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Helping Hands

Safety, the economy, and an aging workforce are among factors improving demand for workstation cranes and other ergonomic lifting equipment.



By Myra Pinkham

Myra Pinkham is a New York-based writer and editor with nearly 30 years of experience writing about the North American and international manufacturing markets, both from an equipment and raw materials perspective, for various industrial trade publications.

Southworth's Jim Galante says, "In the past, workers put positioners or other lifting equipment under the product pallet, but now it is recognized that reaching far out in front is probably worse for the worker than back bending so you see more turntables being used."

A COMBINATION OF the push for ergonomics in the U.S. manufacturing sector and the slow-but-sure improvement in economic activity has helped to bolster demand for investment in workstation cranes and other ergonomic lifting equipment.

While the market for workstation cranes and other ergonomic lifting equipment had been really depressed a few years ago, Brian Stephens, senior product manager for Terex Material Handling North America, Solon, Ohio, says it is now back at, or exceeding, pre-recessionary levels. In fact, with the market becoming more aware of the available equipment and how they can offer companies greater flexibility, he says demand for workstation cranes has jumped 20% to 25% in the past year.

While some others place the growth at somewhat slower rates, the overall consensus view clearly is that demand for these types of lifting equipment are growing at greater rates than standard overhead cranes.

Demand for ergonomic lifting equipment demand in general was actually somewhat slow in the first half of last year, according to Jeff McNeil, marketing manager for Gorbel Inc., Fishers, N.Y., although it started to pick

up in the second half of the year. "We are still not seeing a phenomenal growth rate, but with our customers becoming more aware of their advantages there has been and will continue to be slow, steady year on year growth rates of approximately 5% to 10% both this year and next year," he says.

Al Izzo, general manager for Dalmecc Inc., Bloomington, Ill., says that while actual orders for his ergonomic material handling equipment has been fairly steady year on year, he has seen about a 5% increase in proposal levels.

Matt Forsline, senior applications engineer and products manager for Schmalz Inc., Raleigh, N.C., a maker of ergonomic vacuum lift-assist devices, says that while in general material handling equipment is set to grow by approximately 7.7% this year and 8.7% next year, he believes that ergonomic equipment will see even a greater rate of growth.

Some of the drivers for workstation cranes and other ergonomic lifting equipment are very similar to those for standard lifting equipment. Stephens observes that demand for standard overhead cranes tend to follow the general cycle of the economy, with a slight lag and a bump in demand when companies invest in new or expanded facilities.

Michael Keim, ergonomics business leader at Ingersoll Rand Inc., notes that the recent increase in demand for workstation and jib cranes fits the accelerated focus upon ergonomics as a proactive safety parameter.



Brian Stephens, senior product manager for Terex Material Handling North America, says demand for workstation cranes has jumped in the past year.



Pent-up demand

“A year ago, many companies were skittish about spending money on any lifting equipment with questions about sequestration, the debt ceiling and the federal budget,” McNeil says.

It isn't that the projects that they funded didn't make sense, that they wouldn't have a high return on investment, he says. But still due to the uncertainty in the marketplace many of these projects were put on hold. “As they were still seen to be worthwhile, they weren't canceled, but just delayed or paused,” he adds.

Business sentiment, however, is starting to get better. The New York-based Conference Board's consumer confidence index has edged up to 82.5 points in March, up from 78.3 points in February with indications that consumer confidence will continue to grow with the group's expectations index increasing to 83.5 points from 76.5 points.

There also have been some other positive economic leading indicators, including a 3.8% year on year increase in the Federal Reserve's industrial production index and the manufacturing purchasing managers' index of the Institute of Supply Management was at its highest level so far this year at 53.7% in March, including nice month on month increases in its new orders, production and order backlog indices. In addition, there appears to be less of the political bickering and gridlock in Congress.

“Now that some of the uncertainty in the marketplace has been removed, even companies who hit the pause button last year are now willing to spend more on capital investments,” McNeil says. In fact, Forsline observes that industry-wide material handling is set to grow approximately 7.7% this year and 8.7% next year.

This is not just because of improved economic conditions. McNeil says as usual much of the push for investment in lifting equipment in general can be traced to recent manufacturing process changes. “We are seeing push for more lean manufacturing initiative, more flexibility in production processes and a desire to speed up production rates,” he adds.

McNeil says that these kinds of process changes are particularly positive for promoting demand for workstation cranes and other ergonomic lifting equipment, are now, and likely will to continue to, see greater growth rates than standard equipment.

One example is the speeding up of production lines. When that happens, it is more difficult for companies to expect workers to do as much manually as they had done in the past without jeopardizing their safety.

Continued demand for workstation cranes and other ergonomic lifting equipment depends on a number of factors—not just economic growth. But even though workstation cranes aren't as closely tied to the general economy, they still reflect the ability of companies to make capital investments, Stephens admits.

The push-pull action of workstation cranes is designed to help workers lift relatively heavy loads of up to 2 tons more easily. Stephens says that, unlike overhead cranes, nine out of 10 workstation cranes are added to existing facilities.

Stephens explains that there are two basic types of workstation cranes—rigid, or fixed, bridge cranes and articulating bridge cranes. Fixed bridge cranes tend to require more force to move the load, while articulated bridge cranes are easier to operate and more easily aid the operator to move loads back and forth.

They could be used instead of an overhead crane, or even a forklift, as they have a freestanding floor mount, or to provide a safer alternative for moving loads; workers lifted unaided by mechanical help previously.

Stephens says that among the advantages of workstation cranes is that they can be set up in a smaller area than overhead cranes and do not require that building infrastructure to support the load being lifted and moved. Also they allow companies to utilize a crane for the types of loads that they had previously a forklift or, for loads of 50 to 100 lbs., those that workers had previously moved manually.

Safety driven

Michael Keim, ergonomics business leader at Ingersoll-Rand Inc., Annandale, N.J., notes that the recent increase in demand for workstation and jib cranes in North America has been growing more or less in step with the accelerated focus upon ergonomics as a proactive safety parameter.

“It's not only the need to pick something up with some type of assist equipment, but can the task be done without additional strain to the operator?” Dalmec's Izzo explains.

While ergonomics has already been an important consideration for U.S. manufacturers for about 20 to 25 years, Jim Galante, director of business development for Southworth Products Corp., Falmouth, Mass., says that for much of that time it was just seen as “a nice thing to do,” but really not much more, unlike other areas of the world, such of Europe and Australia, where it was considered “a big deal.”

He says this was evidenced by the fact that many domestic manufacturers felt “the sky would fall down” in 2000 when the Occupational Health and Safety Administration (OSHA) announced it was issuing an ergonomic program standard that would have included “action triggers” for jobs that were identified as having sufficient ergonomic risks of workers performing certain tasks developing musculoskeletal disorders of the upper extremities, back, and lower extremities.

In fact, in mid-2001 Congress passed legislation to repeal the standard, which then President George W. Bush called “an unduly burdensome and overly broad regulation ... (that) “would have cost both large and small employers billions of dollars and presented employers with overwhelming compliance challenges.” This is the only instance that Congress successfully used the Congressional Review Act to block a federal regulation.

More recently, however, ergonomics and safety have become much more important to end customers, Stephens says. “If a company has the desire and means to invest in new or upgraded equipment, why not buy equipment that will be more beneficial for their workers,” he explains.

Stephens says the value of having equipment that doesn't cause harm to employees has been magnified in the current business environment of rising health care costs. Also, he says it shows workers that the company

is investing in them, which could motivate operators to do a better job for their company. “Safety is the No. 1 reason for the investment, but workers are often more productive as well.”

Older and fatter

In particular two factors have really turned things around—the aging of the U.S. manufacturing workforce and the increased number of obese workers. Galante says fewer works are retiring at age 65 than used to at a time when fewer younger people are interested in working in the manufacturing sector, especially in jobs that require heavy physical labor.

He says that as recent as in 1990 there was no state in the United States that reported having greater than 14% of its population being obese, but that has flip-flopped with no states having reported having less than 30% of their population being obese.

That is a big deal, as on average obese works have 13 times more lost workdays than those who have what is considered to be a healthy body mass index (BMI). Also, obese workers also not only file twice as many Workers Compensation claims, but the cost of those claims are usually six to eight times higher than those who are at a healthy weight.

“All of this makes ergonomics being seen in all capital letters and in bright lights—it makes ergonomic equipment that much more important,” as both age and obesity affect the ability of the worker to move loads without getting hurt.

Throughout the manufacturing sector there has been a heightened awareness about safety, according to Keim. “No one is immune to that from the biggest OEM to a small mom and pop machine shop. Customers

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are looking at safety records when they pick a business partner," he says. "When companies make capital investments, continuous improvement in safe lifting is tremendously important."

That is true for a wide array of types of equipment, Galante says. It is not only for workstation cranes but also adjustable worker elevation platforms, balancers, container tilters, lift tables, manipulators, pallet rotators, stackers, vacuum assist devices, platform trucks, carts, flooring technologies, and intelligent assist devices. He says any of these can make the ergonomics of a task better.

"Each company needs to carefully evaluate what the best product is for each application," he says, adding that it is possible that they could need different equipment for different parts of their facility. He says one unbiased resource is Ergonomic Assist Systems and Equipment (EASE) Council of the MHI.

"It's not only the need to pick something up with some type of assist equipment, but whether the task can be done without additional strain to the operator," Izzo asserts. "For example, if the vertical movement of the product to be handled is greater than 20 in., duplicate controls are needed so an operator does not bend unnecessarily."

Galante says that one of the features that has been prevalent to prevent back injuries related to the positioning of the items that must be lifted or moved around. "In the past, workers put positioners or other lifting equipment under the product pallet. But now it has been recognized that

reaching far out in front is probably worse for the worker than back bending," he explains. "Because of that you see more turntables being used as a huge component of ergonomic lifting solution. These turntables are either used on the positioners or on powered lift tables."

McNeil says closed track cranes have been very popular as its enclosed shape helps to keep dust out. Another advantage is the shape of its roll formed tracks and wheels, which help the crane to run smoother. "It allows the worker to take on a 2,000-lb. load while using only about 20 lbs. of force or less," he says

Greater articulation, therefore less rolling resistance, in general is very desirable, Keim says. "If the equipment makes it easier for the operator to pick up and put down loads, that is great, but it is important to minimize rolling resistance as well, as that minimizes the impact upon the operator."

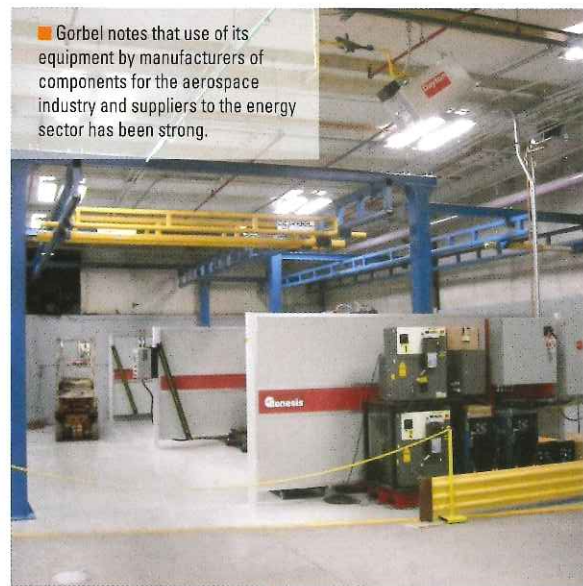
Automotive proactivity

While these kinds of lifting equipment are being used more or less across the board in the manufacturing industry, some market sectors have been more receptive than others. Keim says that the automotive industry has been one forerunner for ergonomics solutions, including workstation cranes. "Automakers and their suppliers have a big emphasis on increasing the safety of their workers and are looking to be proactive before there are any incidents." In fact, he says they use computer modeling of the proper ergonomic postures of their human operators as part of their safety assessments.

■ Jeff McNeil, marketing manager for Gorbelt Inc., says customers are becoming more aware of the advantages of ergonomic equipment.



■ Gorbelt notes that use of its equipment by manufacturers of components for the aerospace industry and suppliers to the energy sector has been strong.



■ Ingersoll Rand has been designing standard and custom handling device solutions for more than 50 years.





Al Izzo, general manager for Dalmeic Inc., has seen about a 5% increase in proposal levels for ergonomic equipment.

The use of ergonomic lifting equipment has also been found to be very helpful in cabinet making, especially to flip large cabinets weighing 400 to 500 lbs., Schmalz's Forsline says, especially given that this equipment is specifically designed to be used by different body sizes and shapes, giving anyone the ability of moving heavy loads.

He says there also has been nice growth in the food and beverage industry, especially with the growth in the popularity of craft brewers, which have been using ergonomic lifting equipment for keg handling at the end of their production lines and for palletizing the beer for shipment.

Use by manufacturers of components for the aerospace industry and suppliers to the energy sector has also been quite strong, McNeil says.

However, according to Galante, the wholesale and retail industries, which is the second largest employment sector in the United States, has been somewhat slow at employing ergonomic equipment in their work environments. "It isn't that they aren't concerned about their workers' safety, but they operate on very low profit margins," he explains. "So investment in ergonomic equipment, especially to this sector, is a very hard sell without a return on investment in less than six months."

All indications are that 2014 will be another growth year, although that could be followed by some leveling of the growth rate in 2015, Stephens says, predicting about 11 percent growth this year followed by 5% to 8% growth next year. "It is common for growth to level off after a big pickup in demand," he explains.

Also fueling this growth is the development of new equipment. "Equipment makers need to redesign the equipment they developed over the past 20 to 30 years to better accommodate the increasingly aging and obese workforce," Galante says, as those workers, in general, have less upper body strength and less agility and reachability than workers in the past. *///*

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