



# **BAY INDUSTRIAL GROUP**

*INNOVATIVE TECHNOLOGY FOR INDUSTRY*

## **Bay Design, Inc.**

*Engineered Material Handling Solutions*

## **Bay Automation, Inc.**

*Precision Automated Equipment*

1907 Lansdowne Road  
Baltimore, Maryland 21227

Phone: 410-737-9280

Fax: 410-737-9284

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[www.bayindustrialgroup.com](http://www.bayindustrialgroup.com)



# BAY INDUSTRIAL GROUP

INNOVATIVE TECHNOLOGY FOR INDUSTRY

## Products & Services

**Bay Design, Inc.**  
*Engineered Material Handling Solutions*

**Bay Automation, Inc.**  
*Precision Automated Equipment*

*Bay Industrial Group Companies*

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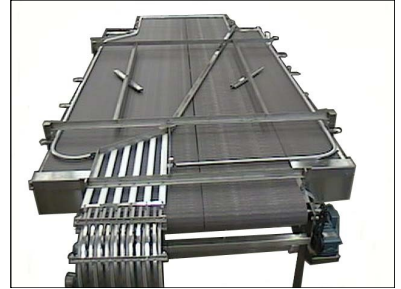
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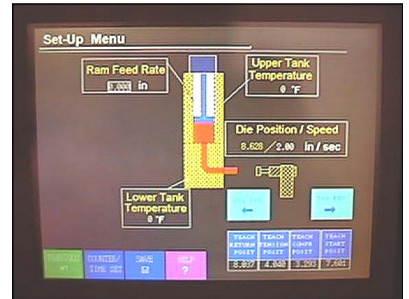
### Bay Design, Inc

- System Integration
- Mechanical and Electrical Engineering
- Controls and Programming
- Custom Industrial Equipment
- Ergonomic Devices
- Custom Tooling & End Effectors
- Material Handling
- Conveyors
- General Fabrication



### Bay Automation, Inc

- System Integration
- Concept Evolution
- Robotic Work Cells
- Hard Automation Cells
- Indexing Dial Machines
- Vision Inspection & Quality Control
- Machine Vision
- Test Equipment
- End of Arm Tooling
- Pick & Place
- Motion Control



### Electrical Controls

- Control Programming
- UL approved panel shop

### Installation Services

- Mechanical Installation
- Electrical Installation
- Commissioning

### Distributor Products

- Case Conveyor
- Parts Conveyor
- Monorail Systems
- Light Duty Cranes
- Hoists
- Manipulators
- Balancers
- Vacuum Lift Equipment



Visit us on our Website:  
[www.bayindustrialgroup.com](http://www.bayindustrialgroup.com)



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## Programming & Controls Capability

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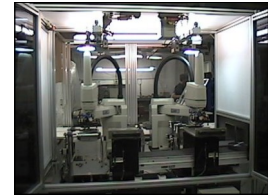
### Industry Familiarity:

Bottling Lines  
Personal Care Products  
Aggregate Grinding Mill  
Glass Manufacturing  
Box Making  
Dairy  
Bakery  
Automotive  
Batch Material Packaging  
Pharmaceutical



### Applications:

Bottle Conveyor Systems (Glass and Plastic)  
Bottle Filling Equipment  
Bagging Equipment  
Oven/Proofer Controls  
Bulk Material Load-Out  
Palletizing/Depalletizing  
Inventory Control Systems  
Robotic Material Handling  
Object Recognition and Acquisition  
SCADA Systems for Batch Product Packaging  
Servo Controls for Conveyor and Pick & Place applications  
Electrical Usage Monitoring  
SPC Systems



### Control/HMI Software:

AIM/V+ (Adept robotics languages)  
Genesis  
Factory Link  
Visual Basic  
PLC  
Function Block  
Instruction List  
Ladder Logic



### HMI Hardware:

Allen Bradley, Maple Systems, Automation Direct

### PLC Hardware:

Allen Bradley, Square D, Omron, Keyence, Koyo (Automation Direct), GE, Seimens, Texas Instruments, Mitsubishi



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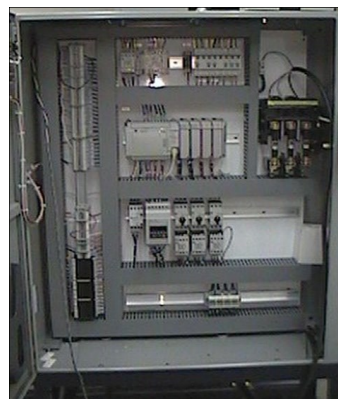
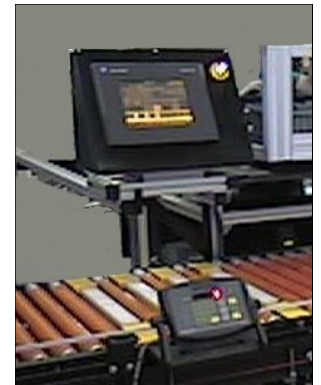
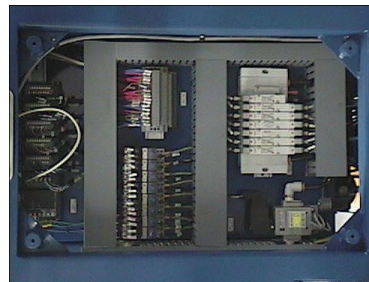
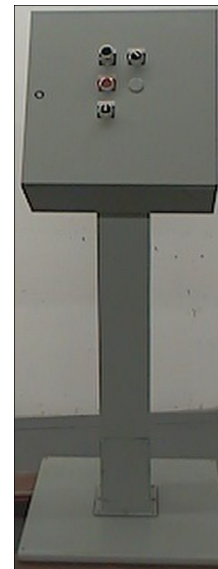
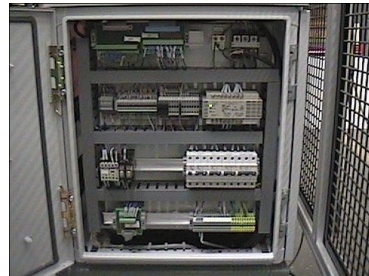
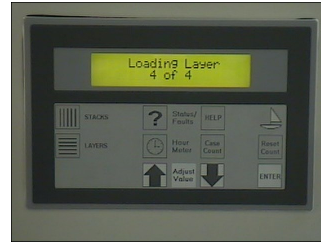
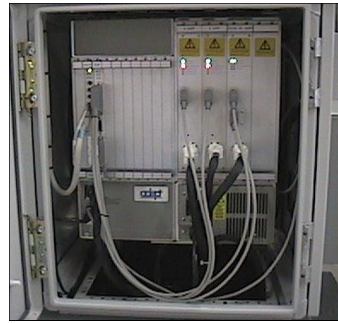
## Control Panels

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# BAY INDUSTRIAL GROUP

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## Tabletop & Mattop® Conveyor

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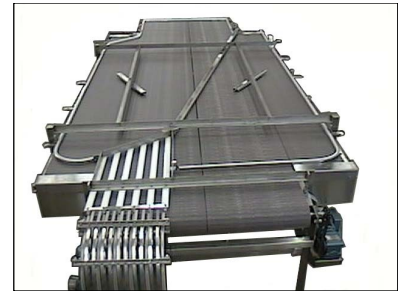
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### Features:

Heavy Duty Construction  
Modular Design  
Completely Assembled Prior to Shipment

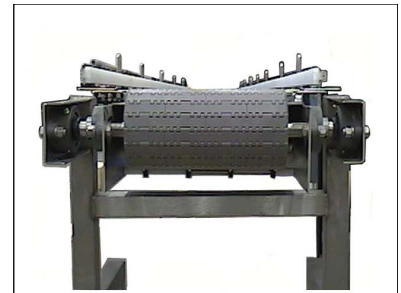
- Frames
- Wearstrips
- Rail Brackets
- Rails
- Motors
- Guards

Factory Tested



### Industry Familiarity:

Personal Care Products  
Beverage  
Box Making  
Baked Goods  
Pharmaceutical  
Food  
Produce  
Heavy Machinery  
Tobacco



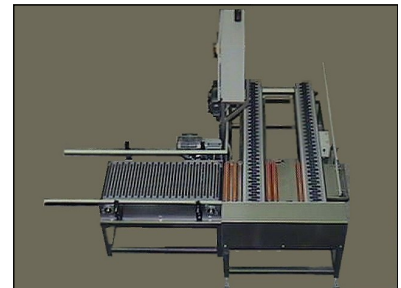
### Applications:

Tray Handling  
Bottle Conveyor  
Accumulation Tables  
Bulk Handling  
Filling  
Taping and Labeling



### Specialty Areas:

Electrical Controls  
Servo Laners  
Pneumatic Diverters  
Denesters  
Pick and Place  
Flap Openers  
90° High Speed Tray Transfer  
Robotics  
Vision Inspection





# BAY INDUSTRIAL GROUP

INNOVATIVE TECHNOLOGY FOR INDUSTRY

## Semi-Automatic Case Loader

**Bay Design, Inc.**  
*Engineered Material Handling Solutions*  
**Bay Automation, Inc.**  
*Precision Automated Equipment*

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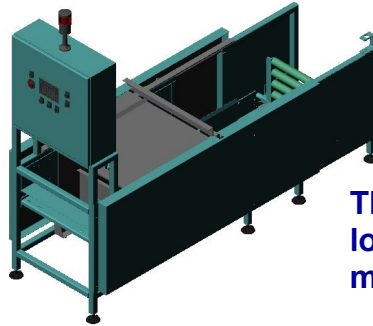
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The Model 3600 Case Loader was designed to improve efficiencies and reduce staffing requirements associated with operations that make use of operators to manually load cases.

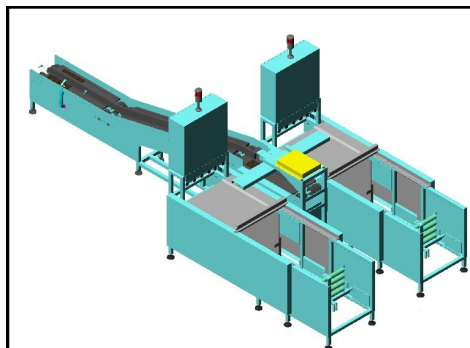


**The Model 3600 Case Loader will load any product that requires a matrix pack pattern such as:**

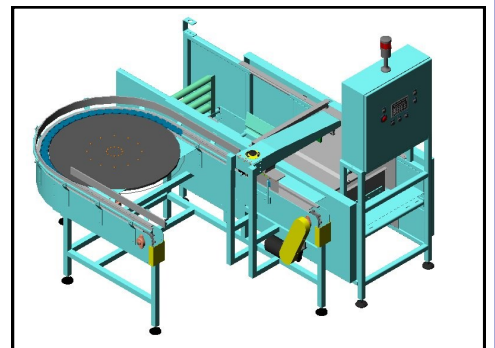
- **Cartons**
- **Sleeved Product**
- **Tubes**
- **Rolls**

### Features:

- Economically priced for improved ROI
- Heavy duty construction
- Powder coat finish
- 110 volt power service
- Touchscreen & PLC Controls
- Operator friendly interface
- UL listed control enclosure
- Ergonomic work height
- Multiple infeed configurations available
- Open design for easy QC access
- Designed to easily interface with up-stream equipment
- Easy to install and relocate
- Small footprint
- Easy Changeover w/o change tooling
- Wide range of products and case sizes
- Optional power discharge
- Optional Dual Pusher infeed



**Twin Model 3600 Case Loaders**  
(w/ optional Dual Conveyor Infeed and Pushers)



**Model 3600 Case Loader**  
(w/ optional Rotary Table Infeed)

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# BAY INDUSTRIAL GROUP

INNOVATIVE TECHNOLOGY FOR INDUSTRY

## Pick and Place

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### Features:

- Economically priced for improved ROI
- Heavy duty construction
- Powder coat finish
- PLC Controls
- Operator friendly interface
- UL listed control enclosure
- Ergonomic work height
- Open design for easy QC access
- Designed to easily interface with upstream equipment
- Easy to install and relocate
- Small footprint
- Easy Changeover w/ change tooling
- Wide range of products sizes





# BAY INDUSTRIAL GROUP

INNOVATIVE TECHNOLOGY FOR INDUSTRY

## Manually Powered Roll Transporter

**Bay Design, Inc.**

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### Specifications:

- 500 lbs to 4000 lbs capacities available
- Safely Transport up to 60" dia. x 24" wide rolls
- Pump Action using hand or foot operation
- Indicator Scale for Accurate Lift Positioning
- Self-Contained; requires no external power source



Model No.	Lift	Roll Diameter	Roll Width	Capacity
RM500	10.0"	48.0"	10.0"	500 lbs.
RM1000	12.0"	60.0"	14.0"	1,000 lbs.
RM2000	12.0"	60.0"	14.0"	2,000 lbs.

### **Custom Configurations Available:**

Call our Customer Service Department for custom applications





# BAY INDUSTRIAL GROUP

INNOVATIVE TECHNOLOGY FOR INDUSTRY

## Flap Opener

**Bay Design, Inc.**

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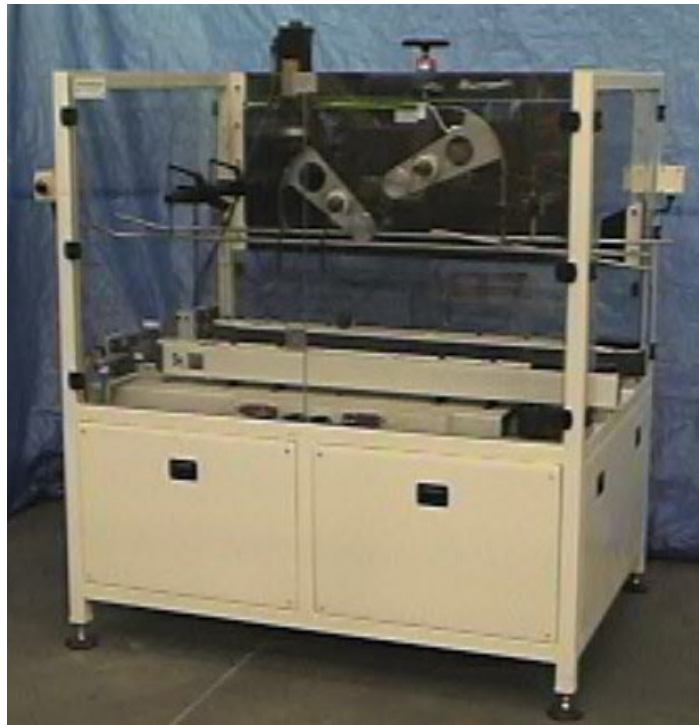
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The Flap Opener is designed to open major and minor corrugated box flaps for a variety of box sizes. Two servo driven cam arms mounted on a common adjustable plate reach into the box and lift the minor flaps then rotate them 180 degrees to allow the automatic removal of the box contents. The machine is equipped with adjustable motorized side belts to power the box through the machine while the flaps are being opened.



### Features:

- Designed to accommodate multiple box sizes without the need for change parts
- Fully adjustable motorized side belts
- Servo driven cam arms to open minor flaps
- Adjustable major flap opening rails
- Common mounting plate for easy adjustments



# BAY INDUSTRIAL GROUP

INNOVATIVE TECHNOLOGY FOR INDUSTRY

## Print-Head Stand

**Bay Design, Inc.**

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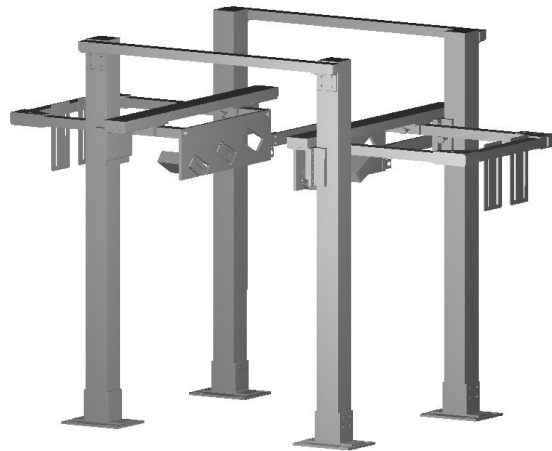
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The Print-Head Stand is designed to provide quick changeover with precise positioning of multiple coder print-heads. Built to accommodate an almost unlimited range of box sizes, the Stand is easily and quickly adjusted in one step—without using any tools. The key is the integrated design of the guide rails and the print-heads. With Bay Industrial Group's Print-Head Stand you get speed, accuracy, decreased downtime, increased productivity, and simplicity without sacrificing technology.



### Features:

- Dramatically reduces changeover time
- Designed to accommodate multiple box sizes without the need for change parts
- Fully adjustable without the use of tools
- Heavy duty aluminum construction
- Guide rails adjust with the print-heads thus eliminating the need for independent rail adjustments
- Easily mounts over your conveyor without modifications

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# BAY INDUSTRIAL GROUP

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## High Speed 90° Transfer

**Bay Design, Inc.**

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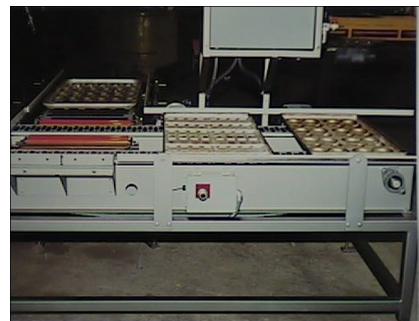
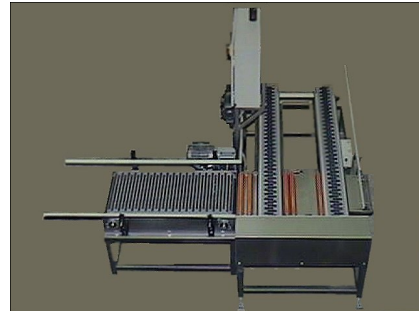
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This ninety degree transfer was designed to handle large pans (2' x 3') at sixty pans per minute. The Mattop® induction belt with friction strips pulls a gap from existing conveyor. The pop up powered roller transfer is covered with polyurethane for better control of the product. A custom proximity sensor actuator ensures a repeatable transfer position. The dual Mattop® take away conveyor is also equipped with friction strips for a more positive transfer.



### **Features:**

- High speed Mattop® belt conveyor
- Pop-up powered roller transfer section
- Proximity sensor actuator for proper transfer
- Dual Mattop® take away conveyor
- Adjustable side rails and supports
- Controls to allow system to stand-alone
- Designed for sixty trays per minute



# BAY INDUSTRIAL GROUP

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## Power-Assisted Load Manipulator

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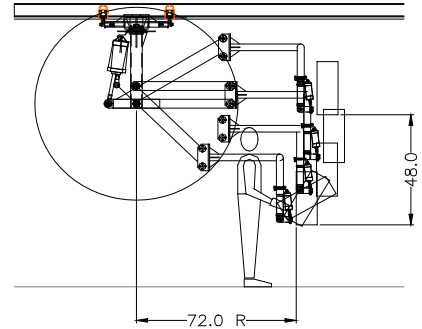
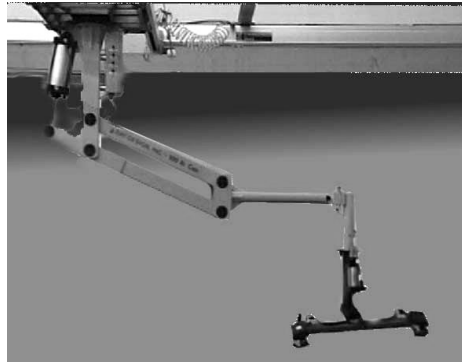
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Model No.	Pick-Up	Lift	Radius	Capacity
LM50	24"	48"	72"	150 lbs.

### Specifications:

- 150 Lb. Capacity.
- 12' Diameter Work Area.
- Load Sensitive Control.
- 48" Vertical Lift Range.
- Requires No Electrical Power Source.
- 4 Axes of Free Movement.
- Extended Range when used with Overhead Rail System. (available as an option)

### Custom Configurations Available:

- Pick-up Height.
- Lift Height.
- Work Envelope.
- Mass.

Call our Customer Service Department for custom applications and provide them with the above information:



# BAY INDUSTRIAL GROUP

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## Robotic Work-Cell

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This work cell was introduced into an existing line, which required orientation of large, unwieldy panels. The four-axis SCARA robot solved many problems related to operator fatigue and maintaining production rates. The work cell features high-speed, twin lane, induction belt conveyor, and interlocked work area enclosure. Custom designed "end-of-arm" tooling incorporates multi-stage vacuum generator/cup array and confirmation sensors.



### **Features:**

- High speed lift and rotate with accurate positioning
- Adept robotics with custom vacuum tooling
- Custom interface with existing equipment
- Pneumatic buffer section for timing parts





# BAY INDUSTRIAL GROUP

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## Robotic Inspection Cell

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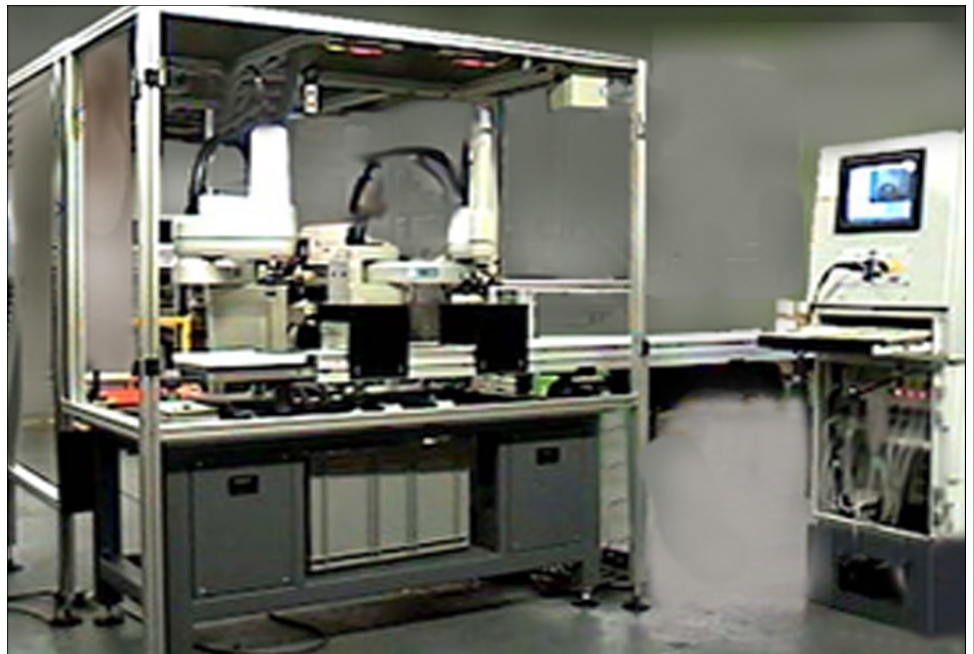
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The Inspection Cell was developed for inspection and singular placement of stacked parts. As each stack enters the work area from one of two conveyors, their image is acquired and compared to a known specification. Each robot is dispatched to the relative location of the acquired part and retrieves the uppermost part from the top of the stack. Parts are then carried to a specific registered destination point for further processing. The vision system locates both part center and angular rotation for proper registration.



### **Features:**

- Dual Robot/Vision Work-Cell configuration
- Location-Inspection-Orientation of work piece
- Custom graphic touch screen monitor
- Significant variety of graphics to inspect and orient

### **Bay Industrial Group....**

Is comprised of two divisions, Bay Design, Inc. and Bay Automation, Inc. Each division is focused on various aspects of the material handling industry and the combination of the two divisions provide for a comprehensive approach to all your material handling needs. In addition, Bay Industrial Group has a complete UL panel shop and a team of electrical programmers, as well as a full range of field services, including mechanical/electrical installation and start-up to support the two divisions.

### **Bay Design....**

Offers a wide variety of equipment and services, from standard conveyors and mezzanines to complete systems integration.

### **Bay Automation....**

Provides expertise in the area of factory automation, from precision assembly machines and robotic assembly to vision inspection and guidance.