Flexible Automation Inc.
Robotic Process Cells and Custom Assembly Machines
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1.0 Company Profile

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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 high-speed, high-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

- ABB
- BANNER
- COGNEX
- DALSA
- EPSON
- FANUC
- FESTO
- KEYENCE
- NATIONAL INSTRUMENTS
- MITSUBISHI ELECTRIC
- OMRON
- PHD
- Robohand
- Rockwell Automation
- SIEMENS
- SMC
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
- Comprehensive Machine Shop
- In-House Panel Build
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

Lean Cells

Screw Driving
2.02 Dispense Automation
Integration of Proven Technologies
Gasket Dispense: Dual Shuttle
Gasket Dispense: Rotary Dial
Gasket Dispense & Plasmatreat
2.03
Fastener Automation
Integration of Proven Technologies
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
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
CC1510-F (with Ergo Lift option)
CC1510-2S

High Volume Clip Setter Cell
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
» Professionalism
» Accountability
» Team Player
Flexible Automation, Inc.

Fastener Solutions - Dan Yoder
dyoder@flexautoinc.com

Dispense Solutions – Andy Osterholzer
aosterholzer@flexautoinc.com

Custom Machines – Evan McMurray
emcmurray@flexautoinc.com

Material Handling Solutions – Rod Sturgis
rodsturgis@usprogroup.com

Follow us on Twitter @FlexAutoInc
Follow us on LinkedIn

http://flexautoinc.com/

3387 E. Bristol Road
Burton, MI  48529
(810) 742-8540