



Case Study: SPANCO Cranes Bring Efficiency to Modular Building Lines

DeLuxe Building Systems, Inc., a world leading manufacturer of commercial modular buildings operates a 250,000 square foot manufacturing facility located in Berwick, Pennsylvania. Construction of the modular buildings takes place in several stages in large warehouses located on their property. The construction is start to finish, where stages include working with raw materials, and assembly of floors, walls, and ceilings. The finished product is a modular living space complete with plumbing hook-up. These finished living spaces are integrated into apartment buildings, student housing, and condominiums.

Recently the company shifted the construction of modular walls from lumber to steel. This shift required the creation of new production lines at their facility. In one of the new production areas, 6500lb. bundles of raw steel would be shipped to the facility and then need to be cut on a large ban saw to specific lengths before going into paint production. The owner considered using existing equipment like Combilifts or forklifts to move the steel bundles to the saw, but due to the length of the steel, and the tight spaces around the machinery, using this equipment was unsafe and inefficient. Looking for an effective material handling solution, the general manager did some research online and located the SPANCO, Inc. website. On the site he read about SPANCO's ability to engineer custom overhead lifting solutions. Customization was important to him and with his 60 years of experience in the modular building industry, he had a clear vision for the production line and standard approaches simply wouldn't work. The owner contacted Schuylkill Material Handling, a local SPANCO distributor, and asked them to come out and look at their facility.

When the SPANCO dealer looked at the steel cutting application, he determined that it would be serviced well by a SPANCO PF Gantry Crane, but the facility ceiling was too low to accommodate the size PF Gantry Crane needed to lift the steel bundles. Schuylkill Material Handling sent some sketches and measurements of the application to SPANCO's engineering department. SPANCO's engineering department reviewed the project and quickly developed a custom solution. By working with the owner's vision and looking at the existing building limitations, SPANCO engineering was able to design a custom motorized dual-tied SPANCO PF Gantry Crane. This custom crane was essentially two small SPANCO PF Gantry Cranes tied together with upper and lower steel channels to create an application specific material handling solution.

After the system was installed by Schuylkill Material Handling, Deluxe Buildings was pleased with the operation of the system. The crane has an overall length of 25' and a height of 11'-4" and is power driven by motors on all four gantry legs. The wheels run on two v-groove tracks that are mounted to the floor. When steel bundles are ready for cutting, they are taken off the stockpile by a Combilift and placed at the head of the cutting line. The crane operator uses a push button control pendant that is mounted on the side of the gantry to easily position the crane over the steel. The pendant also allows him to simultaneously control two synchronized 3-ton power driven chain hoists that are attached to a magnet lifter. The hoists lower the magnet lifter to the steel bundle at which point they grab the bundle for lifting. The hoists then raise the steel bundle and the gantry is powered to move the load down the tracks towards a conveyer that feeds the ban saw. The new crane creates an efficiency that could not be achieved with a Combilift and forklift.

After the successful installation of the gantry crane, Deluxe Building's general manager expressed two other locations at the facility where he had a vision for a safer and more efficient workflow. Both locations involved an application where workers needed to place Sheetrock onto modular building frames. The Sheetrock ranged in lengths from 8'-12', with thicknesses of 3/8"-1/2", much too heavy for a worker to lift safely without some form of equipment. After seeing SPANCO's sales catalog, the general manager liked the lifting versatility offered by a SPANCO Articulating Jib Crane. Because both applications required workers picking different size Sheetrock off of multiple stacks in various locations, a lifting system with flexibility was required. SPANCO Articulating Jib Cranes have 360° rotating articulating arms providing multiple circular areas of lifting with arms that extend outward and fold inward. After evaluating both tasks, Schuylkill Material Handling recommended a 500lb. capacity SPANCO Freestanding Articulating Jib Crane for one, and a 500lb. capacity SPANCO Ceiling Mounted Articulating Jib Crane for the other. After both systems were installed, Deluxe Buildings again saw an increase in their production efficiency.

Both cranes are used in coordination with a 250lb. vacuum lifter to allow workers to easily maneuver and position Sheetrock on the modular structures. The freestanding articulating jib was custom designed by SPANCO engineering to include an inverted knuckle boom in order to provide more headroom. The crane also utilizes piped air power for the vacuum lifter. SPANCO is the only manufacturer of articulating jib cranes that internally pipes air power.

The inclusion of SPANCO overhead lifting solutions at Deluxe Buildings has greatly improved the safety and efficiency of their modular building production lines. In an industry where quicker construction translates into a greater return on investment for their clients, having an efficient workflow is critical. SPANCO overhead lifting products are engineered for quality, durability, and reliability. If you have an application that requires overhead lifting and our standard product line won't work, SPANCO has the experience and know-how to provide the perfect custom

solution.

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To learn more about SPANCO's industry leading line of overhead lifting solutions and accessories, please visit www.spanco.com. If you would like to receive any of our promotional literature, please contact, Michael Evanko, Marketing Manager, SPANCO, Inc., at (610) 286-7200 or marketing@spanco.com.