

Tireless Bag Handler

Robotic palletizer operates in existing work area to increase bagging capacity



Renk Seed Company installed a Columbia/Okura LLC Model A1600 robotic palletizer in the same area where two workers had previously manually stacked bags of corn and soybean seed. A safety screen separates the packaging area from the palletizer. (Brett Renk phot)

The stacking area at the end of Renk Seed Company's bagging line is just large enough for two workers to manually load pallets. Built in 1990, the facility's capacity has expanded beyond what could be accomplished with available skilled labor.

"In order to maintain our production capacity, we were going to have to go to two shifts," says Brett Renk, production manager. "As an alternative, we began to look at installing a mechanical palletizer."

Limited Work Space

The working space required by most palletizers meant the existing work area would be inadequate. Some proposals Renk received called for the construction of a larger work area. Others proposed the installation of extensive conveyors to allow a new machine to be placed in the existing warehouse.

A single-arm robotic palletizer was the only machine Renk found that could

operate in the existing work area. In August, 2002, Renk Seed Company purchased and installed a Model A1600 robotic palletizer from **Columbia/Okura LLC**, Vancouver, WA (360-735-1952/ www.columbiaokura.com).

User Installation

Due to the robot's straight forward design, the accompanying CADD drawings were easy to follow which enabled Renk's personnel to assemble the robot themselves. In only three days, the bagging room went from manual stacking to stacking with a robot.

"If you can read instructions and put together a model airplane, you could assemble this machine," Renk says. "We had no trouble assembling the pieces and installing the machine."

Fine-tuning the robot's computer program took additional effort. The original programming was rather generic and conservative. Because the instructions are all user-accessible, Brett

CASE STUDY

Renk was able to fine-tune the robot's operation.

"Anyone with even a basic understanding of how a computer program functions can make changes to this machine," Renk says. "Just plug in your laptop and you are set to go."

Unexpected Benefits

The robot's program was modified to accommodate Renk Seed's specific applications to place slip sheets on each pallet as well as stack bags.

"Programming for different bag sizes is rather simple," Renk says. "Once it is set, there is no need for more attention." Following Renk's adjustments, the packaging line can operate at 18 bags per minute.

"The robot has exceeded our expectations. There were also unexpected benefits," Renk says. "Labor flexibility has been greater than expected. This allows for more on-demand bagging. Due to the robot's greater efficiency, we have not had to add a second shift."



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Key Personnel

- Richard Renk, Chairman
- Jeff Renk, Sales and Research Director
- Alex Renk, Marketing Director
- Brett Renk, Production Director
- Judy McCormick, Administration