



FROM ROBOTIC AUTOMATION TO
STRETCH WRAPPERS TO CONVEYORS...
KAUFMAN IS THE SIMPLE CHOICE!

HISTORY OF KAUFMAN

1946 – Founded by Larry L. Kaufman, Sr. who pioneered the design and construction of industrial process heating equipment: parts washers, heat treat furnaces, and painting systems.

1960's – Entered the poly film unitizing field by becoming the leading manufacturer of shrink wrap systems in the US and Canada.

1970's – Entered infant stretch wrap market by building rotary table and rotary arm stretch wrappers.



1980's – Continued refinement and fortified position of primary product line of stretch wrapping equipment. Organized focus on providing end of line solutions/systems.

Early 1990's – Continued development of automation equipment to support stretch wrap system including pallet handling conveyors, pallet transfer conveyors, transfer cars, dual load stackers, pallet to slip sheet transfer systems, pallet dispensers, slip sheet dispensers, top and bottom corrugated sheet dispensers, poly sheet dispensers, low level palletizers and gantry stackers.

1995 – Constructed new 60,000 sq. ft. manufacturing facility.

Late 1990's – Development of robotic palletizers and case conveyor systems. KES enters agreement with FANUC robotics as a distribution partner.

Millennium – Mastering of FANUC robotic palletizing systems. Developed an increased depth in robotic offerings including introduction of industry leading robotic bulk palletizing systems. Expanded production capacity with acquisition of 30,000 sq. ft. facility in Fremont, OH.

2010-Present – Continued expansion of FANUC robotic automation solutions with robotic case packers and robotic labelers. KES has created a unique and dynamic competitive position in the marketplace as a manufacturer, FANUC robotic automation solutions provider, and complete system integrator. **Our expertise in end of line automation is unparalleled.**



MAIN OFFICE IN WATERVILLE, OHIO

RESEARCH AND DEVELOPMENT LABORATORY

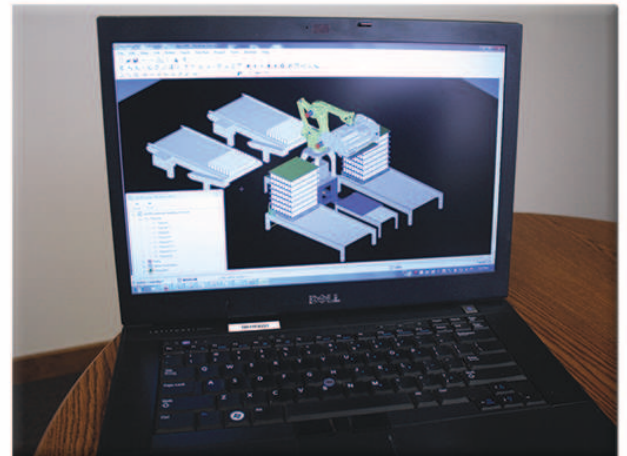
Kaufman Engineered Systems has invested into its Research and Development Lab which consists of all the tools needed to customize a system to fit your unique product including:

- Three FANUC robots and access to all models
- Multiple customizable end-of-arm tools
 - full layer palletizing/depalletizing
 - vacuum
 - bag
 - clamp
 - custom designed
- Conveyors
 - mat-top
 - roller
 - case

The lab is an invaluable tool when testing customer products. It allows Kaufman engineers to verify important process parameters before, during, and after the quoting process. Dedicated testing for:

- Robot speed and utilization
- Product pick ability testing
- Conveying characteristics
- Solution proving

With tools to verify important process parameters before quoting, it takes the "unknown" out of the equation and reassures you through extensive up front testing that your system solution has been designed from factual data.



DUAL LOAD STACKERS • TRANSFER CARS • ROBOTIC TRAY PACKERS

For over 70 years, Kaufman Engineered Systems has been a pioneer in complete line automation. We have a reputation for our single-source convenience, responsive service, and unmatched equipment performance.



PALLETIZING AND DEPALLETIZING

ROBOTIC PALLETIZING AND DEPALLETIZING EQUIPMENT

- Full layer
- Case
- Bag
- Carton
- Plastic container
- Glass container

Calculate the benefits when you automate with Kaufman Engineered Systems robotic palletizing solutions:

- Increased line efficiency
- Increased production
- Improved quality of finished units
- Greater line flexibility
- Reduction in labor injuries
- Reduction in staffing requirements

As an authorized systems integrator for FANUC Robotics, Kaufman Engineered Systems applies FANUC robot technology to provide customers complete end of line system solutions.

Standard Features:

- Allen Bradley control components
- Kaufman Engineered Systems manufactured end-of-arm tooling
- Category 3 safety architecture
- In-house electrical and mechanical system design



VACUUM END OF ARM TOOLING



PALLETIZING SPATULA TOOL

ROBOTIC CASE PACKING SOLUTIONS

- Picking and packaging of products
- Create flexibility and decrease downtime by integrating a robotic solution versus conventional solutions
- Flexible product packaging capabilities
- Adjustable end-of-arm tool solutions based on product shape and orientation
- Decrease packaging process footprint
- Custom system design to meet production requirements and rates

Standard Features:

- Allen Bradley control components
- Kaufman Engineered Systems manufactured end-of-arm tooling
- Category 3 safety architecture
- In-house electrical control panel engineering
- In-house mechanical design



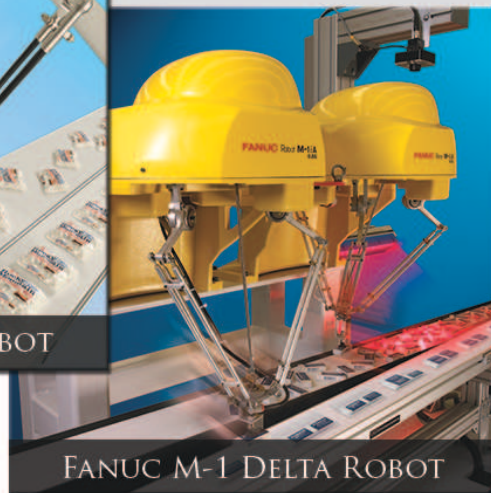
FANUC ROBOTIC TRAY PACKING EQUIPMENT



PLASTIC BOTTLE CASE PACKING SYSTEM



FANUC M-3 DELTA ROBOT



FANUC M-1 DELTA ROBOT

ROBOTIC HIGH SPEED PICKING SOLUTIONS

- Multiple uses including sorting, labeling, packing and material handling
- Maximize accuracy with vision systems or line tracking
- Light weight models built for repeatability and speed

CONVEYING SYSTEMS

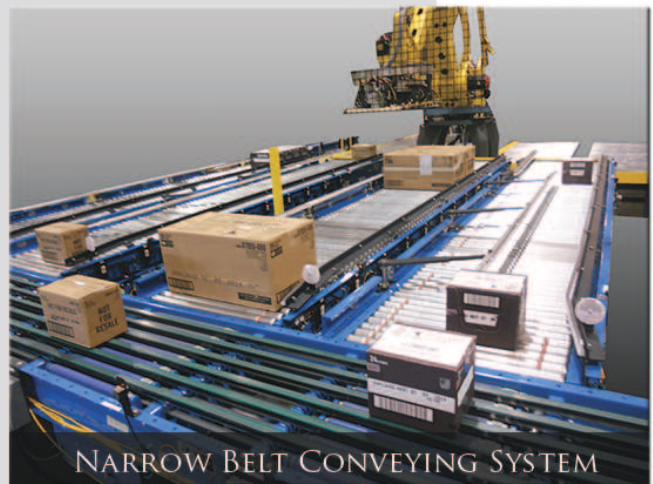
The Kaufman difference is in the details. We build our conveying systems at a higher standard than the competition. Even the most challenging floor plan is no hurdle for Kaufman Engineering System's unmatched conveying solutions. Types of conveying systems:

- Roller conveyors
- Chain conveyors
- Mat-top conveyors
- Belt conveyors
- Chain-to-roller transfer conveyors
- Turntable transfer conveyors
- Lift and turn conveyors
- Hi-low conveyors
- Case and container feed conveyors

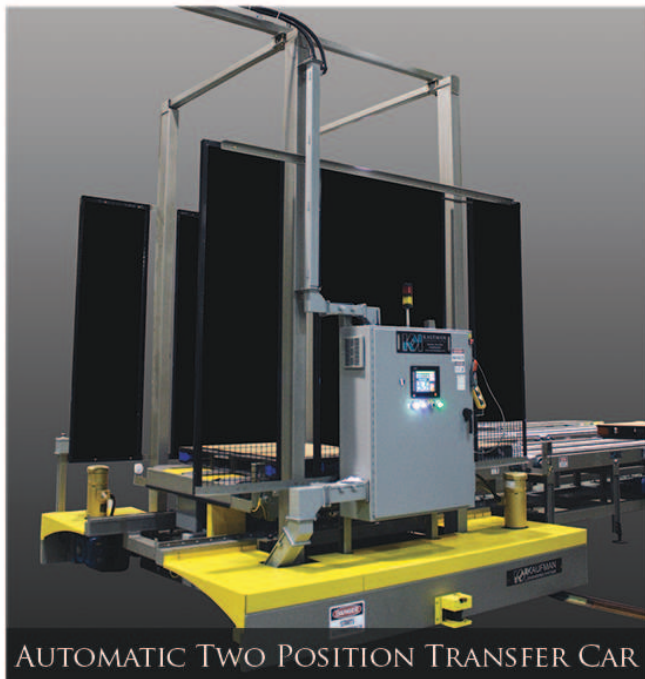
INTEGRATORS OF:



ROLLER CONVEYOR



NARROW BELT CONVEYING SYSTEM



AUTOMATIC TWO POSITION TRANSFER CAR

TRANSFER CARS

- Single position
- Two position in-line
- Two position side-by-side
- Four position

Transfer Car Options:

- Transfer car speeds 60-300 fpm
- Keyence safety scanners for verifying paths are clear of pallets and personnel
- Safety fence for perimeter guarding
- In floor or above floor track designs
- Wireless Ethernet, Igus, Festoon or Power-rail for communication and power
- Electric hold-downs for load securement

FANUC ROBOTIC PALLETIZERS



ROBOTIC CASE PACKERS

KAUFMAN AUTOMATIC STRETCH WRAPPERS



Kaufman Engineered Systems offers a complete line of the most durable stretch wrapping equipment available. When uptime efficiency and equipment longevity are what you desire, Kaufman stretch wrappers are the right choice for your business.

Kaufman offers a complete line of automatic stretch wrapping equipment including:

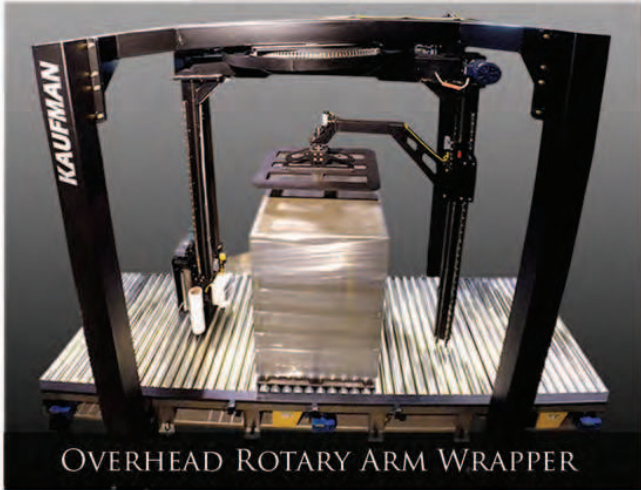
- The KForce R20 and R35 Series - overhead wrapper
- The KForce T20 Series - turntable wrapper

Stretch Wrapper Standard Features:

- 10, 20, or 35 RPM rotation speeds
- Load height capacity 60", 80" and 100"+
- 0-300% film pre-stretch capacity
- 20" film capacity
- Heavy duty tubular frame construction
- Central lubrication
- K-Force film tension control
- Quick thread powered pre-stretch for easy film loading
- Automatic load height scanning
- In-house electrical control panel engineering
- In-house mechanical design

Additional Options

- Load height capacity: 110"+
- 10" - 30" film capacity
- Corner board protection
- Top protection (poly or corrugate)
- Slip sheet plow tabs
- Load stabilizing hold down
- Film roping
- ALTC (Automatic Load Tension Control) automatically adjusts tension to load stability requirements
- UL 508A listed control panel



OVERHEAD ROTARY ARM WRAPPER



TURN TABLE STRETCH WRAPPER

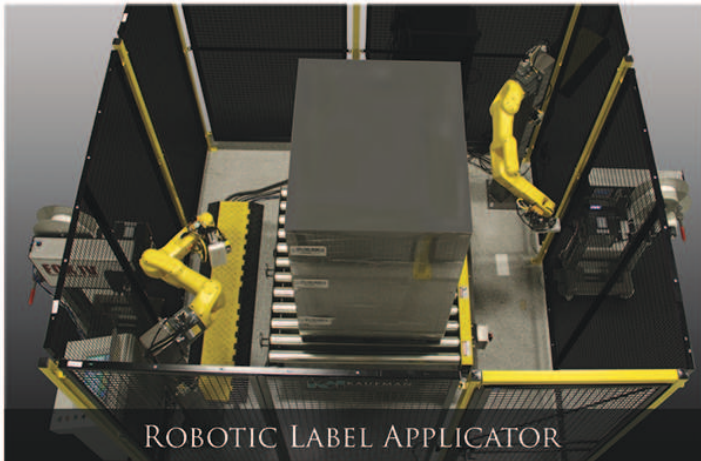
KAUFMAN MATERIAL HANDLING EQUIPMENT

In-line automation systems are a Kaufman hallmark. Kaufman Engineered Systems has built its longevity and stellar reputation in the design and manufacture of custom material handling equipment that is built to last:

- Dual load stackers
- Pallet dispensers
- Pallet stackers
- Bottom sheet feeders
- Top corrugated sheet feeders
- Top poly sheet feeders
- Pallet to pallet transfer units
- Pallet to slip sheet transfer units
- Load lifters



DUAL LOAD STACKER



ROBOTIC LABEL APPLICATOR



AUTOMATIC MACHINE LOADING

ROBOTIC MATERIAL HANDLING SYSTEMS

- Tray forming
- Vertical support forming/loading
- Machine loading
- Corner board applying
- Labeling
- Vision guided depalletization
- Rotating/orienting
- In-house electrical control panel engineering
- In-house mechanical design

Kaufman Engineered Systems are the experts in end-of-line automation and customized equipment to suit your system requirements.

EQUIPMENT INSTALLATION SERVICES

The benefit of having the experienced staff at Kaufman Engineered Systems install your end of line equipment versus an outside contractor is peace of mind.

- Kaufman has 3 direct installation teams
- All employees PPE, KES LOTO (lock out tag out), forklift, and blood born pathogens trained
- Complete mechanical and electrical installation
- Organized delivery of trucks to your location
- Unloading and setup of equipment
- Expert knowledge of your system
- Rental of forklifts designated for installation
- Coordination of all needed tools
- Efficient transition from install to startup to production



Scan to Watch our
Installation & Service
Support Video



KAUFMAN INSTALLATION TEAM

PACKAGING ROBOTIC SYSTEM



ROBOTIC MACHINE LOADING

SERVICE AND SUPPORT

Reliable 24-hour service support you can count on with expert service technicians and knowledgeable training programs. Advanced support utilizing Ethernet cameras to provide video history of an event and remote machine access 24-hours a day, 7 days a week, 365 days a year.

Support Products:

- Preventative maintenance program
- System audits, equipment rebuilds and upgrade support
- Non-proprietary spare/replacement parts
- FANUC robot support and maintenance
- Camera (Eye in the Sky) with VPN remote access
- System safety upgrade for existing equipment
- 24/7 emergency support

Preventative Maintenance Program:

- Annual or semi-annual system reviews
- Discount on labor and parts
- Audit
 - Full review of system equipment
 - Generate list of recommended service and replacement parts
 - Complete scheduled maintenance items
- Additional training/education
 - Literature available for various set-up processes
 - Required maintenance is reviewed with maintenance personnel

Eye in the Sky Package:

- Allows immediate response to down-time
- Video review identifies cause of down-time or sequence of events
- VPN remote access allows remote resolution
- Travel expenses can be avoided
- KES Eye in the Sky Package includes:
 - AXIS PTZ-214 Ethernet video camera with pan tilt, ZoomAXIS camera
 - Station monitoring software (client and server)
 - Industrial PC for archives and communications
 - FANUC software (for robot applications)
 - Windows 7 operating system software
 - Computer set-up and testing



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(voicemail)
24/7 Emergency Support
Phone: 419-878-9727 ext. 300

HUNDREDS OF SUCCESSFUL
COMPANIES HAVE CHOSEN
KAUFMAN ENGINEERED SYSTEMS
AS THEIR SINGLE SOURCE
MANUFACTURER FOR COMPLETE
END OF LINE AUTOMATION.

THE CHOICE IS SIMPLE!

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