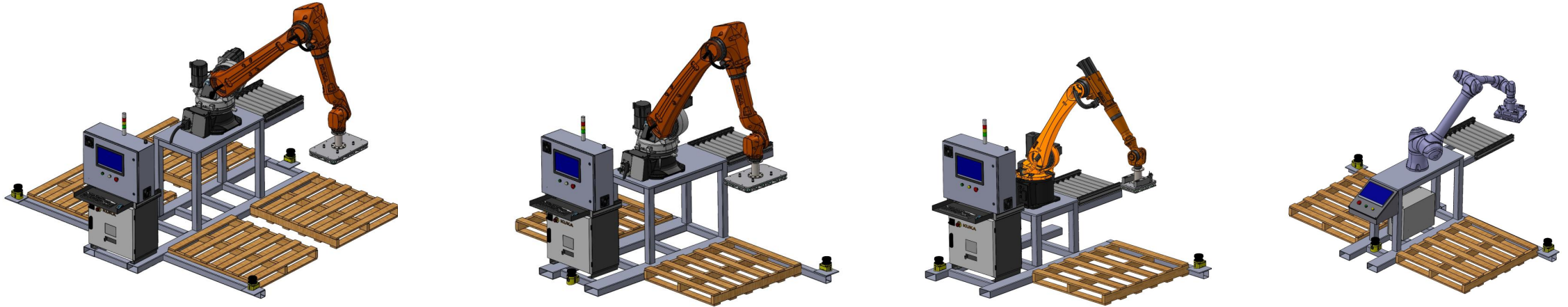
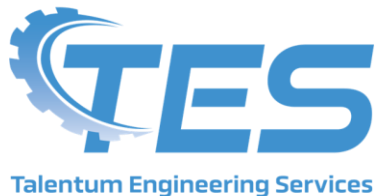


# TX-ROBOTICS® MOBILE PALLETIZING SYSTEMS

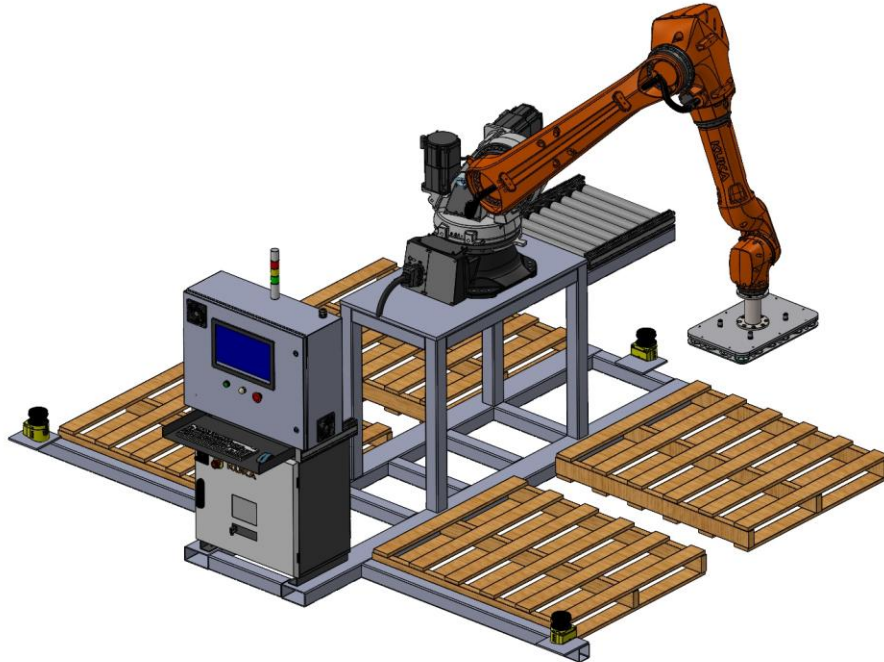


If your manufacturing or distribution operation requires a flexible approach to Material Handling Capabilities, then TX-Robotics may have a Solution to your Material Handling Requirements. Check out our available models.

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## 4 POSITION MOBILE PALLETIZING SYSTEM

Our 4 Pallet Position Mobile System maximizes productivity where multiple container sizes need to be palletized. This system can also be deployed where trucks or containers are being unloaded, where automated palletizing can greatly enhance getting products unloaded, palletized, and moved to warehouse locations.

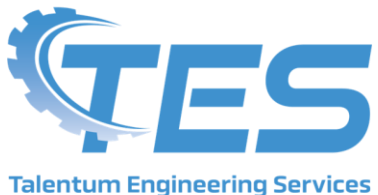
### FEATURES:

- Robot Payload up to 70 kg

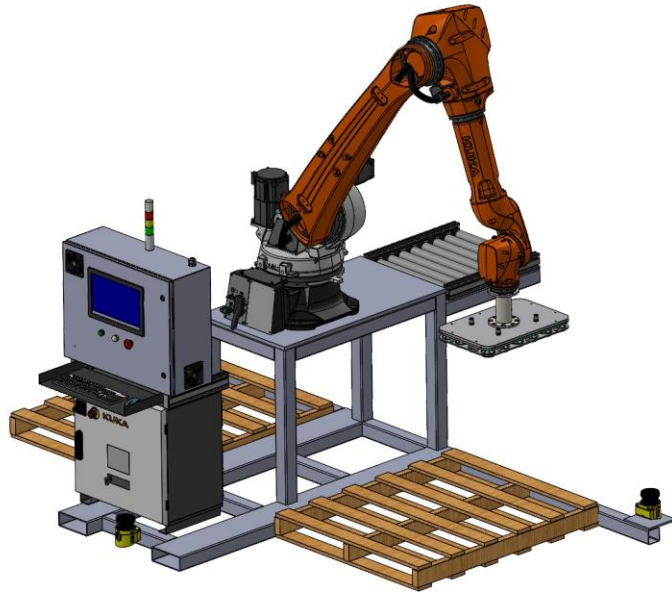
- System is easily moved with Forklift

- Safety Area Scanners insure security without fencing
- Systems are available with Vision Enhanced container detection and orientation control

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## 2 POSITION MOBILE PALLETIZING SYSTEM

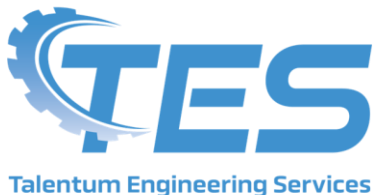


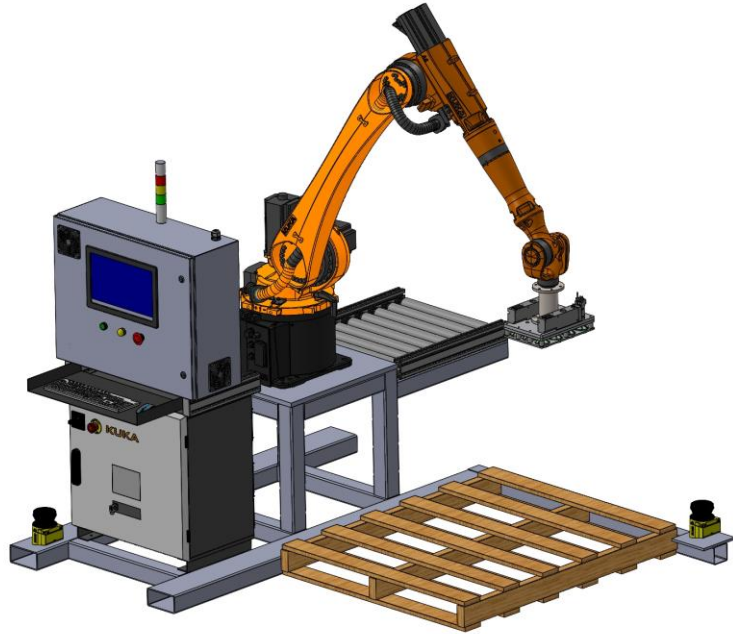
Our 2 Pallet Position Mobile System maximizes productivity where multiple container sizes need to be palletized. This system can also be deployed where trucks or containers are being unloaded, where automated palletizing can greatly enhance getting products unloaded, palletized, and moved to warehouse locations.

### FEATURES:

- Robot Payload up to 70 kg
- System is easily moved with Forklift
- Safety Area Scanners insure security without fencing
- Systems are available with Vision Enhanced container detection and orientation control

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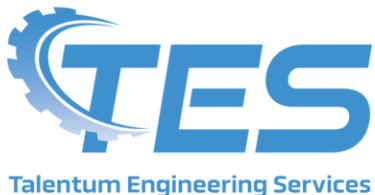
## 1 POSITION MOBILE PALLETIZING SYSTEM

Our 1 Pallet Position Mobile System maximizes productivity where a lightweight and compact system is sufficient. This system is perfect for palletizing containers where a pick rate up to 10 containers a minute is required. Available at a price which guarantees a fast return on investment.

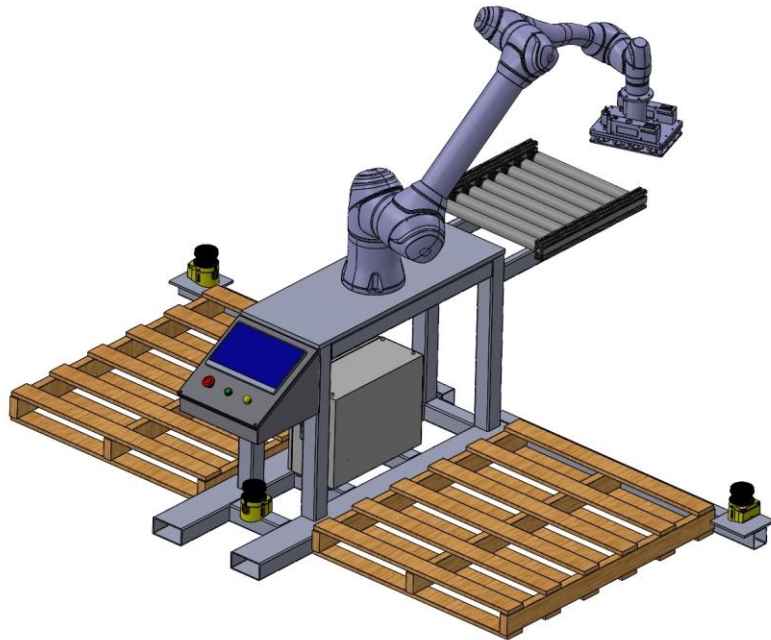
### FEATURES:

- Robot Payload up to 30 kg
- System is easily moved with Forklift
- Safety Area Scanners insure security without fencing
- Systems are available with Vision Enhanced container detection and orientation control

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## COLLABORATIVE MOBILE PALLETIZING SYSTEM

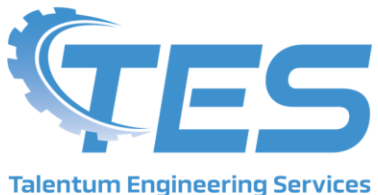


Our Collaborative Mobile System maximizes productivity where the workplace dictates Collaborative operation. This system is perfect for palletizing containers in areas that are in close proximity workers or other equipment. If the pick rate is higher than allowed for collaborative operation then the system can be equipped with area scanners to meet Safety Standards.

### FEATURES:

- Robot Payload up to 25 kg
- System is easily moved with Forklift
- Safety Area Scanners insure security without fencing
- Systems are available with Vision Enhanced container detection and orientation control

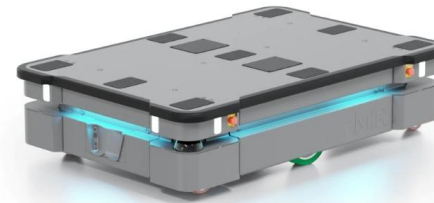
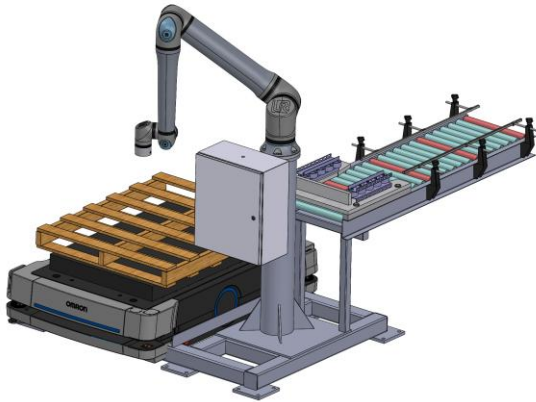
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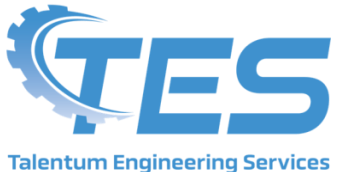
# TX-ROBOTICS®

AMR / AGV READY SYSTEMS



All of our Systems can be configured for operation with Autonomous Mobile Robots, both Platform and Forked type units. Our **TX-STACK®** Operating System seamlessly integrates the AMR Fleet Management System to provide complete control of AMR traffic throughout the facility.

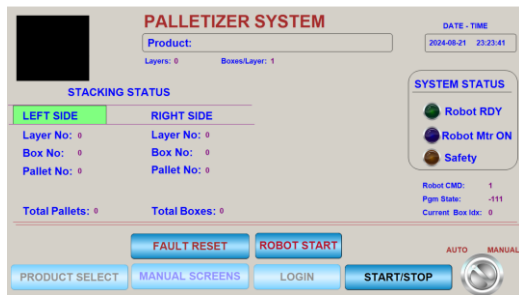
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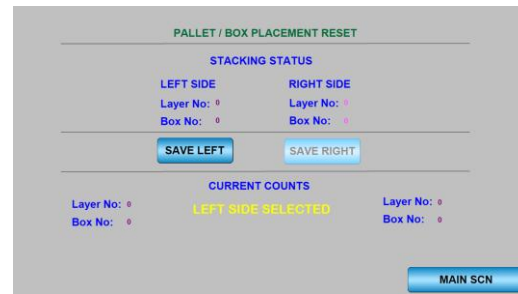
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# TX-ROBOTICS® TX-STACK® USER INTERFACE AND OPERATING SYSTEM

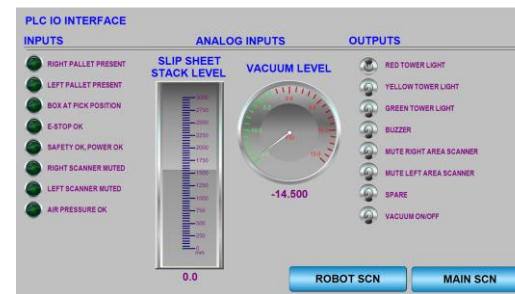
All TX-Robotics systems are controlled by our **TX-STACK®** Operating System, which runs on a State of the Art Hybrid Industrial PC/PLC system using a Windows 10 Embedded operating system. This system is capable of real time PLC control in addition to concurrent execution of Windows 10 apps, which includes the Pallet Pattern management, Vision System, and AMR Vehicle Fleet Management System, if equipped. **TX-STACK®** provides seamless integration of Vision Inspection using State of the Art camera systems that employ AI technology.



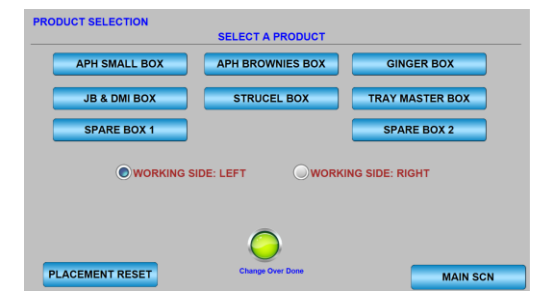
System Main Screen



Box Placement Screen



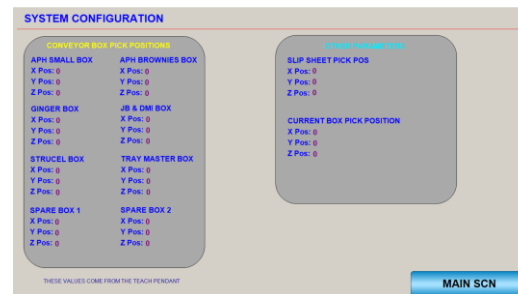
PLC - I/O Interface Screen



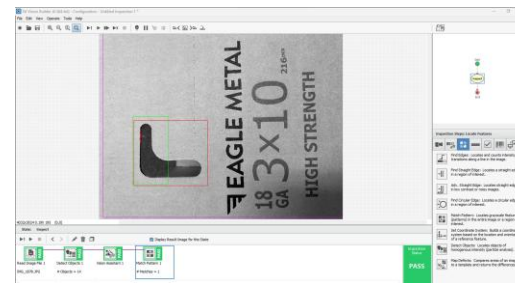
Product Selection Screen



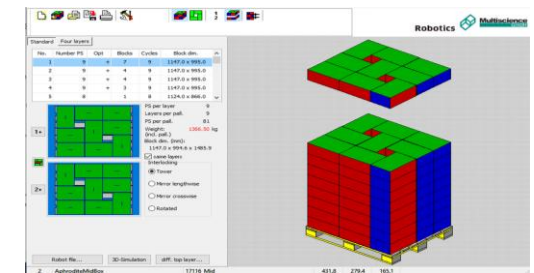
Robot Interface Screen



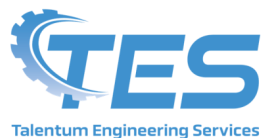
System Configuration Screen



Vision Inspection Screen



Pallet Pattern Management Screen

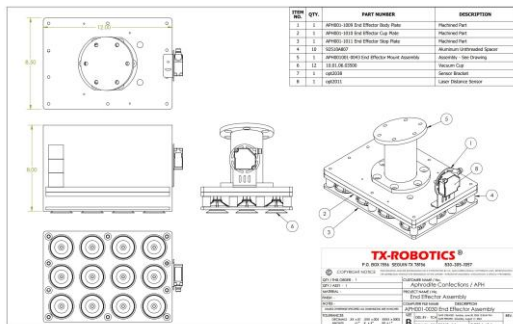


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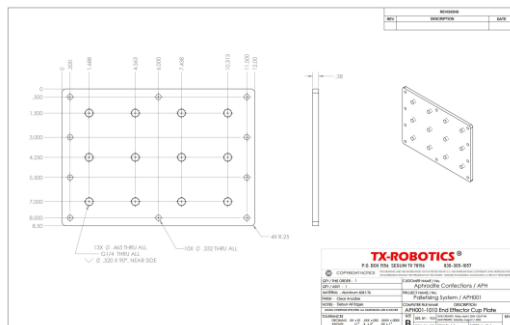
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# TX-ROBOTICS® DOCUMENTATION AND OPERATION MANUALS

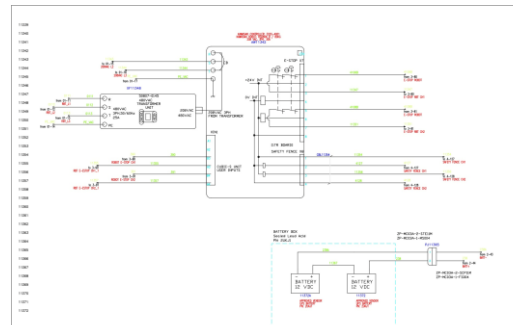
All TX-Robotics Systems are delivered with a complete set of documentation, which is provided in easy to access PDF format, and available directly from the Touchscreen User HMI.



Assembly Drawings



Part Drawings



Electrical Schematics

| TX-ROBOTICS®     |             |                         |              |          |
|------------------|-------------|-------------------------|--------------|----------|
| BILL OF MATERIAL |             |                         |              |          |
| ITEM #           | PART NUMBER | DESCRIPTION             | MANUFACTURER | QUANTITY |
| 1                | APR001-0001 | End Effector Base Plate | TX-Robotics  | 1        |
| 2                | APR001-0002 | End Effector Base Plate | TX-Robotics  | 1        |
| 3                | APR001-0003 | End Effector Base Plate | TX-Robotics  | 1        |
| 4                | APR001-0004 | End Effector Base Plate | TX-Robotics  | 1        |
| 5                | APR001-0005 | End Effector Base Plate | TX-Robotics  | 1        |
| 6                | APR001-0006 | End Effector Base Plate | TX-Robotics  | 1        |
| 7                | APR001-0007 | End Effector Base Plate | TX-Robotics  | 1        |
| 8                | APR001-0008 | End Effector Base Plate | TX-Robotics  | 1        |
| 9                | APR001-0009 | End Effector Base Plate | TX-Robotics  | 1        |
| 10               | APR001-0010 | End Effector Base Plate | TX-Robotics  | 1        |
| 11               | APR001-0011 | End Effector Base Plate | TX-Robotics  | 1        |
| 12               | APR001-0012 | End Effector Base Plate | TX-Robotics  | 1        |
| 13               | APR001-0013 | End Effector Base Plate | TX-Robotics  | 1        |
| 14               | APR001-0014 | End Effector Base Plate | TX-Robotics  | 1        |
| 15               | APR001-0015 | End Effector Base Plate | TX-Robotics  | 1        |
| 16               | APR001-0016 | End Effector Base Plate | TX-Robotics  | 1        |
| 17               | APR001-0017 | End Effector Base Plate | TX-Robotics  | 1        |
| 18               | APR001-0018 | End Effector Base Plate | TX-Robotics  | 1        |
| 19               | APR001-0019 | End Effector Base Plate | TX-Robotics  | 1        |
| 20               | APR001-0020 | End Effector Base Plate | TX-Robotics  | 1        |
| 21               | APR001-0021 | End Effector Base Plate | TX-Robotics  | 1        |
| 22               | APR001-0022 | End Effector Base Plate | TX-Robotics  | 1        |
| 23               | APR001-0023 | End Effector Base Plate | TX-Robotics  | 1        |
| 24               | APR001-0024 | End Effector Base Plate | TX-Robotics  | 1        |
| 25               | APR001-0025 | End Effector Base Plate | TX-Robotics  | 1        |
| 26               | APR001-0026 | End Effector Base Plate | TX-Robotics  | 1        |
| 27               | APR001-0027 | End Effector Base Plate | TX-Robotics  | 1        |
| 28               | APR001-0028 | End Effector Base Plate | TX-Robotics  | 1        |
| 29               | APR001-0029 | End Effector Base Plate | TX-Robotics  | 1        |
| 30               | APR001-0030 | End Effector Base Plate | TX-Robotics  | 1        |
| 31               | APR001-0031 | End Effector Base Plate | TX-Robotics  | 1        |
| 32               | APR001-0032 | End Effector Base Plate | TX-Robotics  | 1        |

Bill of Material

| TX-ROBOTICS®            |                 |                    |                   |          |
|-------------------------|-----------------|--------------------|-------------------|----------|
| RECOMMENDED SPARE PARTS |                 |                    |                   |          |
| ITEM #                  | PART NUMBER     | DESCRIPTION        | MANUFACTURER      | QUANTITY |
| 1                       | 10.01.06.0500   | Vacuum Cup         | Automation Direct | 6        |
| 2                       | E2218H88        | E-Stop Switch      | Eaton             | 1        |
| 3                       | E220P81         | Push Button Switch | Automation Direct | 1        |
| 4                       | 0A5611-48-24    | Safety Relay       | Dold              | 1        |
| 5                       | Z1124H-415102-G | Vacuum Generator   | 3M Pneumatics     | 1        |
| 6                       | QNR100-CP-CP    | Thru Beam Sensor   | Automation Direct | 1        |

Recommended Spare Parts List

### SYSTEM STARTUP

1. Energize the compressed air supply by opening the air supply valve on the regulator assembly.
2. Energize the control system by turning on the Main Power Supply switch, which is the Red and Yellow switch on the upper right-hand corner of the enclosure door.
3. When the system has initialized it will display the Main Screen.
4. Press the Product Select Button to select the Product to run. Make sure the Product selection matches the Product Nest on the conveyor.
5. Push the round button to put the system into Auto Mode and then press the blue Start/Stop Button to start the system. Make sure that boxes are conveying and pallets are in the racks.

Operations Manuals

### PERIODIC MAINTENANCE SCHEDULE

DAILY ---

1. Check Enclosure and Robot Controller vent fans for dust accumulation. Remove filters and clean by rinsing with tap water.
2. Check vacuum cups on End Effector for damage. Minimum acceptable vacuum is -3 psi.
3. Check Cables and Hoses on End Effector to insure they are supported and not binding. Make sure to keep adequate free play.
4. Remove any debris from pallet racks to insure proper nesting of pallets.

WEEKLY ---

1. Clean dust filters on Vacuum Generators
2. Clean dust off sensor heads and Safety Scanners

Periodic Maintenance

### PROGRAM BACKUPS

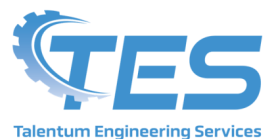
Keyence Safety Scanner

PLC Programs

Robot Programs

Stacking Patterns

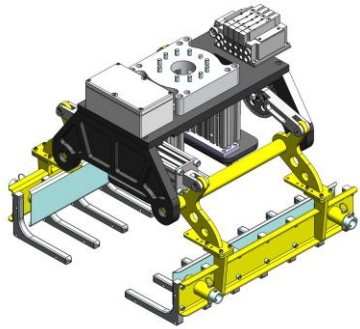
Program Backups



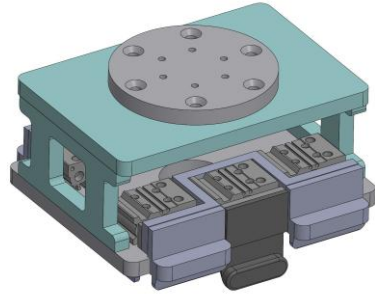
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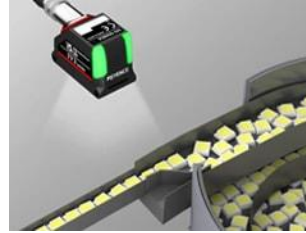
# TX-ROBOTICS® END OF ARM TOOLS, AND OPTIONAL FEATURES



BAG GRIPPER



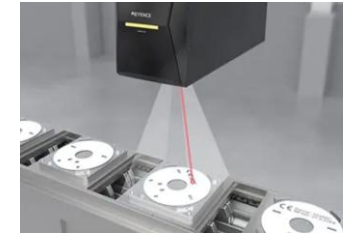
RPC CRATE GRIPPER



VISION SYSTEMS



LABELING

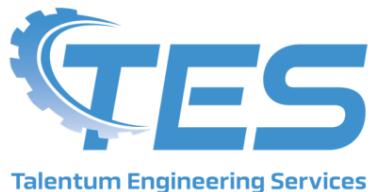


LASER MARKING

We offer a wide range of End of Arm Tools to suit whatever products you are stacking, We can also custom design tools to suit any application.

Where required, we can equip your system with a wide range of secondary operations such as vision systems, labeling, barcode reading, RFID tracking, and Laser marking.

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