

# End of Arm Tool: Full Layer Palletizer

Mechanical Engineering

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Sponsor: Thiele Technologies Inc.

# FRESNO STATE

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## Abstract

The group's senior capstone project was to design a new end of the arm tool (EOAT) for Thiele Technologies operating out of Reedley, California. This tool allows packaging facilities to palletize a full of product from a conveyor belt and place the formed layer onto a standard pallet of. Overall, the designed EOAT gives potential costumers the capability to palletize multiple pallet size with only one EOAT thus maximizing vital floor space.

## SolidWorks Model



## Requirements

- Handle layer weight of 400lbs
- Maximum Product height: 14 inches
- Product Layer compressed (across flow): 30"-40"
- Product Layer compressed (with flow): 40"-48"
- Mount to a Famic M-410iB/ 450 robotic arm
- Adjustable pallet size on the fly

## Prototype



Final Design utilizes a universal chain and roller bed concept to place product onto a pallet safely. Two pneumatic cylinders square product on the sides. While two pneumatic guided cylinders form the pallet layer with product flow.

## Complete System



## Sponsor



## Fabricated Components

