

CASE STUDY

Automated Packaging Plant Timeline Reduced by 40% with Expert Project Management

www.epicsysinc.com | (314) 334-1089

JOB OVERVIEW

Key Features

- Fully automated packaging plant treating five tons of seeds daily
- Conveying systems, neutralization systems, process feed tank, moving waterbed, gas fired drying drum, bulk weigh feed system, box tote dump
- Custom fabrication of the 35,000 lb drying drum

Challenges

- Coordination of a condensed timeline across multiple facilities and crews
- Client's dryer drum manufacturer could not deliver a drum within the necessary timetable. EPIC designed and built a custom dryer drum in-house

Impact

- Project timeline was reduced by nearly five months through full scope responsibility by EPIC's project manager
- Custom solutions for both the dryer drum and tote packaging systems were successfully engineered, designed and integrated

THE EPIC SOLUTION

EPIC reduced the project timeline 40% by delivering a fully automated packaging plant in five months. The final system treats 1200 pounds of seed an hour. Bulk dry seeds are dumped into a bucket elevator. A dust collection system was installed to control dust coming off the conveyors and box dump.

Seeds pass through a moving water bed where they are treated with a water and lye solution. A 100 horsepower packaging boiler heats water from a process feed tank for the moving water bed. This system includes a heat transfer system and dual bank filtration. A neutralization system was integrated to process the effluent from the moving water bed.

A wet product conveyor moves seeds to the dryer drum, where drying rates are controlled by speed and angle of the drum. Dry seeds leave the drum and pass along a vibratory conveyor to reject the tramp material. A bulk weigh feed system feeds a custom box tote packaging system. EPIC managed the field contractors for mechanical, civil and electrical upgrades, utilizing local contractors. Conduit installation and field construction took several months, during which the machinery fabrication progressed. FAT testing for the drum was completed in EPIC's plant before shipment. ISO's were used to make the field installation quicker by simplifying the complete process, making it easier to manage. A full week of training for automated packaging plant operators and maintenance personnel was conducted on site.

