# Robotic Palletizers

TopTier palletizers are mission-critical components of automated end-of-line packaging operations for food, beverage, and consumer packaged goods manufacturers. TopTier is the global leader in technology and value – providing palletizing solutions with speed, flexibility, and dependability for 24/7 operations. TopTier installs single palletizers or systems integrated with existing conveyor and other material handling equipment to drive productivity and increase efficiency. New patented technologies from TopTier make palletizing reliable, easy, safe, and energy efficient.

MODULAR ENGINEERING
Palletizer model groups share common functional modules and frame systems to provide comprehensive palletizer solutions. Shared modules maximize layout flexibility while reducing cost through increased manufacturing and machine controls efficiencies. Modular engineering means quality control and complete flexibility in the configuration of machine components. No customization is required. The orientation of induction and load exit meet your exact requirements.

ROBOT

SHEET HANDLING

PALLET HANDLING

INDUCTION

STRETCH WRAPPING

LAYER CONDITIONING

LOAD HANDLING
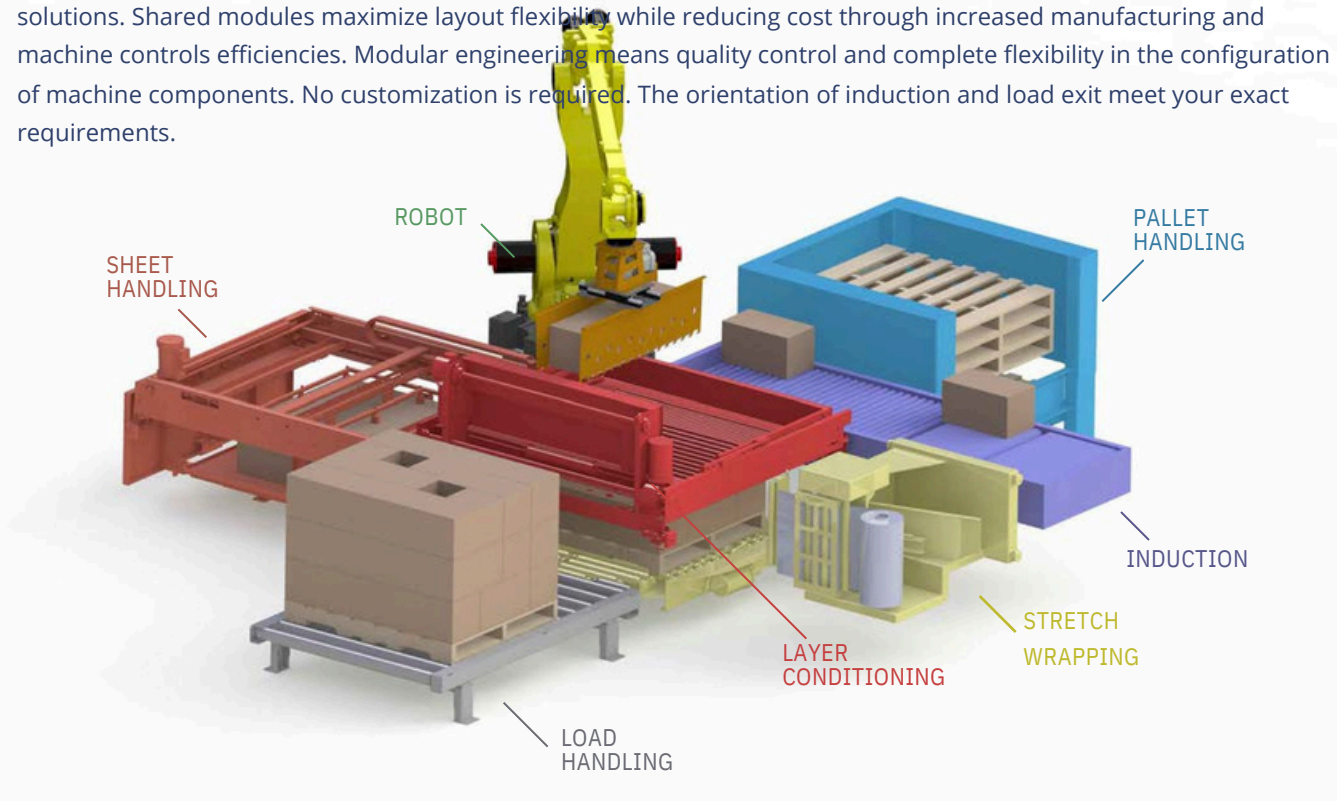
ADVANCED CAPABILITIES AND PERFORMANCE — WITH NO ROBOT PROGRAMMING

Robot palletizing has become an increasingly accepted alternative to traditional layer palletizing, but the solution is not without challenges. Typical robot palletizing experiences limits on products that can be handled, performance issues with deviations in product uniformity, special training to handle complexities of robot programming, large footprint, custom integration, and the expense of support. All these shortcomings are eliminated with RoboTier.

TECHNOLOGY

RoboTier utilizes end of arm tooling that supports product from the bottom, allowing higher speed robot motion and advanced product handling security. Bottom support offers a significant improvement over typical robot product handling methods such as vacuum top picking that is less flexible and secure, and clamping systems that necessitate looser loads.

Bottom support is achieved by assembling layers on an apron with products loosely spread to allow removal of the bottom support tool. Loose spreading allows faster robot speeds, as exact product placement is not critical. Once a layer is completed, four-sided clamping centers the layer on the pallet and a tight uniform layer is deposited. Vertical travel capabilities of the apron reduce robot reach requirements allowing use of the smaller, faster, and more economical Fanuc robots. The layer apron also provides a queuing platform for continued layer building while optional concurrent stretch wrapping occurs.

CONTROLS

RoboTier product handling innovations are enhanced by advanced controls architecture for robot palletizing. A Fanuc controller with very simple code that cannot be modified directs robot motion based on PLC instructions. In effect, the robot is an electronic slave to the Allen Bradley CompactLogix PLC master controller and B&R PC 12" color touchscreen HMI. All automatic and manual palletizer functions are controlled using the HMI touchscreen; robot controls training or experience is unnecessary. EasyStack programming software installed on the PC HMI creates patterns quickly and easily without PLC or robot programming.

CAPABILITIES • Rates: 1-3 layers per minute
- Products: Case, bag, bundle, display pallet
- Infeed Height: 23" to 60"
- Minimum Case Dimension: 6"
- Maximum Case Dimension: 29"
- Maximum Case Weight: 220lbs"
- Minimum Layer Dimension: 38"
- Maximum Layer Dimension: 50"
- Standard Layer Weight: 300lbs
- Standard Load Height: 60"
- Minimum Footprint: 162" x 115"
- Typical Footprint: 233" x 155"

OPTIONS
- All-electric
- Concurrent Stretch Wrapping
- Freezer
- Labels-out
- Load Handling
- Load Labeling
- Pallet Handling
- PerfectPattern Induction
- Sheets & Liners
- Double Stack Loads
- Layer Weight to 1000lbs
- Tall Loads to 110"

Some features may not be available on all models.

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PMMI
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info@optamate.com

317-342-6729

Optamate