

Workstation Crane Systems

BY JEAN FEINGOLD

Items often need to be moved within a factory or warehouse. When workers lift and carry them manually the work is hard and subjects workers to serious risk of injury. If the items are heavy, these tasks can take multiple workers.

Now there is a faster, safer way to do this work by using workstation crane systems, also known as light or enclosed track crane systems. These systems consist of overhead metal tracks combined with lift assists, cranes and vacuum lifting devices. Depending on the system's design, they can lift weights up to almost two tons but are also popular for lifting as little as 20 pounds.

Some typical applications

At A.L. Smith Glass Company in Ijamsville, MD, a Gorbel® workstation bridge crane system with a vacuum lifter is used for lifting and repositioning large 500 pound sheets of glass into an edging machine. Depending on the edged glass order volume, the crane is often in constant use for multiple shifts each day. Before the company had this crane, panes were moved by two strong men working very slowly. Now it takes only one person to load heavier and larger pieces of glass



The five-bay freestanding workstation crane at Wilbert's Automotive Recycling in Webster, NY, pulls engines from automobiles so they can be put into inventory for sale. One bay has a dual bridge; one lifts the cab of a pickup truck while the other pulls the engine. *Photo courtesy of Gorbel.*

into the machine faster and in a much safer manner, allowing the company to expand its product offerings. "From an ergonomic viewpoint, the Gorbel® cranes

have a productivity ratio of 125:1, which means these workers are typically exerting three to five pounds of force to move and place the 500 pound loads," noted David Butwid, vice president of sales and marketing at MHI member Gorbel. This has provided more flexibility in the size, strength and gender of the worker available to lift and move loads while significantly reducing the risk of worker injury.

Companies handling lightweight loads also benefit from workstation crane systems. "Companies today want systems to move as little as 20 pounds but when you get to these weights, the lift assists and cranes have to match," explained Mike Lee, vice president of sales and marketing at MHI member TAWI USA Inc. "We have an aluminum track today where a 10-foot section weighs only 17 pounds, for example, and is used to move these lighter products. In today's world, companies don't want their workers lifting any sort of significant weight. With these lighter goods, we have to supply cranes and lift assists that are extremely fast, lightweight and compact in size."



An overhead workstation crane is used by Morningstar Stone and Tile of Topsham, ME, to move stone slabs in and out of inventory. Two systems were installed, one with a motorized bridge. The previously used tow motor required two employees. Now one can do the job. Management describes the crane system as safer and more productive. *Photo courtesy of Gorbel.*



The worker is using the vacuum lifting device attached to an extremely light and easy to move TAWI workstation crane made from aluminum to palletize boxes weighing only 50 pounds. *Photo courtesy of TAWI USA.*

Design, installation and learning curve

Lee said depending on the scope and size of a project, systems can be designed on the spot and installed in just a few hours. Standard Gorbel® workstation crane systems can be laid out, quoted, ordered, delivered and installed within two to four weeks, with custom designed systems like the glass company's taking up to 10 weeks. Even so, Butwid said this installation took four people less than eight hours to install.

"Most operators adapt to the system after only a couple hours of use," said Butwid. "The crane and hoist are completely intuitive, but the vacuum device requires a bit of time to become comfortable with, especially for large work pieces." Lee said operators pick up the use of the lightweight crane systems right away.

Part of today's safety culture

Crane systems increase machine and manpower productivity, improve safety

and ergonomics and generally modernize operations, Butwid noted. "These systems help reduce injuries by taking away the manual lifting part of the job and by making these cranes just as light and easy to use as possible," Lee said. "Workers go from a huge injury potential to almost an elimination of any risk. It's ALL about saving money on injuries. Our lifts can make the job faster and the operator more productive, but the safety aspect is the driving force behind the investment from our customers. When I started with TAWI in 1992, selling a lift to handle 200 pounds was a tough sell. And almost nobody had safety managers. Today our 50 pound capacity lift is our best seller and our customers have teams of dedicated safety and ergonomic people."

At A.L. Smith Glass Company, there is no longer a risk of catastrophic back injury or cuts from handling unfinished glass edges. "A single operator is just as productive at 8 a.m. as he/she is at 4 p.m., even when the biggest jobs are run through the edger," Butwid pointed out. "There used to be a big drop off of productivity as the two-man team fatigued. There is no physical exertion with the system except to push the bridge and lifter back and forth on the crane. There is extremely low rolling resistance, much better than manhandling the largest panes of glass."

Crane systems save money

Companies using workstation crane systems save money by reducing worker injuries, which results in lower worker comp claims and insurance costs, and by needing fewer workers to move big items. Now jobs that formerly took two workers can be done by one in less time than before. For example, at the glass company, manpower has been reduced by 50 percent and edging machine productivity has improved from 20 percent to 65 percent (depending on glass size and weight) because the panes can be repositioned and loaded much quicker.

Other types of facilities that would benefit from using workstation cranes include machining centers, assembly operations, maintenance operations and warehouses. Using systems to do both heavy lifting and repetitive light lifting saves workers time and potential pain. ●

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