

**Flexible
Automation
Inc.**



Flexible Automation Inc.

Robotic Process Cells and
Custom Assembly Machines

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- » 3.01 - Machine To Print
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- » 3.03 - Rapid Response Machine Service

4.0 Mission, Vision, Values

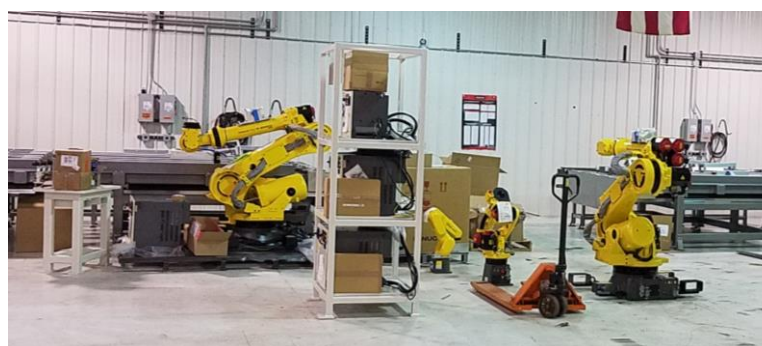


1.0 Company Profile

- » 1.01 - History
- » 1.02 - Target Applications
- » 1.03 - Automation Partners
- » 1.04 - IT Resources
- » 1.05 - In-House Production & Control
- » 1.06 - Industry Experience

1.01 History

- » Established 1983 as a turn-key systems integrator
- » Fanuc Authorized System Integrator for over 25 years
- » Epson Robotic's first and oldest integrator in U.S.A.
- » Decades of vision integration for many brands
- » Certified LabView developer and National Instruments integrator
- » Reputation built on hi-speed, hi-precision, complex assembly machines
- » Installations in Mexico, Germany, China, Hungary, Puerto Rico, and Canada



1.02 Target Applications

Robotic Fastening and Dispense Applications



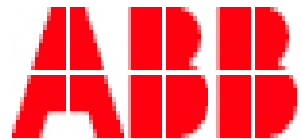
- » Screw Driving
- » Clip Setting
- » Clinching
- » Fasteners



- » Form-In-Place Gaskets
- » Glass Primer Applications
- » Structural Bonding
- » Mold release application



1.03 Automation Partners



1.04 Advanced Manufacturing IT



ShopBot CNC Router



Cloud-based back-up to protect your order



All details laser marked



1.05 In-House Production & Control



In-House Engineering & Programming



**Skilled Mechatronic Assembly
Department**



In-House Panel Build



Comprehensive Machine Shop



1.06 Diverse Industry Experience

- » Automotive
- » Commercial
- » Industrial
- » Medical Device



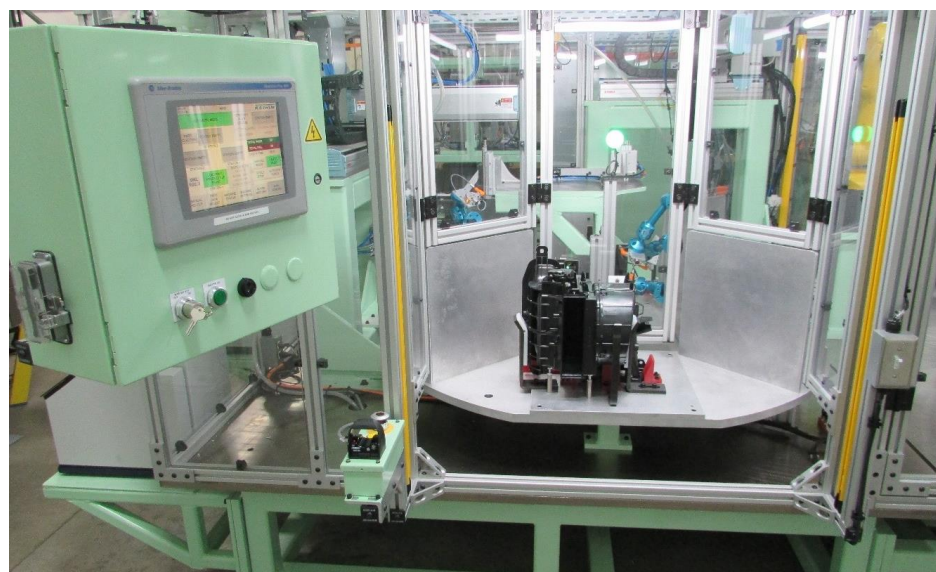
2.0 Products

- » 2.01 - Custom Assembly Machines
- » 2.02 - Dispense Automation
- » 2.03 - Fastener Automation
- » 2.04 - Robotic Process Cells; Beam-Chassis
- » 2.05 - Robotic Process Cells; Cage-Chassis

2.01 Custom Assembly Machines



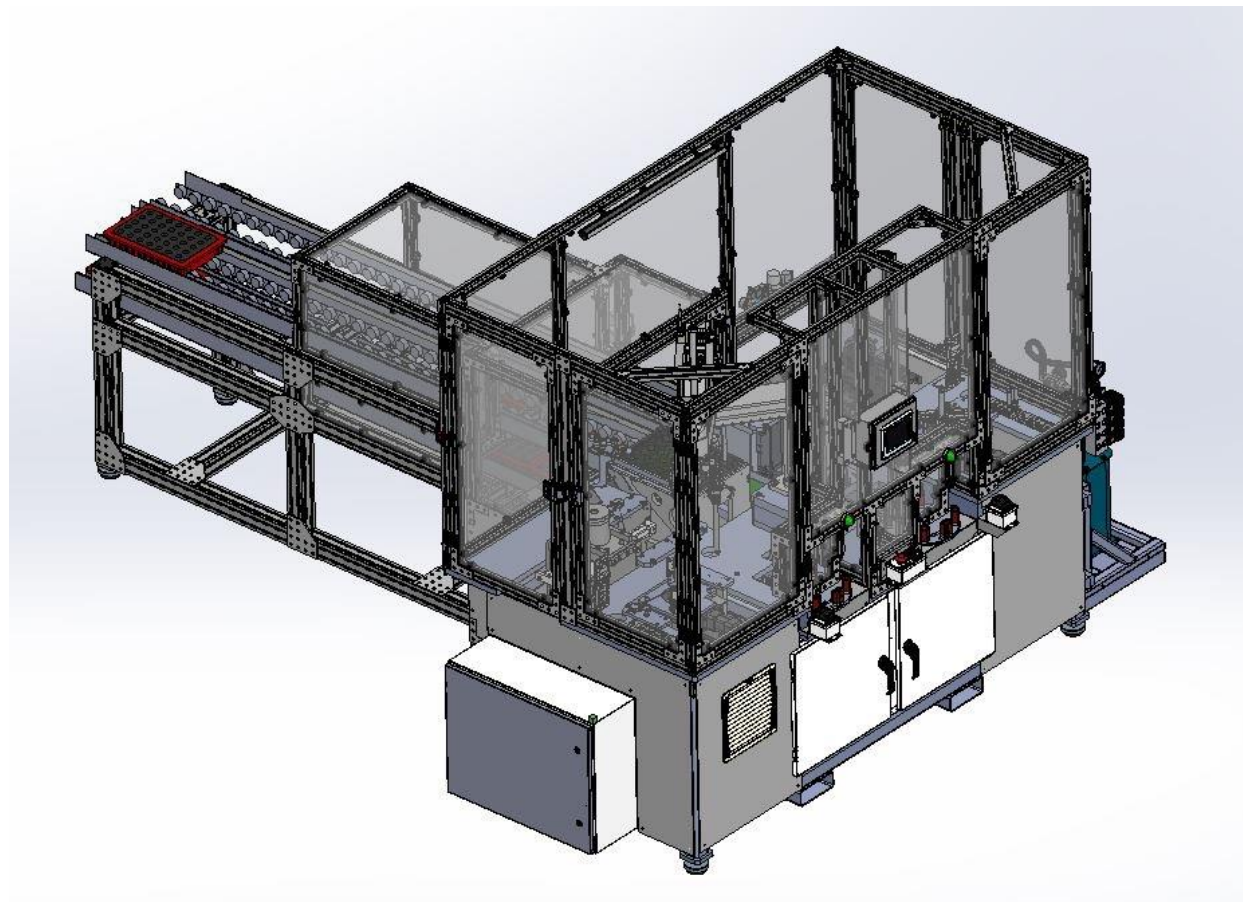
Triple, Four-Station Rotary Dial Line



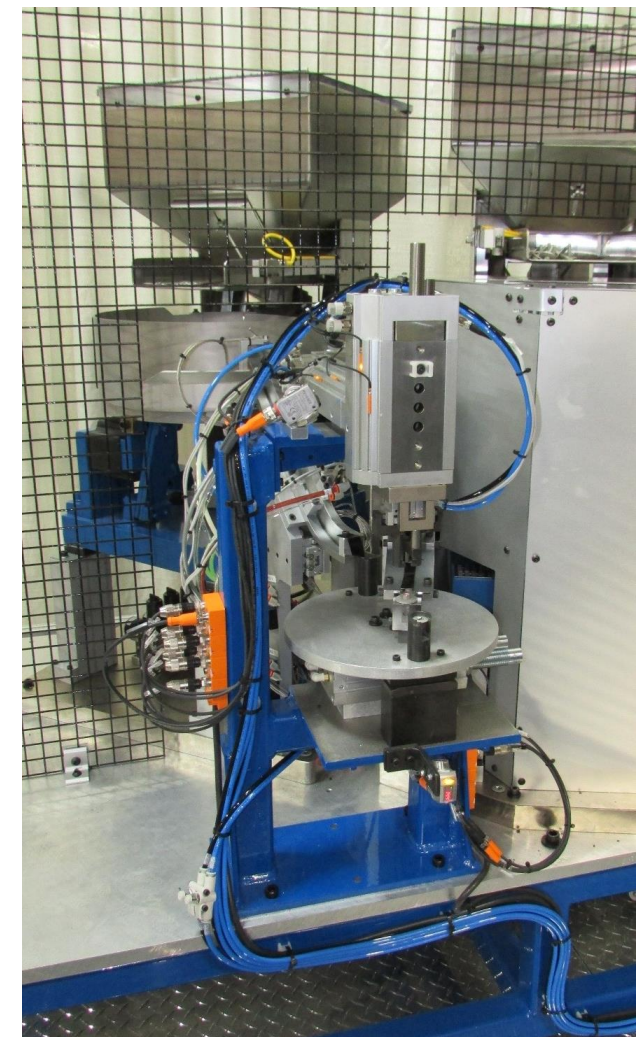
12-Station Rotary Dials, Connector Assembly



Two-Station Processing and Pack-Out



Fastener To Panel Assembly Cell

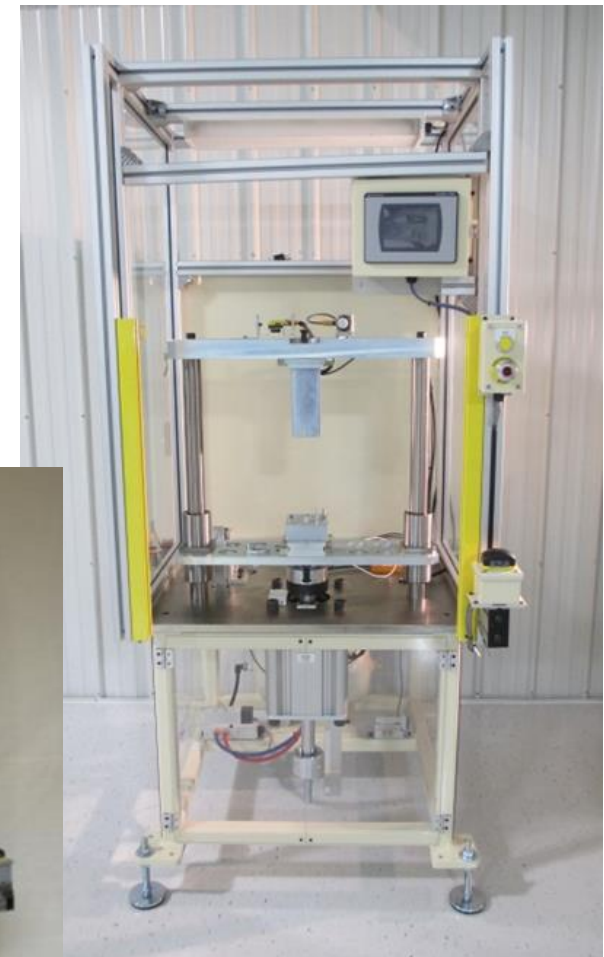




Nut Driving



Screw Driving

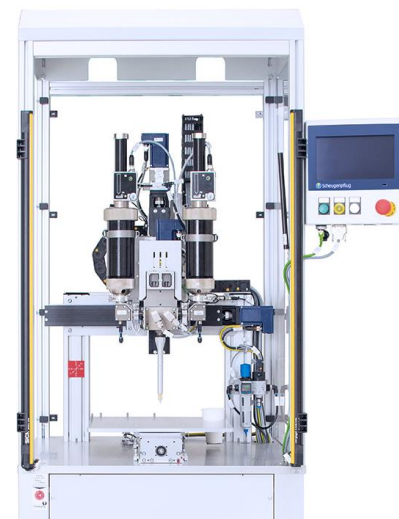


Lean Cells

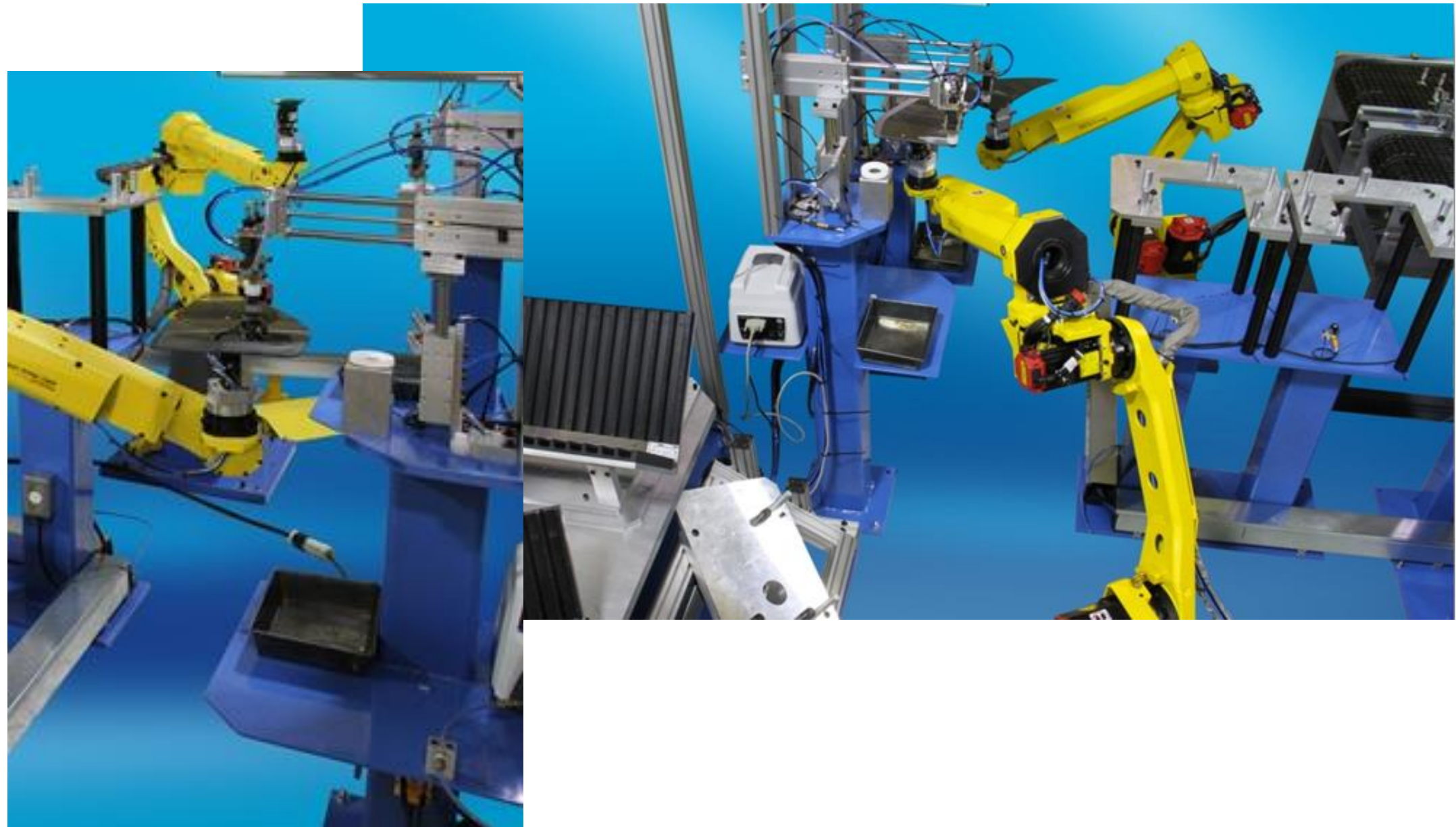
2.02 Dispense Automation



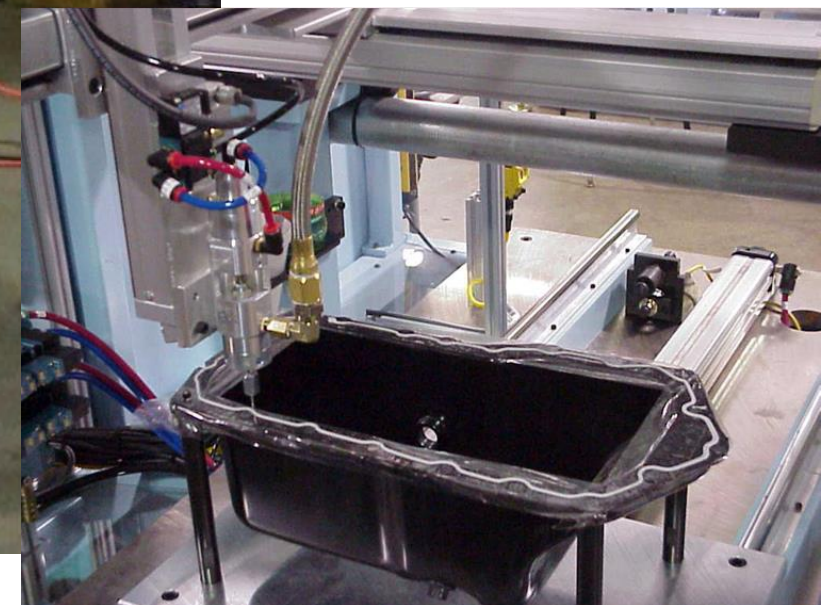
Integration of Proven Technologies



Glass Primer Application



Gasket Dispense: Dual Shuttle



Gasket Dispense: Rotary Dial



Gasket Dispense & Plasmamatreat



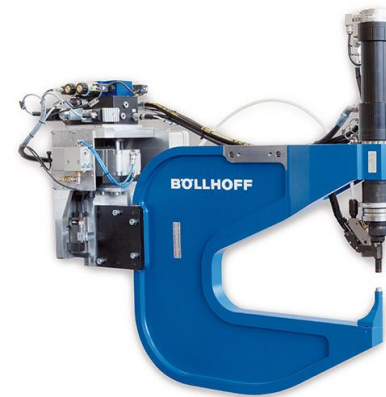
2.03 Fastener Automation



Integration of Proven Technologies



ASSEMBLY AUTOMATION[®]
AUTOMATIC SCREWDRIVING SYSTEMS



GESIPA[®]

BeA[®]



WEBER

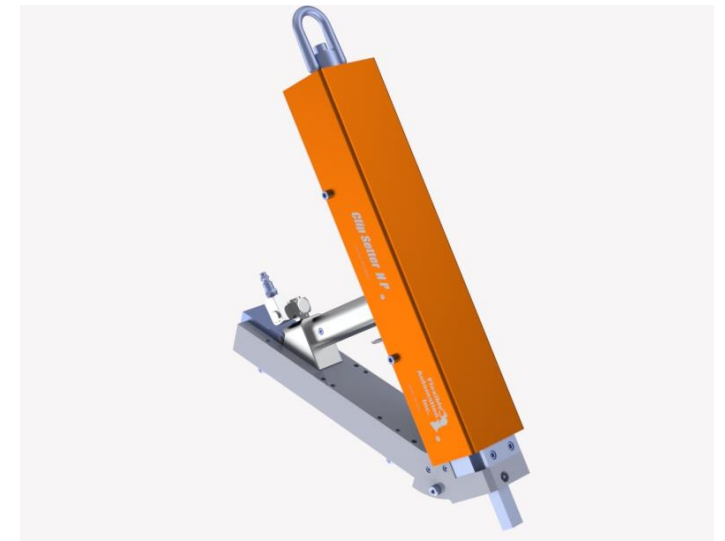
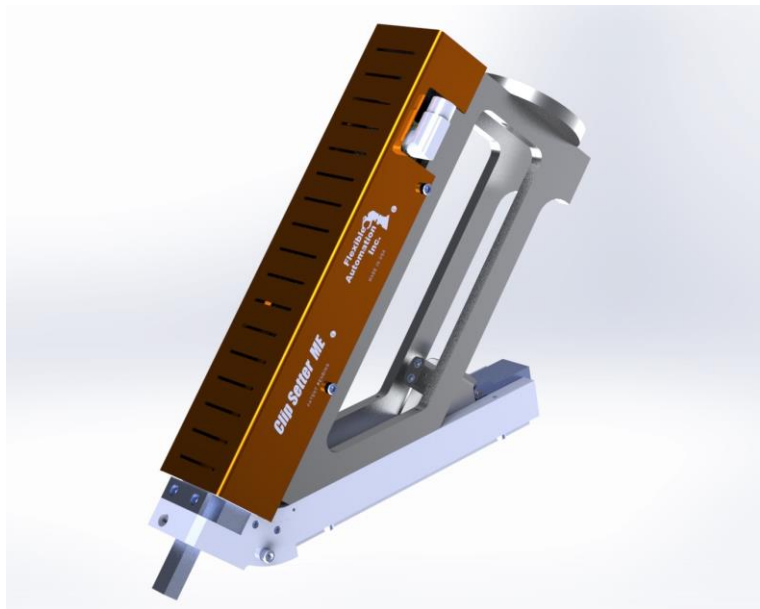


STANLEY[®]
Engineered Fastening

Flexible
Automation
Inc.

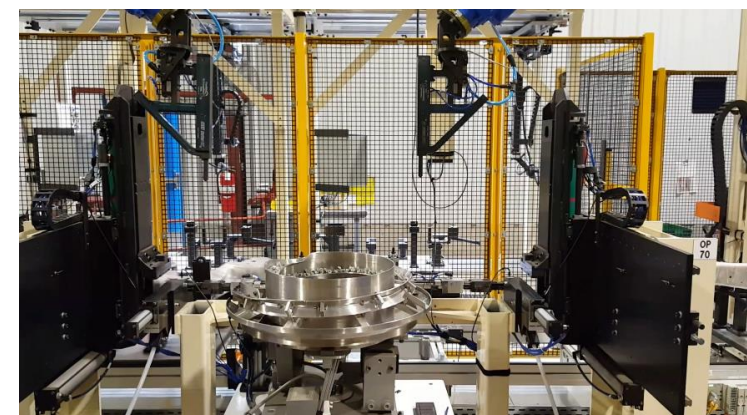
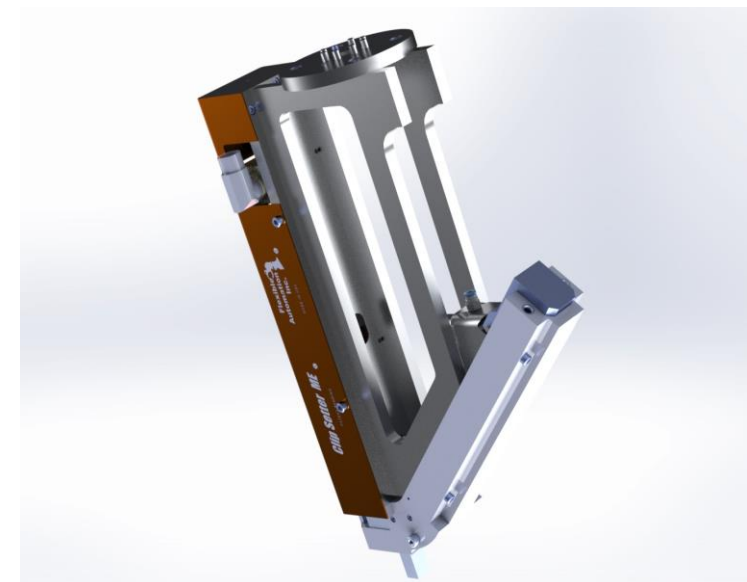


FAI Clip Setter Product Line



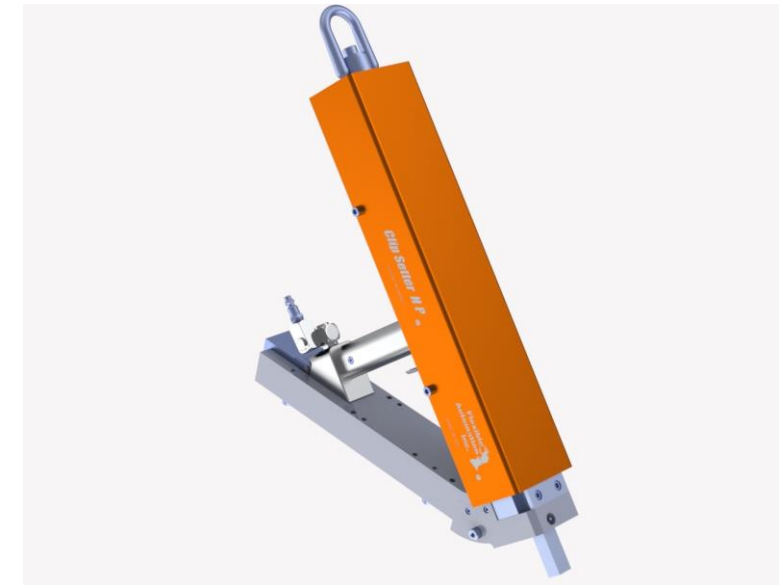
Clip Setter RHS

- » The Clip Setter RHS is robot mounted (R), has a high-capacity magazine (H) and utilizes a Servo actuator (S). It is typically mounted on the end of a mid-sized six-axis robot, but it can also be mounted on a fixed pedestal.
- » High-duty cycle linear motor actuator with integrated stroke and force sensing for the highest levels of poka-yoke inspection*
- » Programmable stroke and force parameters simplifies integration when utilized as an end-of-arm tool
- » Robot shoulder-mounted back-pack for motor controller and I/O link
- » Optional 2D profile sensor for active alignment that compensates for part-to-part variations
- » Standard ISO mount fits many robot flange models
- » Model specific adapters available upon request
- » Compatible with Quick-Disconnect EOAT adapters
- » Tool weight: 20 pounds



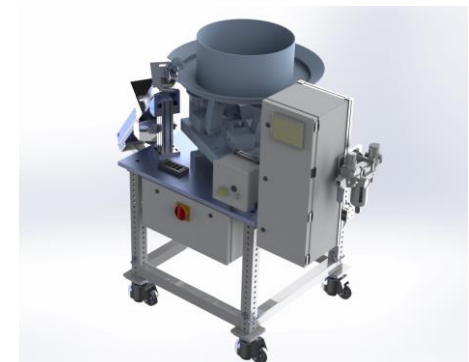
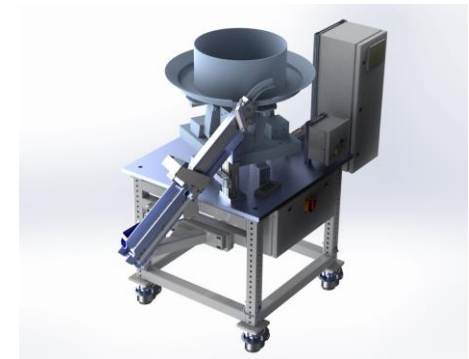
Clip Setter HHP

- » The Clip Setter HP is hand-held (H), has a high-capacity magazine (H) and utilizes a pneumatic actuator (P). It is manufactured with light-weight aluminum components to improve handling qualities.
- » High-quality, low-cost pneumatic air cylinder is used to drive clips into position
- » Comfortable, contoured handle for a firm, controlled grip
- » Tool balancer connection hoop
- » Tool weight: 15 pounds

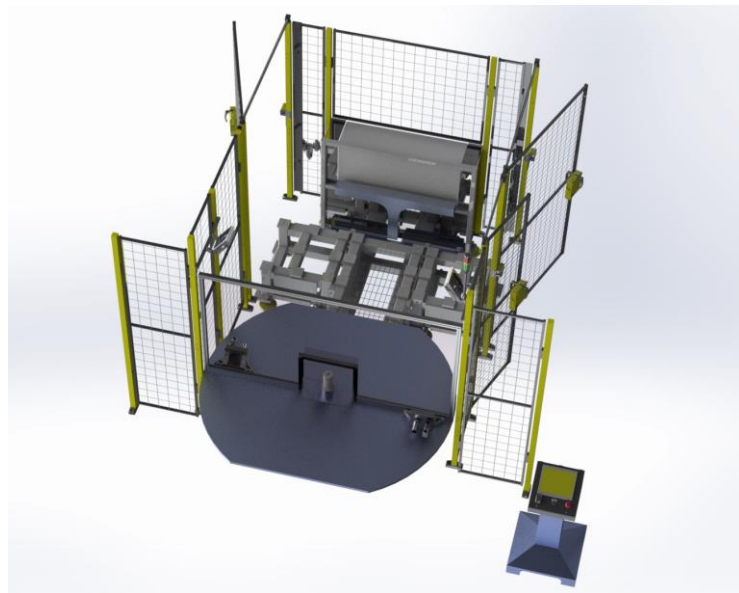


Clip Setter Speed-Dock Feeder

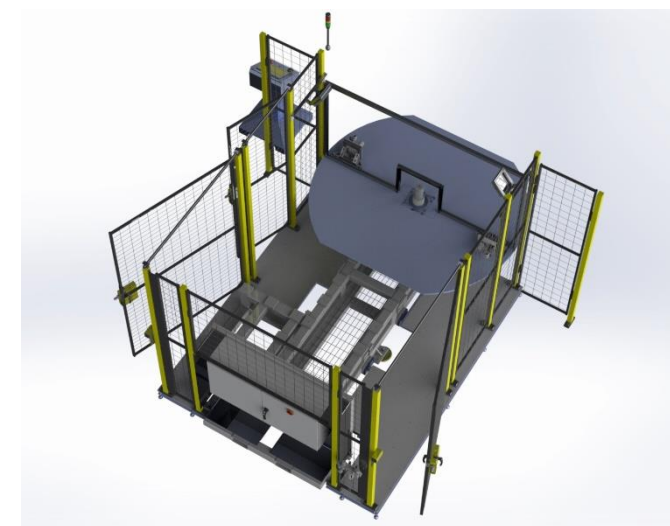
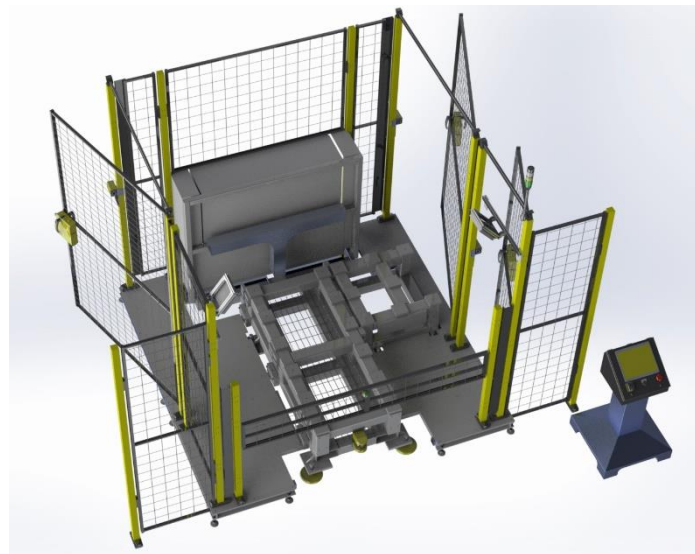
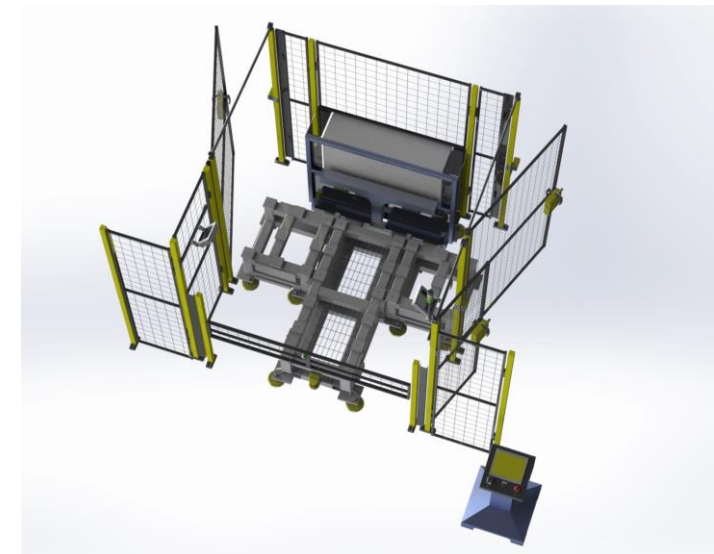
- » Vibratory bowl and inline track
- » Stand-alone controls including Allen Bradley PLC and HMI
- » Fast tool re-load time: 3 second average
- » Capable of supporting two Clip Setter tools
- » Auto shut-off with low-level sensor
- » Four mounting base options;
 - » Standard mobile cart
 - » FAI's robotic cell Auxiliary Base
 - » Raised pedestal for use with fixed position Clip Setter tools
 - » Custom, auxiliary base for integration with customer-provided work cells



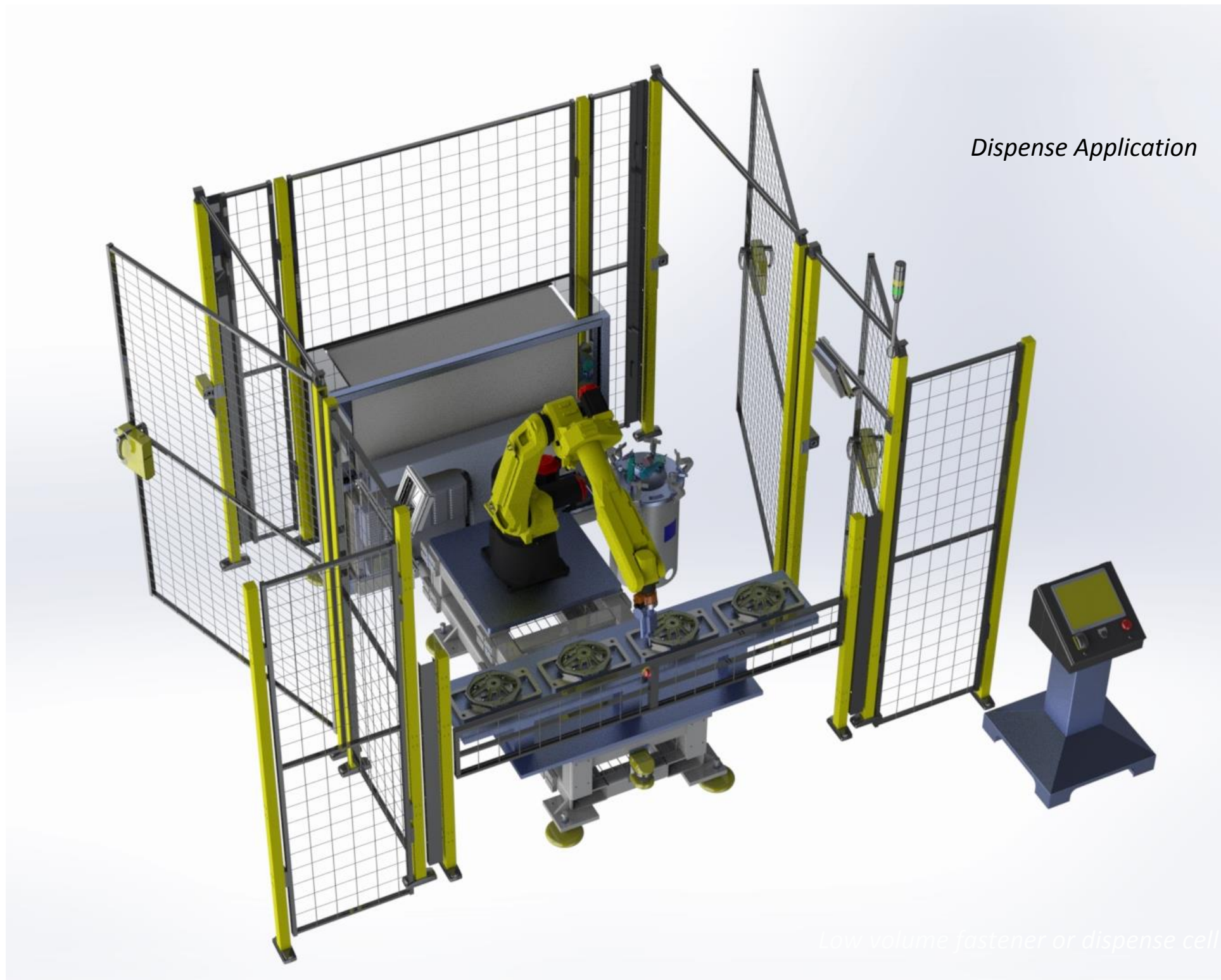
2.04 Robotic Process Cells; Beam-Chassis



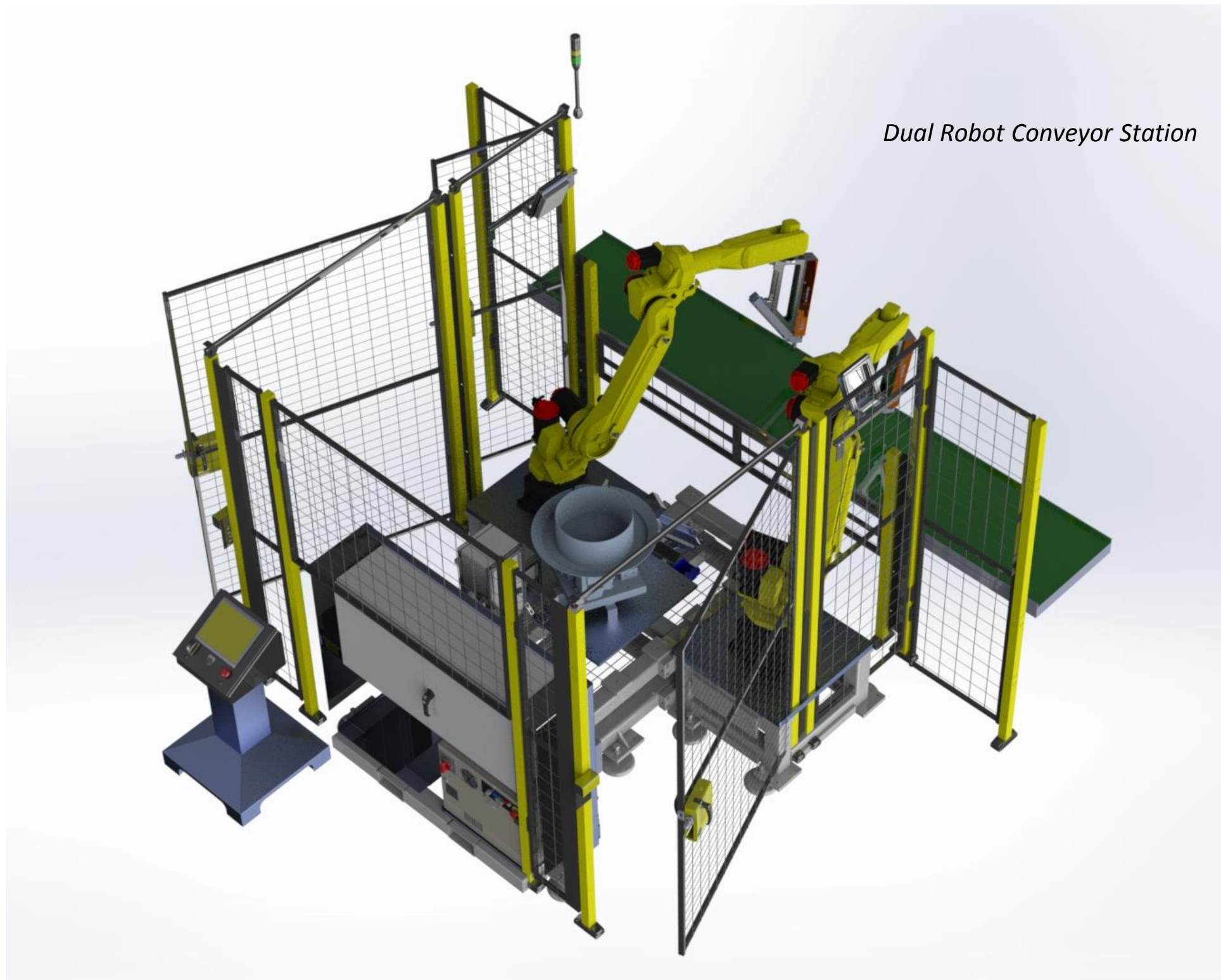
- » Lower Cost
- » Faster Deployment
- » More Flexibility
- » Higher ROI



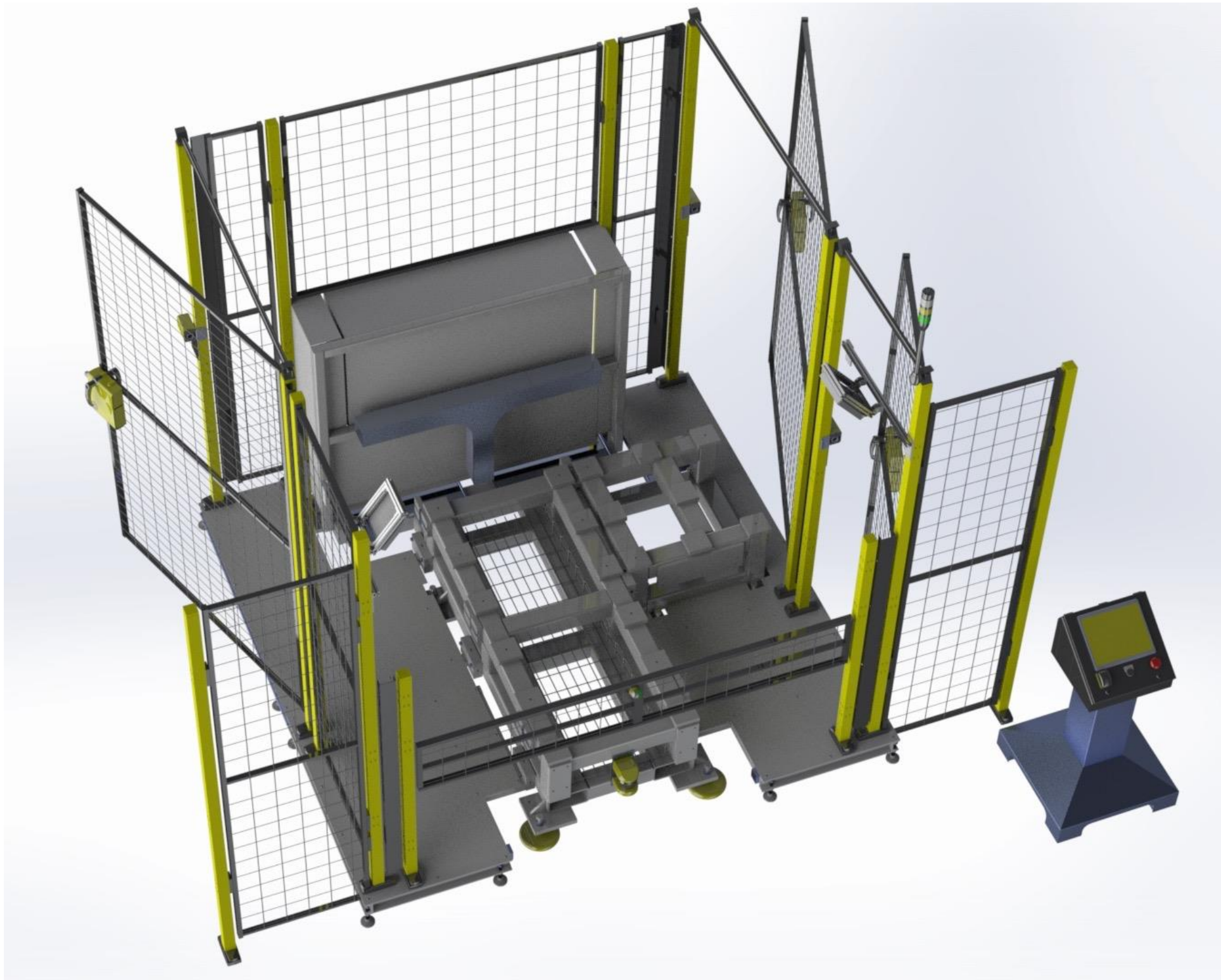
Short-Beam Fixed-Fixture - No Auxiliary Base (SBFC0A)



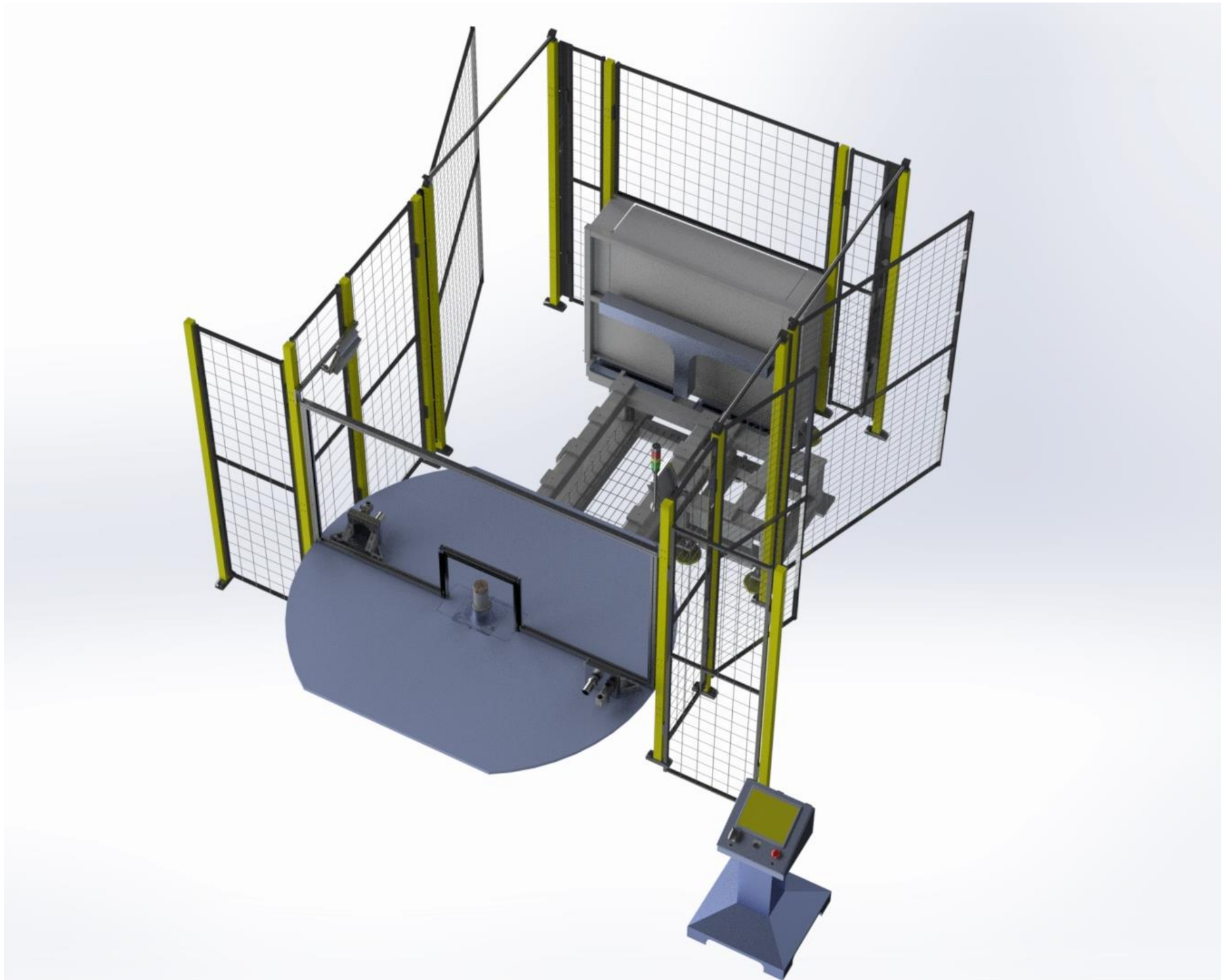
Short-Beam Fixed-Fixture with Two Auxiliary Bases (SBCC2A)



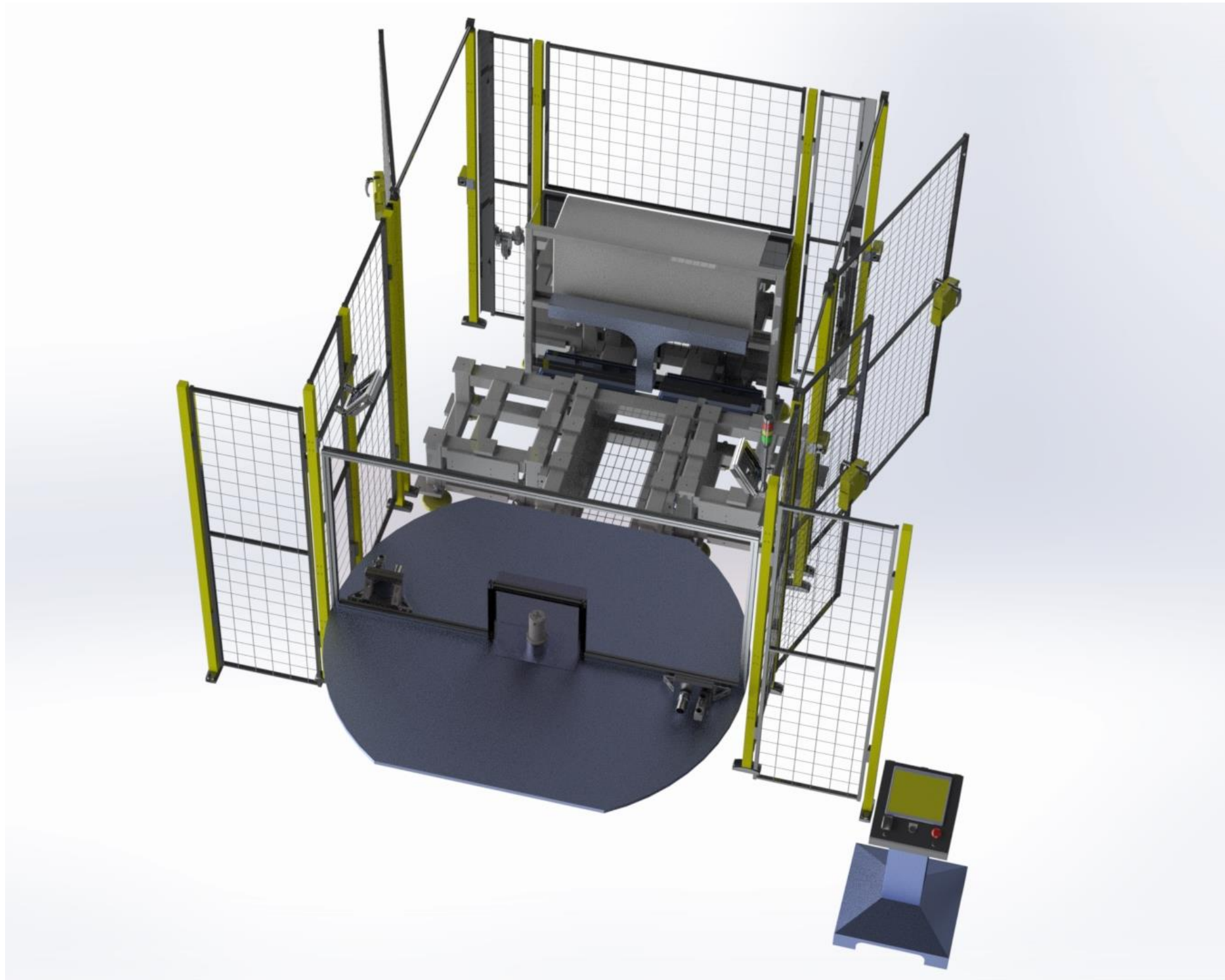
Short Skid Chassis (SSFC1A)



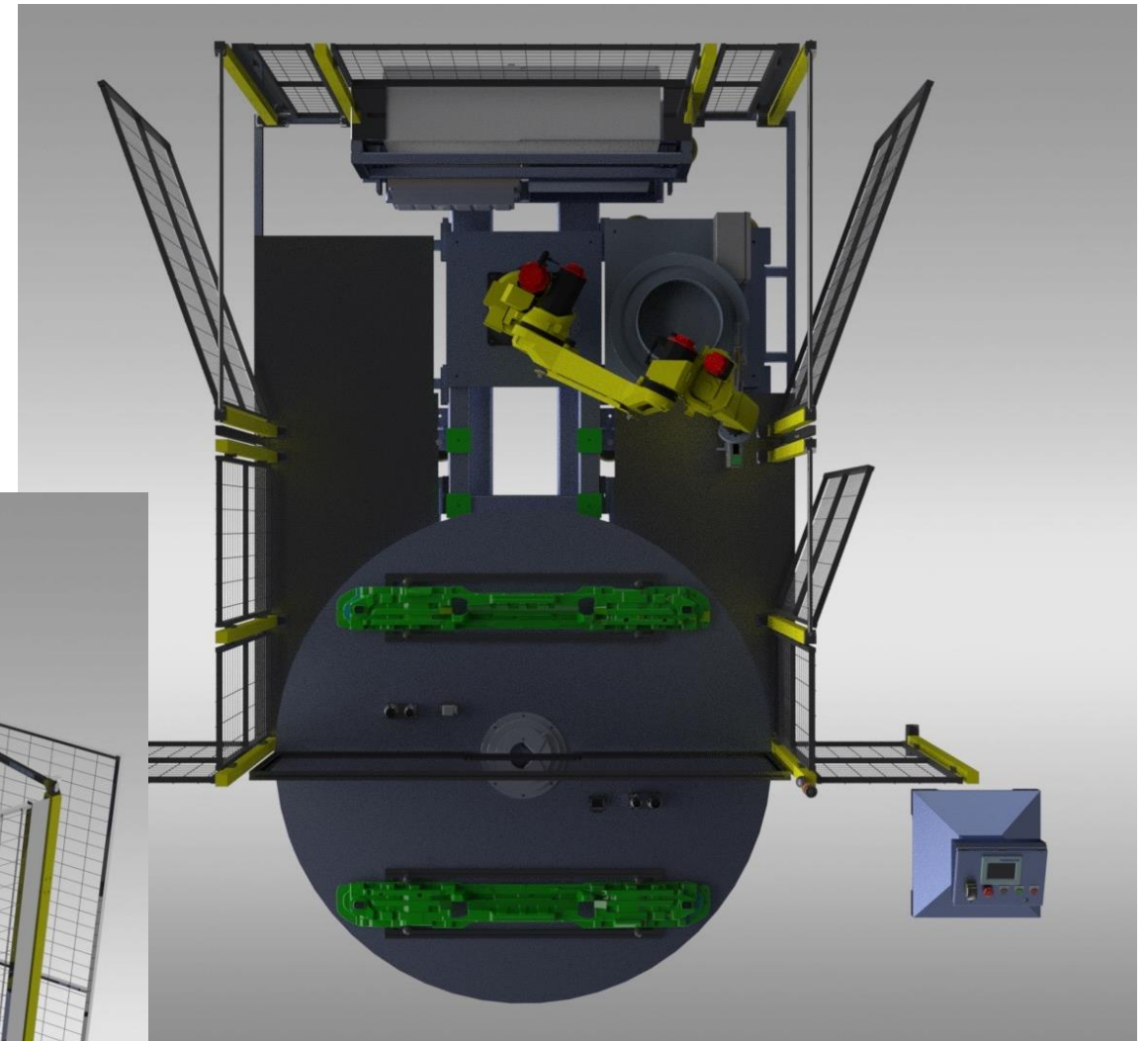
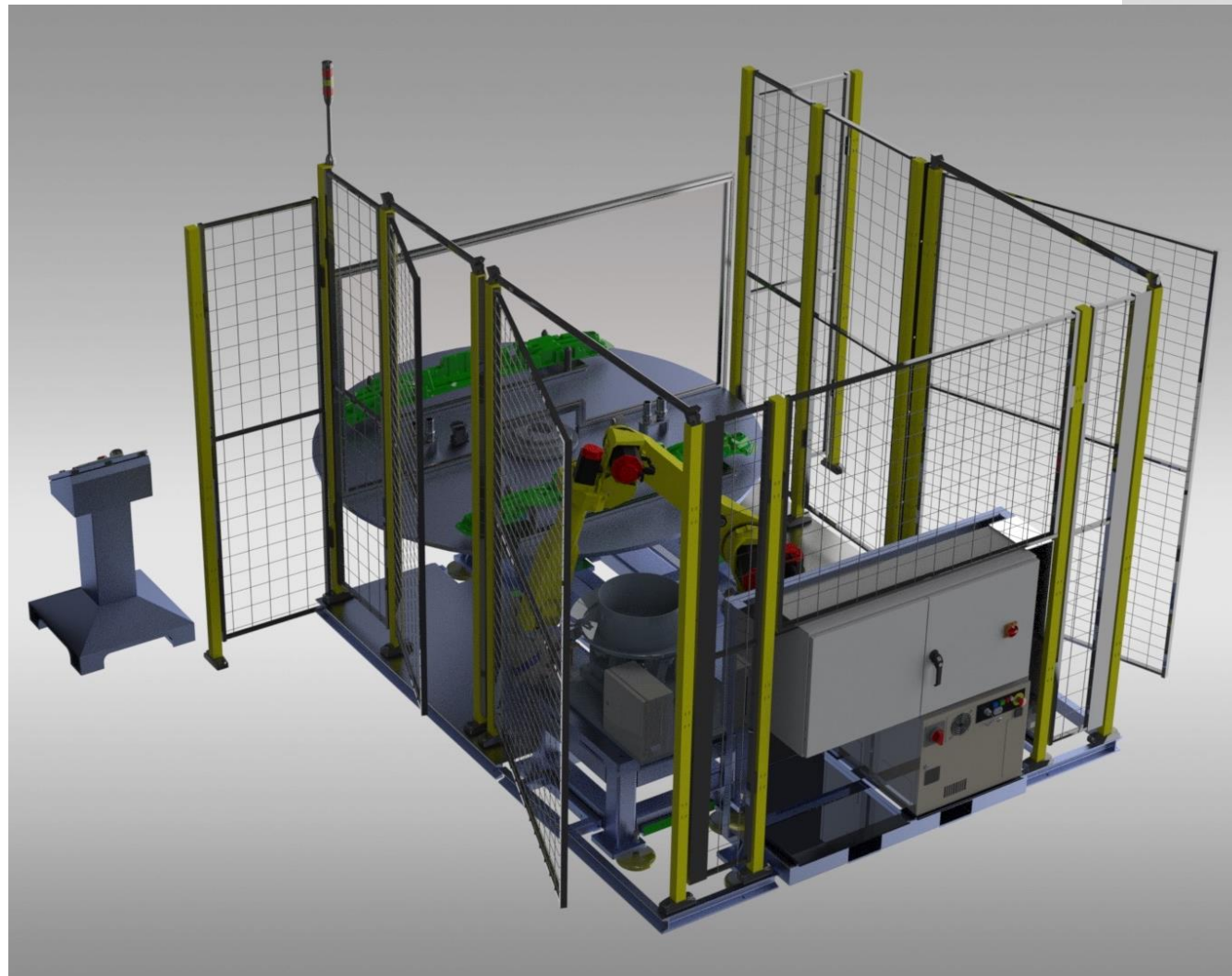
Long-Beam Rotary Chassis w/ 1 Auxiliary Base (LBRC1A)



Long-Beam Rotary Chassis with Two Auxiliary Base (LBRC2A)



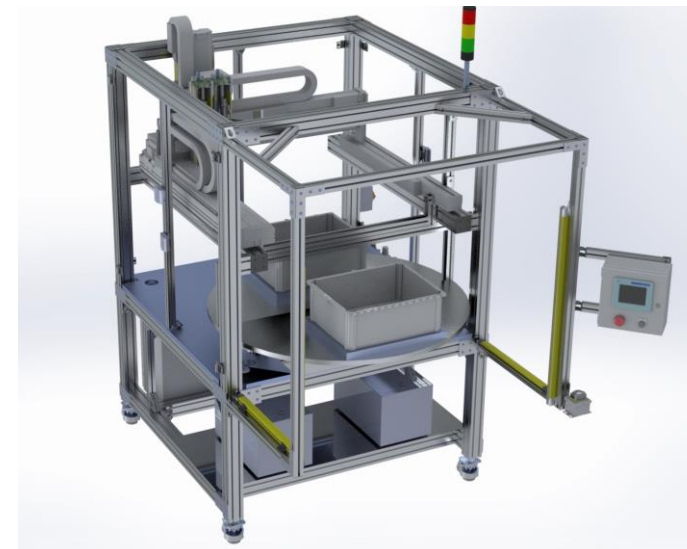
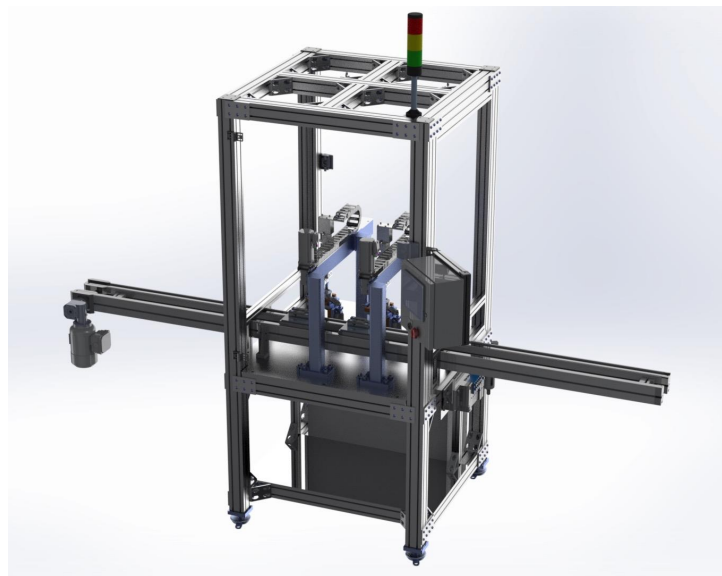
Long-Skid Rotary Chassis, One Auxiliary Base (LSRC1A)



2.05 Robotic Process Cells; Cage-Chassis

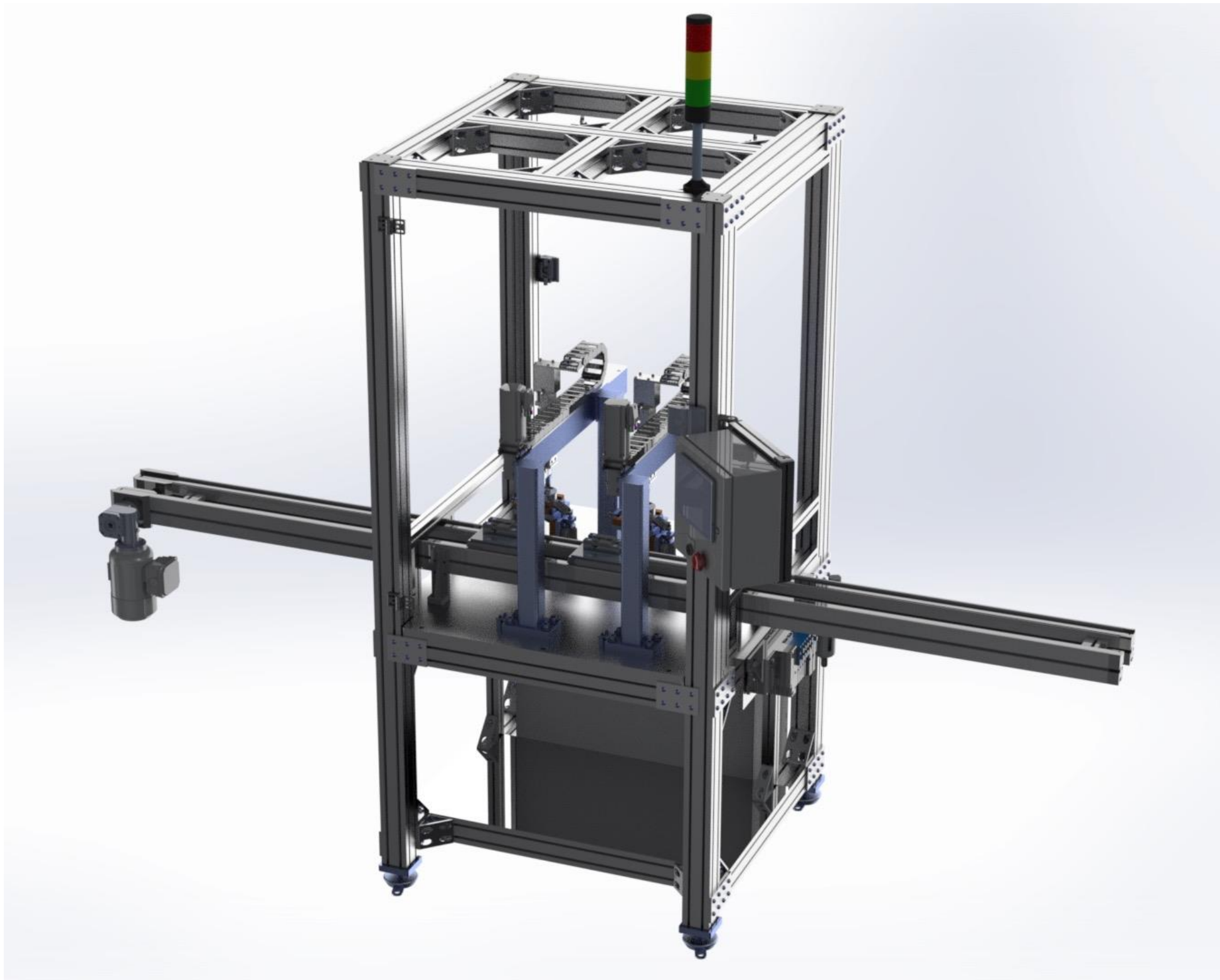


Pre-Engineered Cage-Chassis

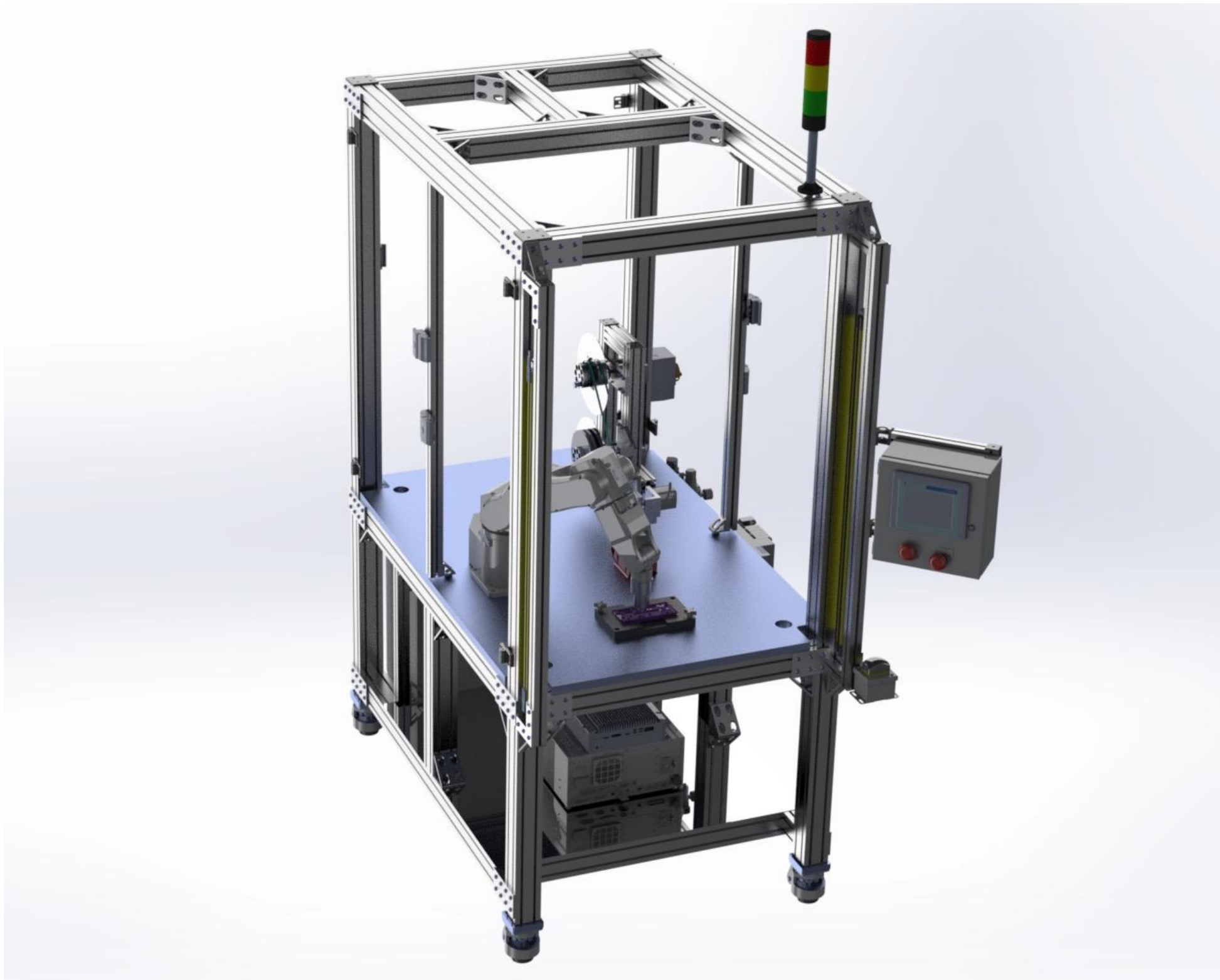


- » Low cost
- » Quick to deploy
- » Easy to reconfigure for additional through-put

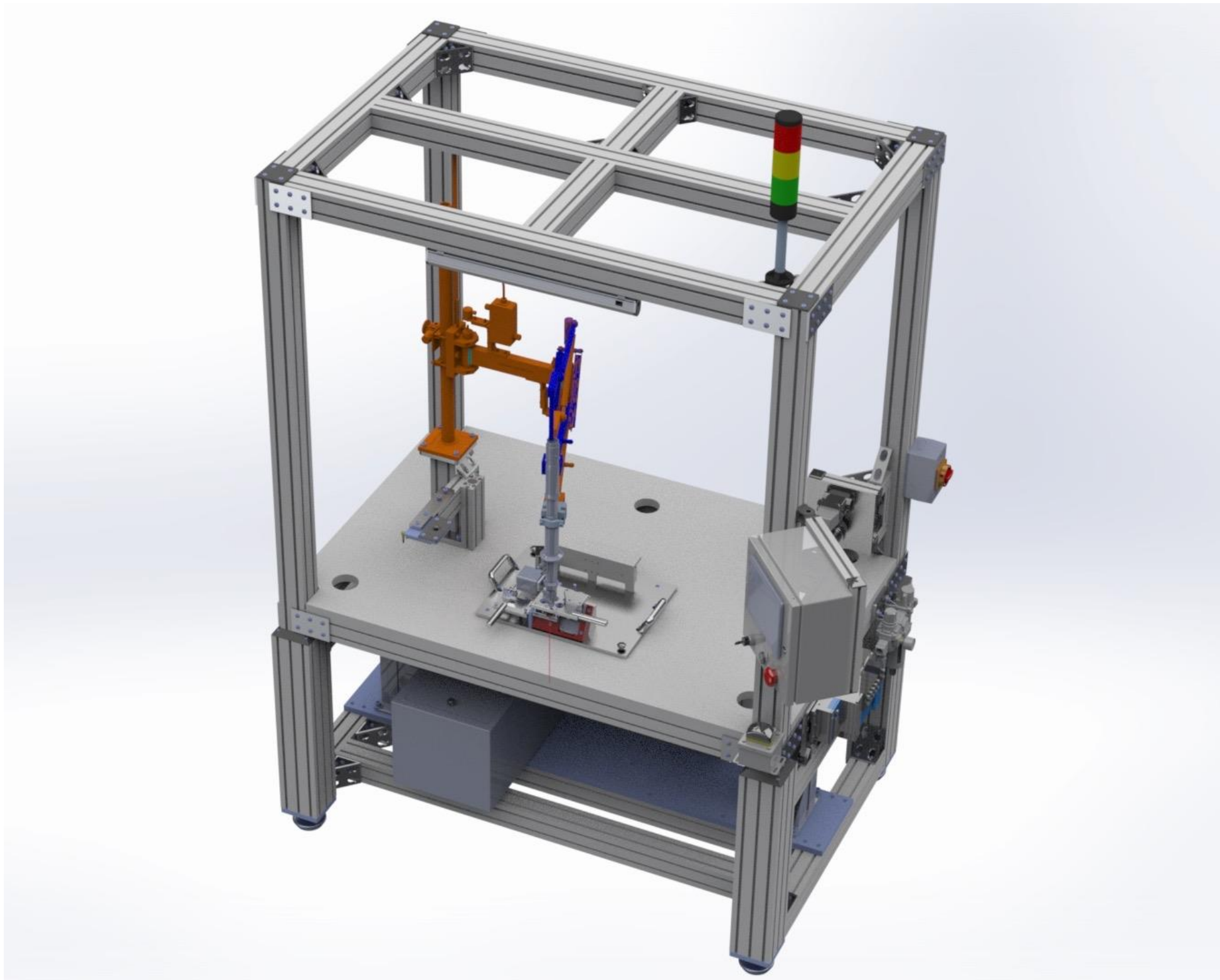
CC1010-C



CC1015-F



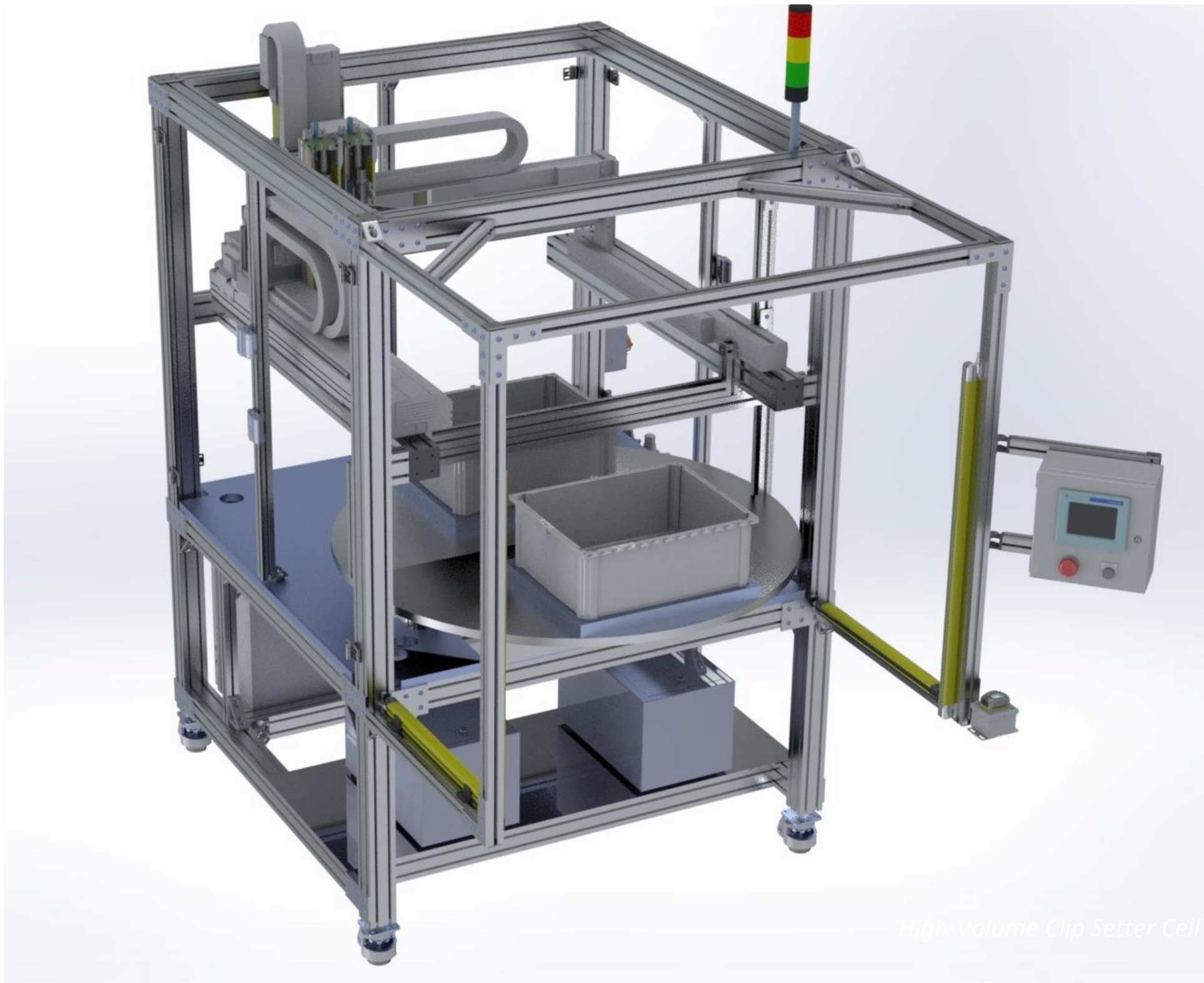
CC1510-F (with Ergo Lift option)



CC1510-2S

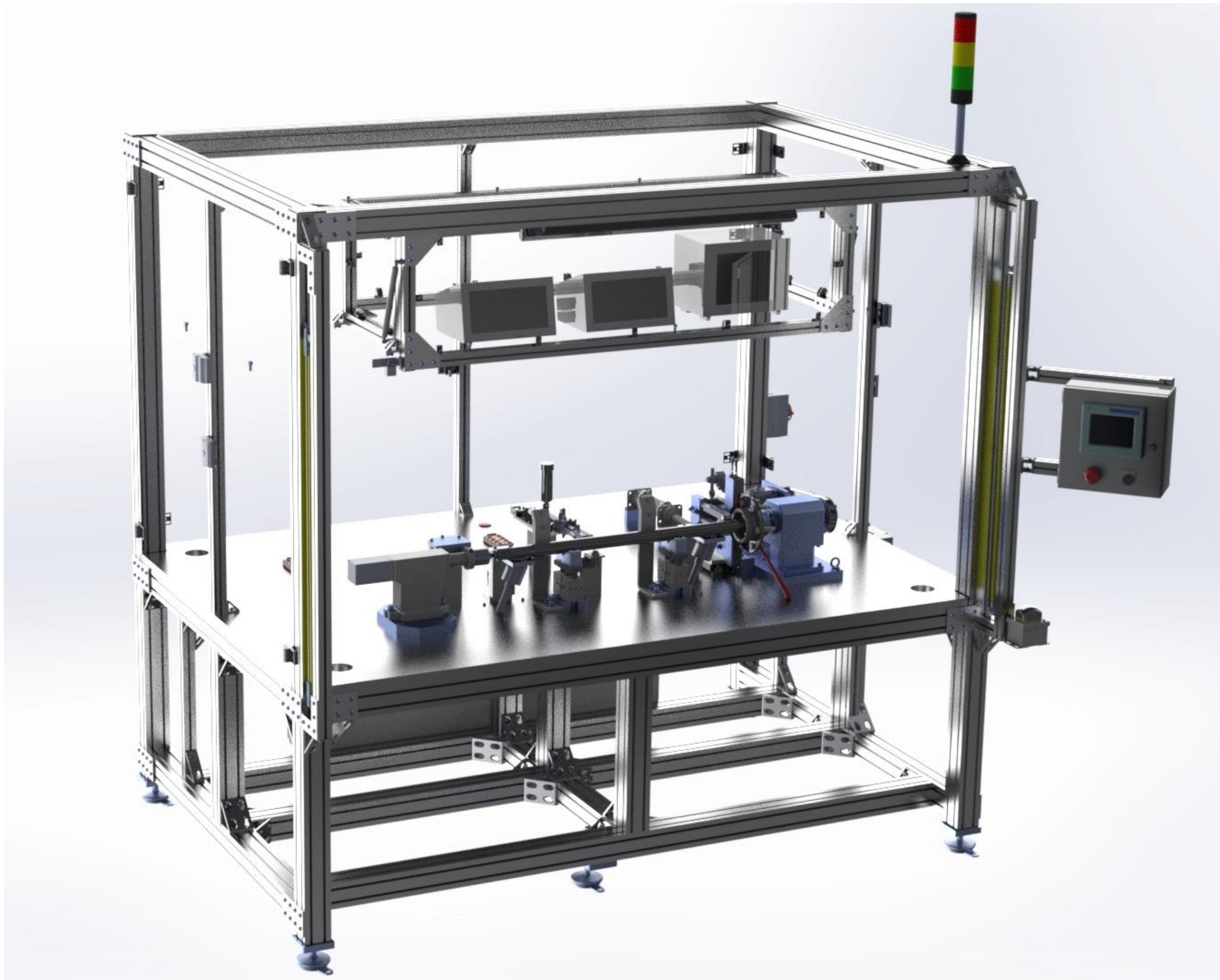


CC1515-R



High-Volume Clip Setter Cell

CC2215-T

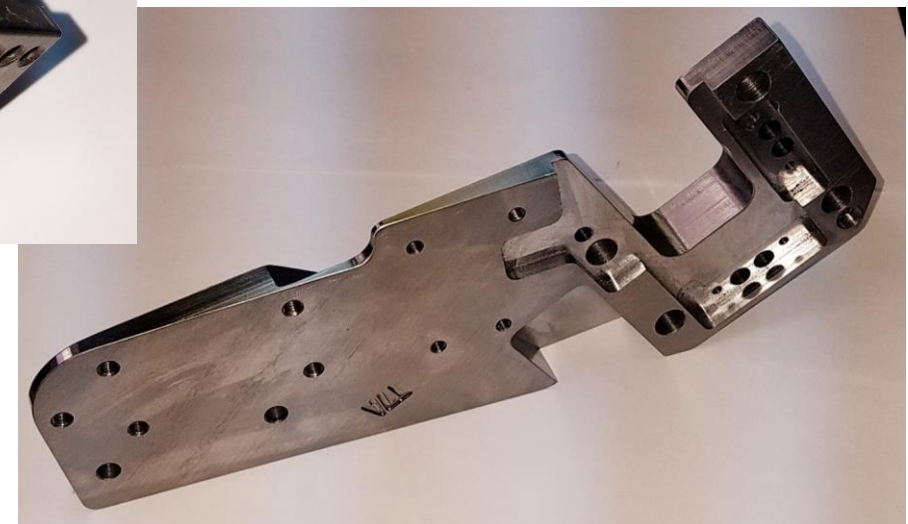
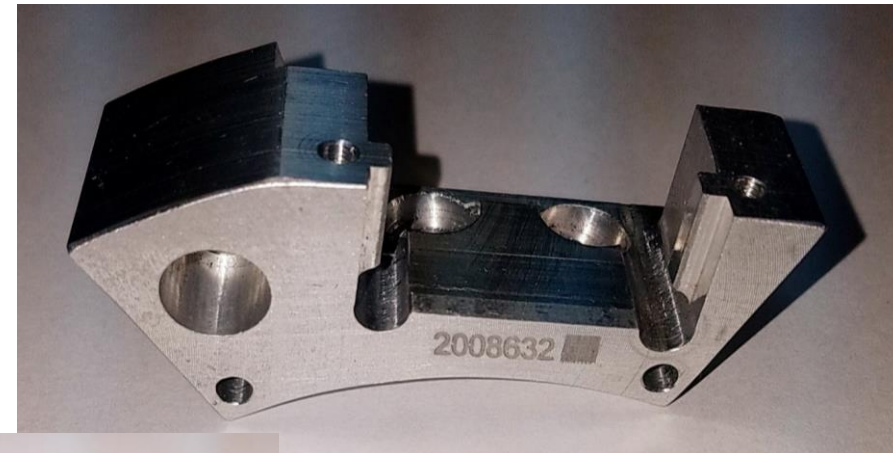


3.0 Services

- » 3.01 - Machine To Print
- » 3.02 - Fab To Print
- » 3.03 - Rapid Response Machine Service

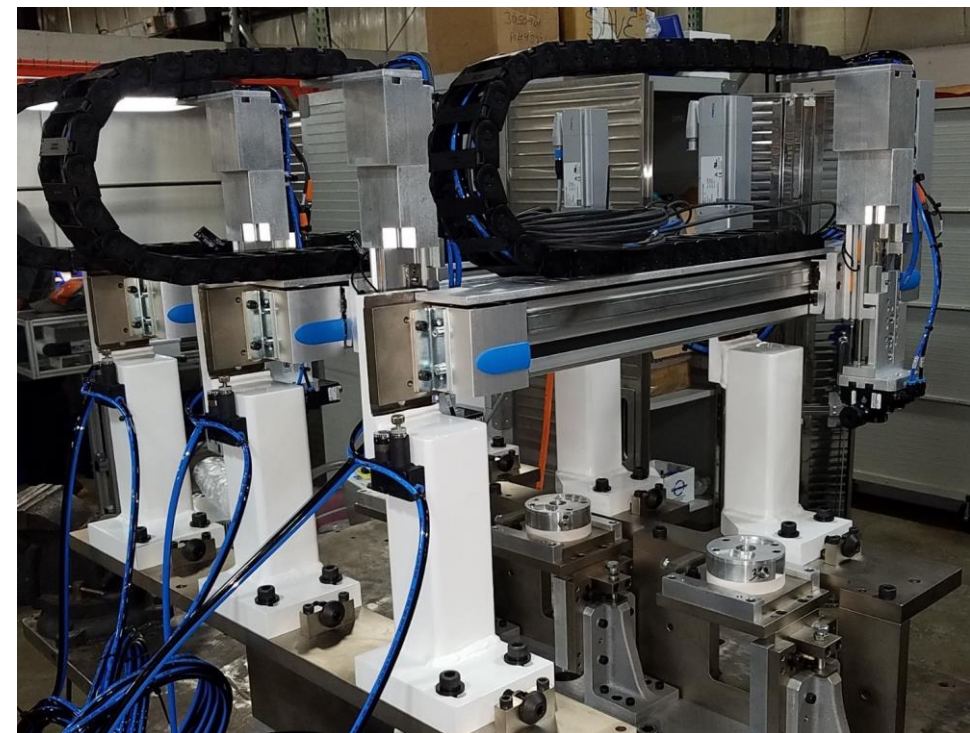
3.01 Machine To Print Services

- » Machining and fabrication services from a World-Class Robotic Integrator
- » Mastercam CAD/CAM 2D & 3D software
- » Vertical Machining Centers
 - » HAAS MiniMill (1)
 - » Milltronics RH20 (2)
 - » Southwester Trak (3)
 - » Bridgeport knee-mills (3)
- » Lathes
 - » Southwestern TRAK TRL 1630 SX
 - » Jet 1440-3PGH
 - » Hardinge DV59
- » Grob band saw
- » Sub-contract EDM, heat-treat, and plating
- » Deltronic comparitor
- » All details are laser etched with your specified part number and 2D barcode



3.02 Fabricate To Print Services

- » FAI can provide automation-quality fabrications in short-order and at competitive prices
 - Steel-tube bases, stanchions, and other weldments
 - Extruded aluminum base frames, and enclosure doors with polycarbonate panels
 - Sheet-metal guards, chutes, and enclosures
- » Competitive prices and quick-turnaround
- » Welding Equipment
 - Miller CP-302 MIG welder
 - Miller 252 MIG welder
 - Miller Syncrowave TIG welder
 - Lincoln Pro-cut 60 plasma cutter
- » Thomas SuperTRAD band saw
- » Scotchman CPO 350 chop saw
- » Famco Electric shear
- » ShopBot PRS 3D router
- » Epoxy-spray and powder-coat painting



3.03 Rapid Response Division

- » Contract robot and PLC programming
- » Replacement part installation and machine upgrades
- » Extremely talented staff, provided at competitive rates

Mission Statement

Facilitate rewarding careers in advanced manufacturing for our customers and our employees.

Vision Statement

Provide world-class automated assembly technology, from multiple sites, demanded by leading manufacturers around the globe.

FAI Values

- » Action Oriented
- » Accountability
- » Professionalism
- » Team Player



Flexible Automation, Inc.

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Custom Machines – Evan McMurray

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