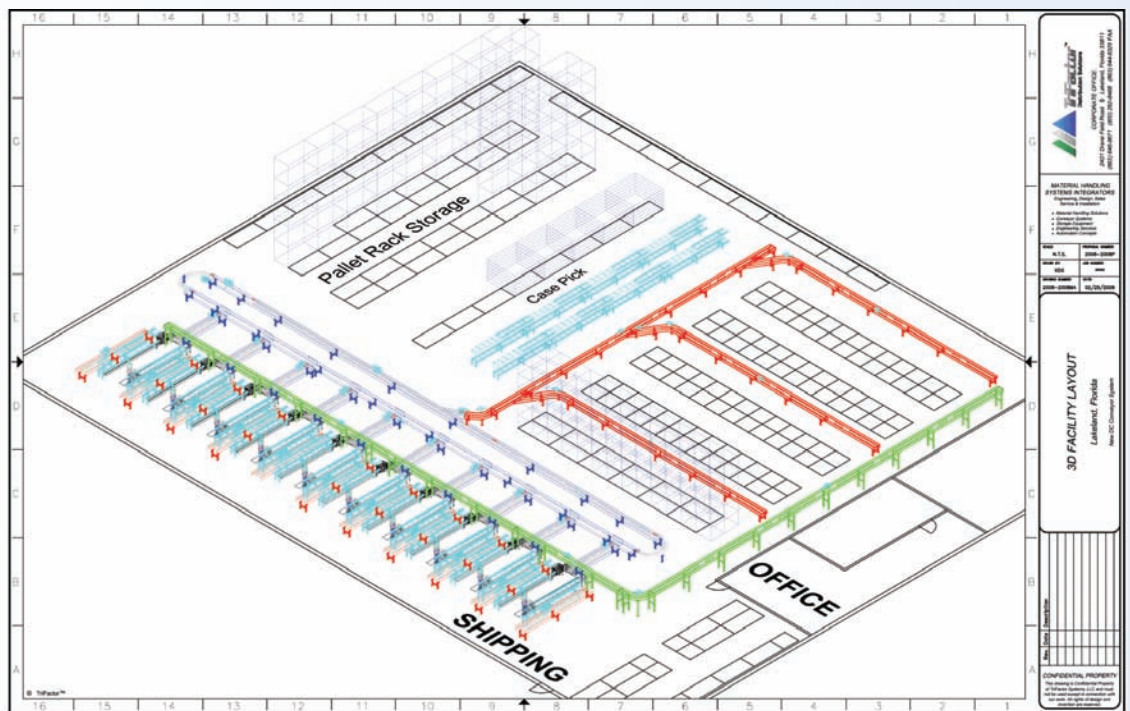
Though it may sound like future expansion of a slotting system in an existing building can be a major headache at best, and futile at worst, that's not always the case. You may have space you don't even know about. Space limitation can often be dealt with by off-site storage. You can also make sure there aren't a large number of empty pallets hanging around, eating up valuable (and costly) square-footage.

Ideally, when a new distribution center or warehouse is being designed, the material handling system along with the appropriate slotting strategy are strongly considered to be critical components of the building design criteria. However, it's not as easy as it sounds. The per-square-foot budget allocation for construction of the building is what drives the train. Planners often lose sight of the reason for the new building and the material handling system is frequently a last minute consideration. As the old cliché goes, they are unable to see the forest for the trees.

Whether designing an effective slotting system from scratch, or working within existing structural confines, the key to developing a successful slotting strategy is an in-depth understanding of product characteristics and movement. All you have to do is look at the beer industry to know how true this is.

Years ago when there were only a handful of different types of beers and most goods were shipped in full pallets. But this is more difficult today. With consumer demands constantly changing, and the introduction of micro-breweries, there are literally hundreds of different beer products, which involve more sorting, more slotting, and more labor.

■ Continued on page 8



Three dimensional drawing of storage equipment within a facility as generated by CAD enhanced Slotting software (Slot 3D). The software enables the user to enter design criteria for the storage media to be evaluated during the slotting analysis, and then superimposes a 3-D representation of the user-specified storage media onto an uploaded AutoCAD design of the facility.

## FAQ

# Frequently Asked Questions About Material Handling Solutions



John T. Phelan, Jr.,  
P.E., COO

**Q. "What kind of sortation equipment is best for our application?"**

A. While choosing the proper conveyor equipment for specific applications can be tricky, determining the proper sortation equipment is even more of a challenge.

Some of the key factors we typically evaluate when engineering a sortation solution are product dimensions, product weights, the weight distribution inside the carton, number of diverts or shipping lanes, size of the wave or batch that is being inducted into the sorter, rate and the time frame required to sort the entire wave or batch of products.

Having engineered many sorter solutions, we have identified the common threads in certain industries. For example, we have engineered and installed countless sorters in the wine and spirits industry and the majority utilize high speed sliding shoe sorter technology. The key factor in selecting a shoe sorter for this industry is throughput, while other important factors include product fragility and bottom surface condition.

We have also found that retail is an industry on the verge of adopting new sorter technologies. Based on the required sortation rates in the retail industry, the recommended sortation technology has varied from sliding shoe sorter to narrow belt sorter to a pop-up wheel solution.

In pharmaceutical distribution, we commonly see more of the low speed divert technology such as a pneumatic pusher or swing arm.

That being said, every customer's operation should be treated like a fingerprint – they are never exactly the same. Because of this a due diligence is required so the solution can be engineered specifically to the customer's needs.

The major factors when evaluating sorter types are throughput and budget. These go hand-in-hand due to the significant price difference between a shoe sorter and a pneumatic pusher, for example. The bottom of the carton is important; a firm flat bottom is typically required for a pop-up wheel and not necessary for a shoe, pusher or swing arm. Product fragility is important as well in choosing whether the divert is soft, shoe sorter or hard, push.

**Q. "We are building a new warehouse/distribution center. What is the best way to lay out the operations and subsequent equipment to support the operations?"**

A. Too often, customers engage a material handling systems integrator after the building is designed and the flow of operations has been roughly determined.

Our experience makes it clear that anyone building a new distribution center should pick a systems integration partner as early as possible, even as early as the building design phase of the project. This inspires partnership and collaboration, and

saves time and avoids hidden agendas.

That being said and to answer the question, when we are helping our customers determine their operations and equipment, we undertake an iterative process that is collaborative and mutually beneficial.

Our goals are always to use space as efficiently as possible, allow for the most efficient handling of material, provide the most economical storage medium, impart the most flexible design for future considerations and make the distribution center a safe and clean place to work. In doing so, we first consider or help locate some of the building's fixed obstacles such as building columns, electrical distribution systems,

pneumatic distribution systems and fire protection systems.

Second, we define the location of the receiving and shipping functions. Then, we locate the storage areas and equipment, as well as analyze the required aisle widths in consideration of the customer's lift equipment. Fourth, we assign the material that is to be stored in the storage medium.

Finally, we determine the best material handling solution that integrates this operation into a smooth flowing process. Typically, this is done with conveyor systems automated by warehouse control technology that exchanges data with the customer's Enterprise Resource Planning (ERP) system. When that is accomplished, we review the plan with the customer, talk about the features and benefits of the system, mark it up for improvement and then re-evaluate it until all stakeholders are satisfied with the design. It is truly a collaborative and team-oriented process that is hinged on trust and respect of the systems integrator and customer.

**Q. "Why should I commit to one company so soon?"**

A. Whether you are designing a new distribution center or re-engineering an existing one, we recommend choosing a systems integrator as a partner as early as possible in the process. Whether it is with our company or a competitor, it is imperative for the customer to collaboratively design their material handling system with the company that is going to engineer, project manage and install the project.

The material handling systems that best meet customer requirements and expectations are the end result of a collaborative effort between an integrator that knows material handling and the customer who knows what they need to accomplish. This process places the liability for fulfillment on the systems integrator, where it belongs, and helps avoid design concepts, for example, that may lack the detailed engineering needed to implement a successful project. It also avoids the customer being exposed to a high likelihood of change orders, budget overruns and schedule issues because one or many engineering details were missing.

The other major reason why it's prudent to commit to one

**That being said, every customer's operation should be treated like a fingerprint – they are never exactly the same. Because of this a due diligence is required so the solution can be engineered specifically to the customer's needs.**

## Case History

# TriFactor Solution: Vertical Reciprocating Conveyor

### Company

West Pharmaceutical Services, Inc. of St. Petersburg, FL, develops, manufactures and markets medical supplies to the consumer healthcare industry. Its manufacturing facility employs over 100 workers and the company has annual sales in excess of \$200 million.

### Situation

The company utilized a manual operating system to transport kitted ingredients used in making its rubber compounds. The totes measure 30" long by 24" wide by 15" high, with a fully-loaded weight of 175 lbs. Considerable manual shuttling of the totes between areas was required, resulting in an inefficient use of the workforce. The company had also maximized its floor space, which prohibited the addition of automated equipment, thus hampering future growth and increased productivity.

### Assessment

TriFactor's Needs Analysis revealed that the company was not utilizing the cubic space above the floor of its 150,000 s/f facility efficiently. By doing so, West Pharmaceutical Services could increase productivity and decrease manual labor. In addition, it was determined that a solution was needed to eliminate the ineffectiveness of the current method of staging product in pooling points at ground level.

### Solution

The decision was made to implement a vertical reciprocating conveyor system, which would allow the company to select elevated conveyor paths, maximizing available cubic space. The new system would transport the totes to one of three mixing lines, all controlled through photo-eye logic to eliminate any backups. An operator positioned in the "kitchen area" would manage a control station directing the totes to either floor mounted or elevated zero-pressure conveyors placed at heights of 24", 72" and 120" above the floor, where they would then be discharged on to a live roller conveyor and directed to the proper mixers for processing.



*Horizontal powered conveyor taking discharged ingredient totes from a vertical lift conveyor and declining the totes to the respective mixer.*

### Result

The TriFactor team completed the project on time and on budget. The immediate results included the freeing up of floor space and improved product staging. Employees no

longer diverted totes manually to predetermined locations, which freed up their time for other duties. There was also increased productivity, reduction of overhead costs, and ease of visualization for the plant manager in assessing production due to the elevation of the totes throughout the operation.

### ROI

Based on conservation projections, the new system has an ROI of approximately 18 months.



*Vertical lift conveyor delivering ingredient totes to three levels of zero pressure accumulation conveyor and to each respective mixer while conserving essential floor space.*

## The difference is in the engineering

Continued from page 1

Florida and has been with TriFactor since September 1993.

No one at TriFactor can match Craig's leadership qualities, technical skills and pure dedication. His customers trust him because he always represents their best interests and constantly thinks of their future.

Craig has managed in excess of \$25 million in material handling system projects for the company. His customers include Johnson & Johnson, PepsiCo, Publix Super Markets, Inc., Bacardi & Company Limited and Coach, Inc.

### TriFactor Engineering team profile

To indicate the engineering group's level of experience and the depth of expertise, here is its profile:

- Disciplines include mechanical/industrial and electrical engineering and programming
- Group includes eight in-house engineers
- More than 132 years of industry experience, ranging from one year to 32 years
- Each one is degreed
- Size of individual projects managed: from less than \$1 million to more than \$10 million
- Major TriFactor projects for Johnson & Johnson, PepsiCo, Publix Super Markets, Bacardi & Company, Coach, Inc., Pet Supermarket, Inc., William Thies & Sons, Brandsmarts Stores, Closet Maid Storage Products, Rooms to Go Furniture, Exactech and Bealls, Inc.

The engineering group represents a major commitment by TriFactor to design and implement material handling system solutions that utilize the most appropriate technology for meeting customer requirements.

system is installed.

*Since your objective is making sure you achieve the right results with your investment, picking a supplier that you trust the most to solve your problems should be the primary objective.*

The process should be to evaluate potential suppliers/system integrators and determine which one possesses the skill, experience and expertise to handle your important project.

Once that is done, you are ready to sit down and negotiate the deal, such as profit margins, budget constraints, timeline and whatever else concerns you.

This partnering process frees you to focus on what you really care about—the development of a solution that delivers the value you want, but is not necessarily the cheapest.

A “valued” solution deserves some further explanation. The material handling systems integrator should have both the engineering capabilities and equipment suppliers to give you options. While each manufacturer has its benefits and disadvantages, you will be hearing the evaluation and

comparisons from the same source, the integrator you have chosen as your project partner.

The biggest benefit of all is that you have already determined the integrator's fee and now you are both sitting on the same side of the table working to achieve the most appropriate solution for your needs and budget without the suspicion and mistrust that are inherent in the fixed bid process.

There are other benefits associated with this process. Typically, on a major project the timetable from start to the point when equipment is placed on order is reduced by months, which can be a significant benefit for those who are under time constraints. It also makes it possible to start obtaining a quicker return on investment. Because more time is spent on the solution, there are generally fewer change orders and the customers are more confident that all their team's issues have been addressed satisfactorily.

The partnering process offers the best assurance for obtaining the right results.

## TriFactor Helps Exactech Achieve its Goal While Becoming “Eco-Friendly” Continued from page 2

operation to Exactech's 25,000 sq.ft. facility was needed so that the distribution operation could be totally reengineered, and yet still be efficient in a relatively small space.”

“We are a growing company and don't have unlimited access to funding; we can't keep going back to the well,” says Kevin. “I needed a company that could come in on time and on budget, I really only had one shot at this.

TriFactor hit it right on target.”

What Exactech ended up with was a conveyor system that not only met the priorities that Kevin had placed on the project – “Increased accuracy, increased velocity and increased capacity” – but a system that was also tremendously eco-friendly and, in the long-term, would save the company money down the road.

TriFactor designed and installed a 24v MDR (Motorized Drive Roller) style conveyor, which utilized a smaller footprint, partially because of its ability to accumulate on the inclines and declines. This style of conveyor is 40%-60% more energy efficient and 45% quieter than traditional conveyor systems.

“This conveyor system is insanely quiet,” says Kevin. “I can walk through the warehouse and have a normal conversation with people and be heard perfectly.”

The environmentally friendly facility was now experiencing work-noise reduction to 55-60 decibels, about the level of

the average soft rock radio station. “They should have called it the ‘stealth conveyor’,” adds Kevin.

With the new system in place, TriFactor was able to increase Exactech's picking and replenishment efficiencies by 200%

and the company's receiving capacity by 400%. The new system allowed incoming product to be segmented and sorted to four separate workstations, where it could then be transported to a pick location for distribution.

To complement the “green” aspect of the conveyor, Exactech also installed energy-efficient low power lighting, a polished floor in which the reflection would allow for less lighting and a high-gloss floor to reflect more light. They also added a whisper quiet, high efficiency compressor – all of

which allowed Exactech to qualify as an environmentally friendly workplace.

“The nice thing is now our lights can be networked,” explains Kevin Godwin. “Because we are always in all areas of the warehouse, motion sensors were not an option. But we also didn't want to leave our lights on at full power all the time. Now we can control the lighting in individual areas of the warehouse. We also installed skylights, which allows quite a bit of sun to come in during the day, where often we don't even have to turn on the lights.”



Exactech final pack out for domestic shipment

## For TriFactor High-voltage means high-quality

Watching TriFactor technicians work on the inside of the CP1 six-door control panel, with its 95 variable frequency drive-controlled motors, dozens of sensors and hundreds and hundreds of feet of multi-colored wiring, is like watching an autopsy performed on "Star Wars" C-3PO.

But there's really nothing futuristic about this product, which is the brain of a high-tech conveyor system where a series of photo cells and scanners placed along the sides of the conveyor relays information with every box, carton and crate that crosses their path and the control panel instructs each conveyor as to when to turn on and when to shut down. Although the mechanism appears to be highly complex, all driven by intricate codes written by electrical engineers in a language that baffles the average person, the underlying concept is quite simple: safety.

"It's definitely all about customer safety," says TriFactor COO JJ Phelan. "We build only UL 508a-approved control panels, which is the highest standard in the industry. Even if the customer doesn't specifically ask for it, we will only install this control panel on our projects because it gives the highest level of excellence and safety."

JJ says that what makes this process unique is that TriFactor is one of the few companies in the industry that actually builds and tests the product at our facility. Many other companies subcontract the building of the UL-approved 508a control panel, and then ship it to the job site where the electrical engineer has to input the PLC codes and hopes for the best. Otherwise, it's back to square one.

"We are a one-stop shop," points out JJ. "Everything is done in-house. Our electrical engineers design the layout of the panel and write the PLC code and our electricians build the panel. If there is a problem, and the team needs to confer, there's no phone messages or e-mails—they just walk 20 feet and get all the answers they need. In the end, everything is fully tested before it even gets to the job site, saving the customer both time and money."

TriFactor works with control panels of all sizes. "The largest single control panel we've built is probably the CP1 for a valuable customer in Arizona," says JJ Phelan. "It's a six-door modular enclosure approximately 21 feet wide, 7 feet high and 2 feet deep. It contains 95 variable frequency drive (VFD)-controlled motors with approximately 700 physical I/O points and 500 virtual Ethernet I/O points."

Adds JJ, "The CP4 control panel, which we also installed for the same project, is the same physical size, but only has about 85 VFD motors and 600 physical and 350 virtual I/O points in it."

Despite their different specifications, both control panels have one common element that speaks to the company's mission of installing only electrical products of the highest quality and safety; each is UL-approved.

Safety is of the utmost importance with every TriFactor-built control panel, and it all starts with the rigorous training undertaken by the company's engineers. "Our personnel are expertly trained in the high standards needed to meet the UL code of approval," says JJ Phelan. "Our control panels have consistently passed every on-site inspection conducted by Underwriters Laboratories. We take the UL sticker very seriously and treat it as a mark of excellence with every panel we ship to our client."

TriFactor will accept no substitute, so neither do they expect it of their customers.



TriFactor's Bill Waikem and Todd Bixby assemble the back panel of a UL508A industrial control panel. This will get mounted inside the steel cabinet and will be used to process signals from sensors in order to properly control all of the motors in the conveyor system and transfer information about product on the conveyor system to the customer's ERP system.

## TriFactor Helps Exactech Achieve its Goal While Becoming "Eco-Friendly"

Continued from page 6

Along with being eco-friendly, the new system was designed to be flexible to meet the needs of a growing business.

"It was important not to have a rigid system put into place," says Kevin. "TriFactor gave us a system that was very flexible, that allowed us to actually move 10-foot pieces of track around to fit our requirements. We could pick up a section from here and put it over there if it served our needs—like the train tracks you used to play with as a kid."

Exactech says the reason it all worked out so well, both from a business and an environmental standpoint, is that Brad and his team at TriFactor took the time to understand what the company was all about, and what they needed to accomplish.

"Brad and the design team did a great job for us because they took the time and the effort to understand what we do as a company," points out Kevin Godwin. "They fully embraced who we are, what we do, and what we needed."



Formerly Advanced Handling Systems  
2401 Drane Field Road  
Lakeland, FL 33811

PRSR STD  
U.S. POSTAGE  
PAID  
PERMIT NO. 57404  
BOSTON, MA

# ROI Focus

THE DISTRIBUTION SOLUTIONS NEWSLETTER FROM TRIFACTOR

## FAQ About Material Handling Solutions Continued from page 4

company early on is because the old-style three-bid process takes longer and the relationship tends to be adversarial because each party focuses on its own goal rather than a common one. Our process has the customer come under contract during the planning phase of the project.

When all stakeholders have agreed to the layout, we solicit equipment and installation bids from multiple manufacturers and installers. We then show the customer all of the bids and review features and benefits of each manufacturer and installer. In the end, the customer picks the vendors and the project is on its way. This method inspires trust, is completely open book, the customers know that they are getting a good deal and the implementation time is significantly reduced.

**Q.** *"Why would I pay you for engineering just so you can tell me what I need? Others will do it for free."*

**A.** We have no hidden agenda. Our engineers are some of the best in the industry and the old saying, "you get what you

pay for," applies. Additionally, those who typically do "free engineering" to analyze a customer's needs typically have a limited amount of time to devote to a customer's solution, which may result in a less than appropriate system.

In the same way, if you go to a material handling distributor that only represents one conveyor manufacturer, what do you think they are going to engineer and try to sell?

As a true systems integrator we have many tools in our chest. Deciding on the proper conveyor for a specific application is not easy and if done incorrectly, can be a very costly decision. We analyze the products to be conveyed, environment that the products are in and the throughput needed for successful operations and then match them to the customer's budget in order to arrive at the best possible ROI.

*If you have questions, please email them to JJ Phelan at [jjphelan@trifactor.com](mailto:jjphelan@trifactor.com).*

## Effectively slotting a warehouse or distribution center Continued from page 3

All this has created new and ever evolving challenges with the way we do business. The people who oversee the day-to-day operation of a bustling warehouse or distribution center are often too busy to implement or analyze the

changes needed, no matter how rudimentary they may seem. But supply chain professionals who know how to effectively slot their facility will possess a considerable and lasting economic advantage.