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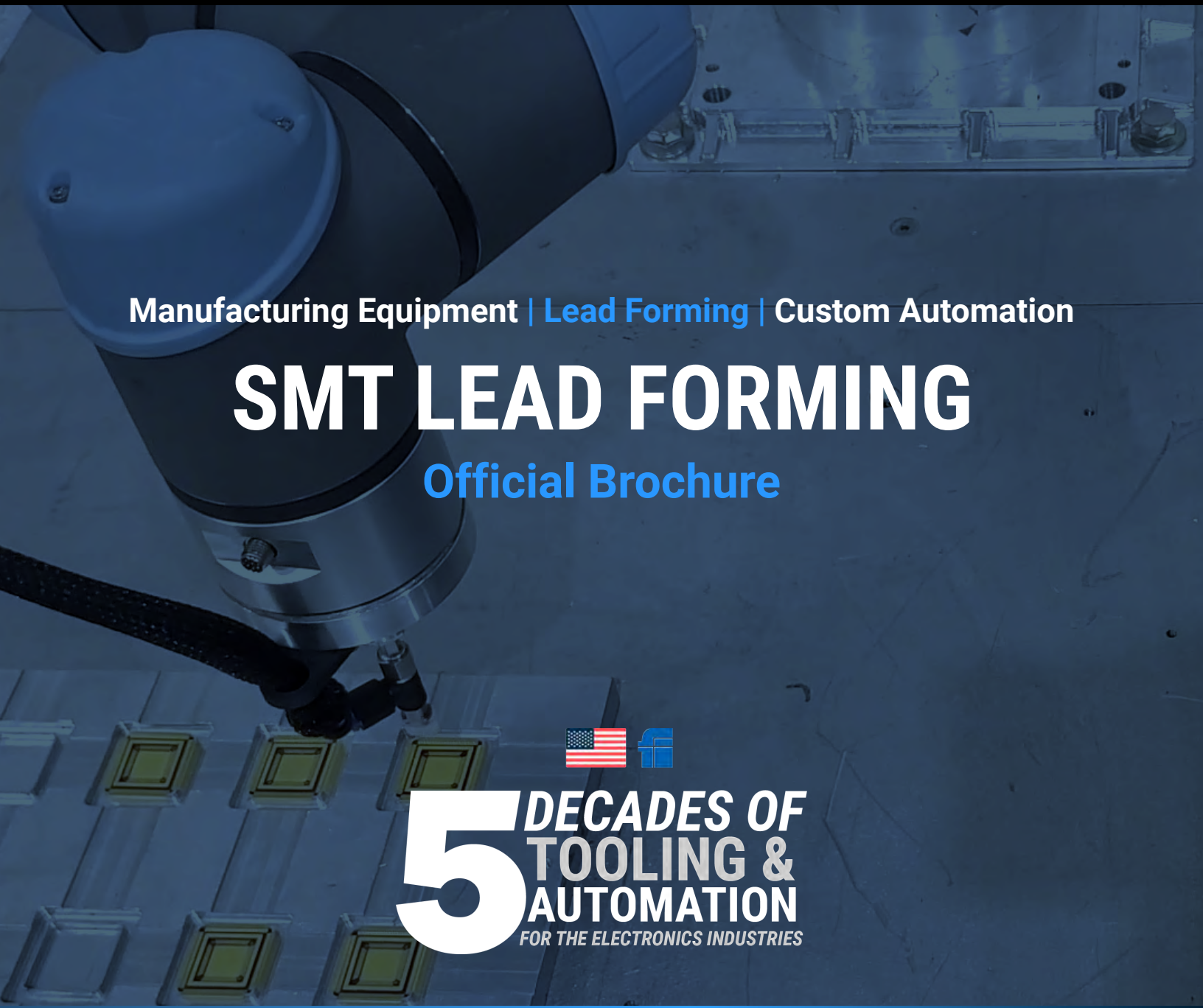

Manufacturing Equipment | Lead Forming | Custom Automation

SMT LEAD FORMING

Official Brochure

5 DECADES OF TOOLING & AUTOMATION
FOR THE ELECTRONICS INDUSTRIES

JAPAN UNIX | flexfactory reinvent feeding | UNIVERSAL ROBOTS | COGNEX | FANUC

ABOUT

SMT LEAD FORMING

SMT Lead Forming World Leaders

World leader in aerospace and defense semiconductor lead forming equipment and services. Capabilities include: ceramic and metal-cased integrated circuits for SMT and custom through-hole applications.

Fancort offers prototype to production equipment specializing in processing high-reliability devices to exacting tolerances. Fancort Industries is ITAR registered and a NASA and Johnson Space Center approved supplier of forming and tinning Services.

31 Fairfield Place, West Caldwell, NJ 07006 USA
info@fancort.com 888-326-2678

TINNING WORK CELL

High Accuracy Without Changeovers

The FLEX is a two-sided gull-wing lead forming system with automatic standoff control. Simple changeover of die members, combined with accurate, repeatable changes in tip-to-tip length, can vary all the critical dimensions of most SMT footprints on various ceramic packages.

Features

- Fancort's dynamic solder pot/s with controls of heated Nitrogen.
- Fancort preheater with thermocouple and controls.

SAM AWARD

Fancort Industries forming and tinning services, located in Fairfield, NJ, is listed in the System for Award Management (SAM) and has a cage code of 8KE76.

ISO CERTIFIED

Fancort is the industry leader in component lead preparation services for the semiconductor and aerospace industries.

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FIVE DECADES OF TOOLING & AUTOMATION

TINNING WORK CELL

Features

- 5 Axis robot for accurate placement into form and trim, tinning, etc.
- Sturdy Enclosure with Light curtains, built to meet the customer requirements.
- Docking stations for your matrix trays.
- Optional Inspection for Bridging or dimensional compliancy.
- Lead forming to Mil-STD-883K and IPC J-STD-001E-2010/April 2010.
- Lead tinning is per IPC J-STD for soldering J-STD-001F module #3 and J-STD-001FS #6, Space Addendum.
- Fancort is IPC J-STD-001ES CERTIFIED for tinning Space Grade flat packs and quad packs as of 18-November-2013
- Automatic standoff control (B) to +/− .002” when used with the Fancort floating anvil press.
- Removable die members for varying all critical dimensions such as shoulder, foot, radii, and lead material thickness without removing the tool from the press.

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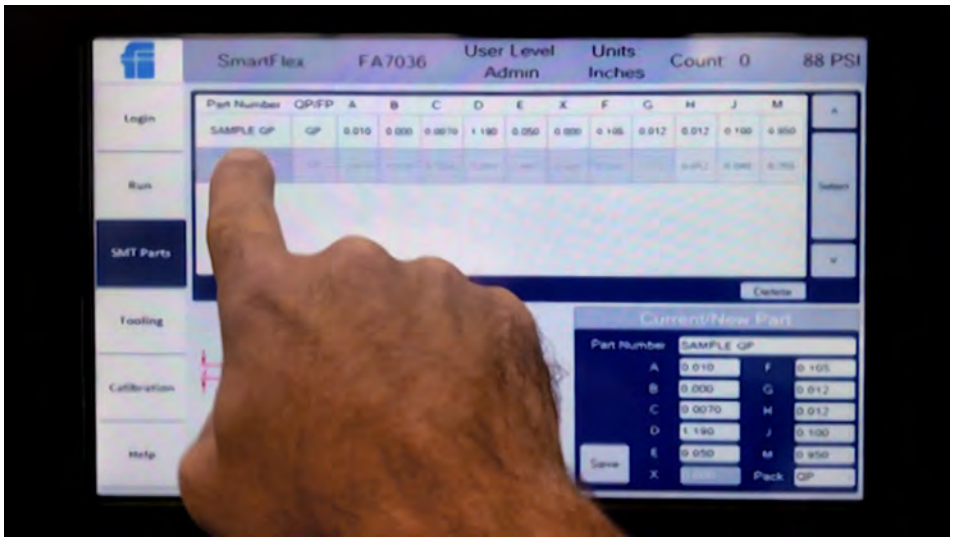
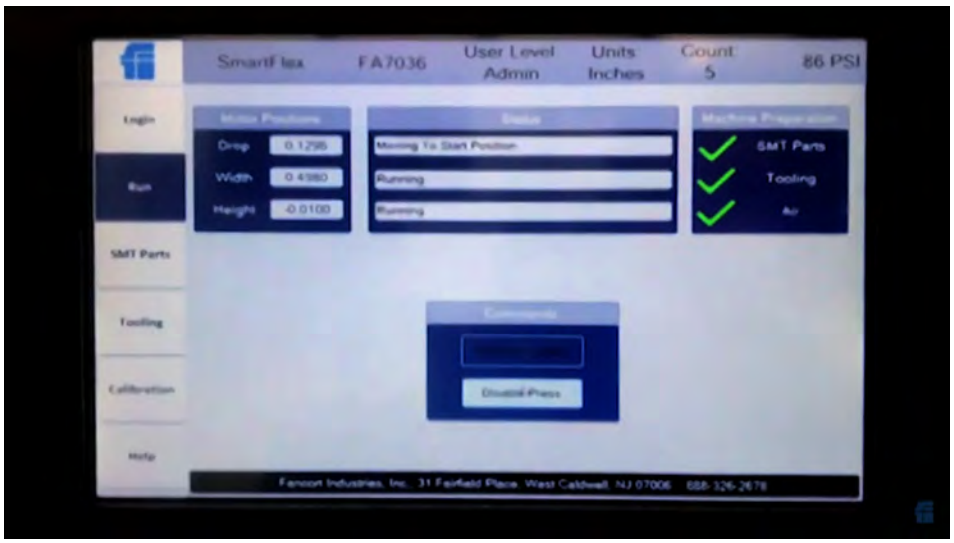
TINNING WORK CELL

Features with SmartFlex™ option

- Adjustable tip-to-tip length using hand control with precision ball screw, anti-backlash, and digital readout.
- Centering station with manual loader for higher throughput and the most accurate hands-free operation.
- Patent number 4,907,628





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SMARTFLEX™

SmartFlex™ SMT Trim and Form System

Fancort newest SMT offering is the SmartFlex an Electronic Floating Anvil FLEX System that is PC controlled featuring windows. Here are some unique features that the PC controls adds to the already top-of-the-line Automatic Standoff height control SMT Floating Anvil FLEX System.

This system will help the technician/operator make setups easier, faster, and with less chance of mistakes. Plus, everything will be documented and saved in the PC controls for future use and/or modification when needed.

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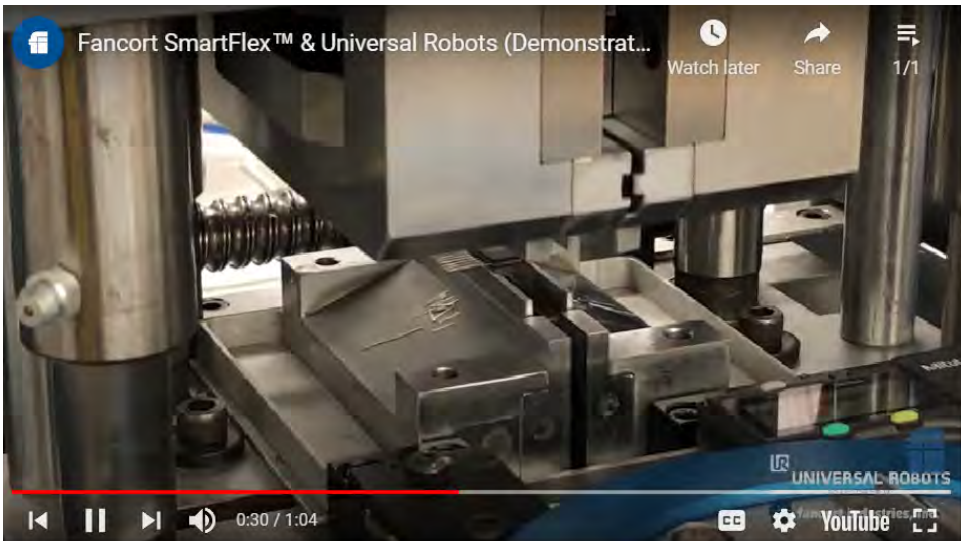
SMARTFLEX™

Features

- Automatic setup and adjustment of the “A” Standoff height.
- Automatic setup and adjustment of the “D” Tip to Tip.
- In the SMT forming specs library, the operator can choose existing forming specs linked to a list of internal Flex tool members (that the customer has on hand already) and will be required to process this new or existing IC part.
- SMT Development Mode. This feature will prompt the technician to enter his required forming specs and help guide the operator to put in industry standards values. Once the values are accepted, the program will determine what internal tooling members will be used or have to be acquired. This unique program calculates spring back and has the Flex systems limitation, including;

For example, .012 “C” is the system's maximum lead thickness capability, and the program will not allow a value larger than .012 to be entered or saved.

- Parts library, This section will have a list of all internal Flex tool members on hand for use that the user has acquired.
- Internal Flex tool members will have a Bar code ID that will identify its critical dimensions when read with the reader provided with the system.
- Internal Diagnostics, Operation manual, Factory support.



Click here to watch video

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SMT COMPONENT PREPARATION SERVICES

Overview

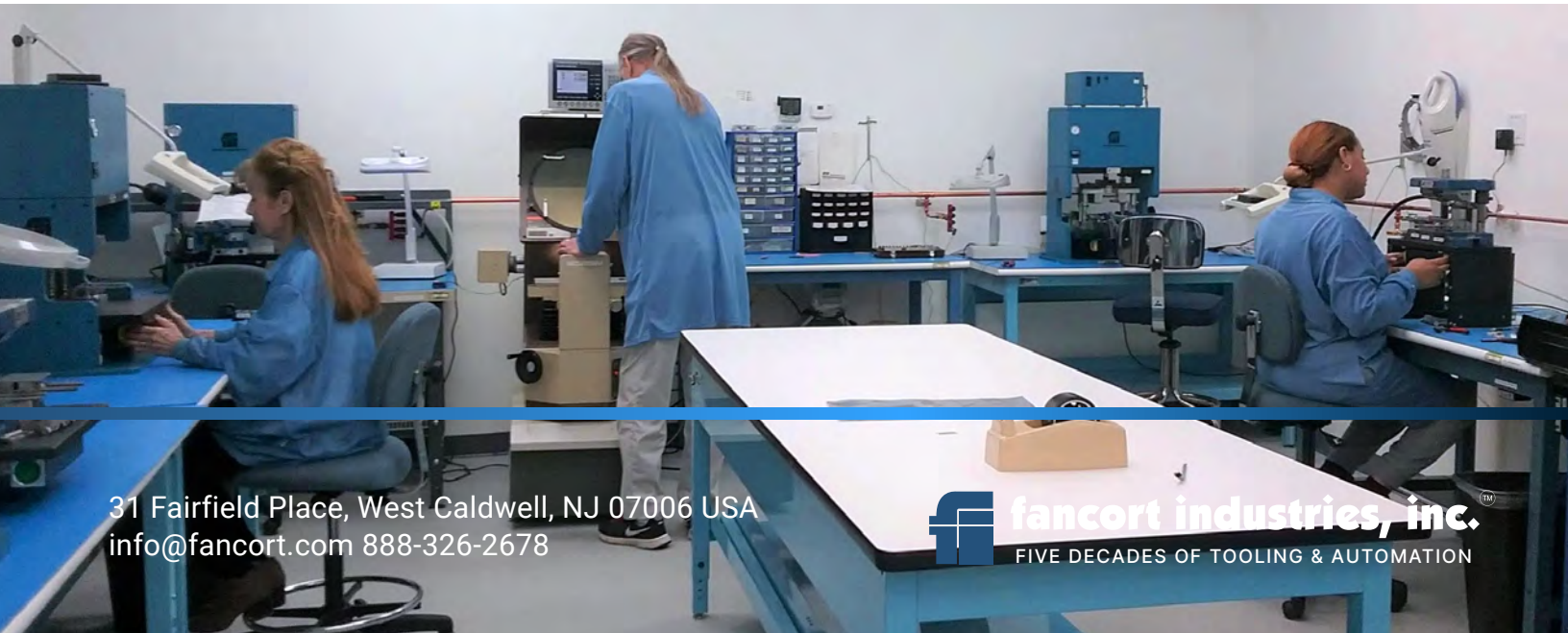
Fancort is the industry leader in component lead forming for Aerospace and semiconductor industries, with five decades of experience designing tooling to form and trim leads for various electronic devices into numerous configurations. We use our unique universal lead forming systems and complete process control to ensure accuracy and quick turnaround. Mil-Spec lead tinning on our LTS 2000 automated equipment is available for any FLAT MILSPEC device, and leak testing is another option we offer.

Features

Lead forming to Mil-std 883 and NASA std FP 51 3414 Rev. H Section 3
Process control incorporates all ISO requirements
Standard footprints layouts are available, or we will design your custom footprint

Options

Lead tinning to Mil std NASA std 8739.2 8199 "workmanship standard for SMT" and Mil 2009 7.
Tinning is a double dip method: No flux, tin to remove gold, flux, and final tin.
Tinning per J-STD-00/ES for space-grade parts.
Leak testing to Mil-std 883, Med + Mod 1014.12. conditions A and C, gross and fine.
Fancorts adjustable matrix trays are available for storage and shipping.



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FIVE DECADES OF TOOLING & AUTOMATION

SMT LEAD FORMING SERVICES

ISO Certified Lead Preparation Services

Fancort is the industry leader in component lead preparation services for the semiconductor and aerospace industries. We have five decades of experience in lead forming a wide variety of packages, including large and small flat packs and quad packs, DIPs, fiber optic headers, and devices that require conversion from through-hole to SMT.

We use our unique, universal, and dedicated tooling systems to ensure accuracy and quick turnaround of your parts to JEDEC/IPC, and or MIL-SPEC standard dimensions, with optional services such as package leak testing and tinning.

PIND TEST

- Particle Impact Noise Detection test
- Fine and Gross Leak Testing

SAM AWARD

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ISO CERTIFIED

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UNIVERSAL ONE-SIDED
SMT FORM AND TRIM SYSTEMS

Overview

One-sided universal lead forming systems are the most flexible and accurate in the industry for processing various components to most standard footprints. This equipment is ideal for high-mix and short-run requirements.

Features

This equipment forms a gullwing configuration on most one, two, and four-sided packages.
Adjustable backstop with linear slide holds the package case parallel for accurate registration.
All models can process top-brazed, side exit or bottom-brazed packages.
Fancort Universal One-sided SMT Form and Trim Systems include built-in digital micrometers on all models for easy setup of trim length and standoff height. Inch and metric readouts are standard.
Easy to change die members for significant variations in lead material's thickness, hardness, or shape.
Standard models handle packages up to 2.5" in length; larger models for packages up to 4" in length.

F-1B/1 and 3300 press

F-1B/3A and 5000L air press

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SMARTFLEX

TWO SIDED SMT LEAD FORM AND TRIM SYSTEM WITH AUTOMATIC STANDOFF CONTROL AND PLC CONTROLLED

Overview

The FLEX is a two-sided gullwing lead-forming system with automatic standoff control. Simple changeover of die members, combined with accurate, repeatable changes in tip-to-tip length, can vary all the critical dimensions of most SMT footprints on various ceramics packages.

Features

Automatic standoff control (B) to +/- .002" when used with the Fancort floating anvil press.
Removable die members for varying all critical dimensions such as shoulder, foot radii, and lead material thickness without removing the tool from the press.
Adjustable tip-to-tip length using hand control with precision ball screw, anti-backlash, and digital readout.
Centering station with manual loader for error-free throughput and the most accurate hands-free operation.
Patent number 4,907,628.

SmartFlex™

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DEDICATED SMT TOOLING

Overview

Dedicated tooling is made for tighter tolerance lead forming and less part handling than Fancort universal lead forming systems. These tools process all sides of a two or four-sided package simultaneously. They are available with manual standoff control or our patented electronic floating anvil system for automatic standoff control. Both tools produce a coplanarity of .004" or better, per JEDEC specification.

Automatic Standoff Control

Fancort state-of-the-art patented floating anvil system incorporates a precision stepper motor control system built into the press to automatically position the moveable forming anvils each time the press cycles. This feature produces a constant standoff (B) regardless of the lead exit position (A) or body thickness to a tolerance of +/- .002".

Manual Standoff Control

These tools require the manual setting of a built-in, lockable micrometer to set the standoff height and a lifter mechanism for easy part removal for quadpacks.

Options

Integrated corner cutting for devices with metal or nonconductive tie bars.
Manual tool loader for semiautomatic part handling.

F-1A Manual tools for FP & QP

F-1F Floating dedicated tools for FP & QP

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LEAD CUTTER

Flatpack and Quadpacks – Adjustable #F-3 Series

Trim leads on packages up to 3" in length.
Adjusts easily to various case sizes with a movable locking nest.
Tapered shear to eliminate stress and smooth cutting.
Built-in micrometer to set cut length from .080" to .500"
Optional model to cut corners on packages with nonconductive tie bars, #F-3C/A

Flatpack and Quadpacks – #F-3 or F-3/4

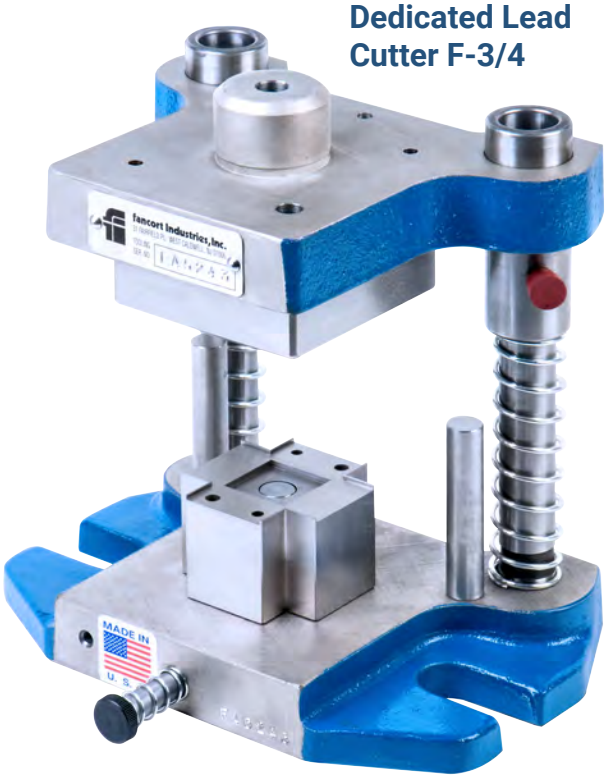
Dedicated lead cutters to cut all sides of a package at one time, two or four-sided.
Lifter built-in if required for easy part removal on quadpacks. P/N F-3/4 Series.

Through-Hole Components

Pneumatic lead cutters, standard or large models, tapered shear for reduced stress, scrap bin, and custom-made precision tooling plates for cutting leads on almost any through-hole component, including connectors with heavy leads. P/N D-2C standard.

F-3A
Adjustable Cutter

Optional Large
Model D-2C/L



Dedicated Lead
Cutter F-3/4

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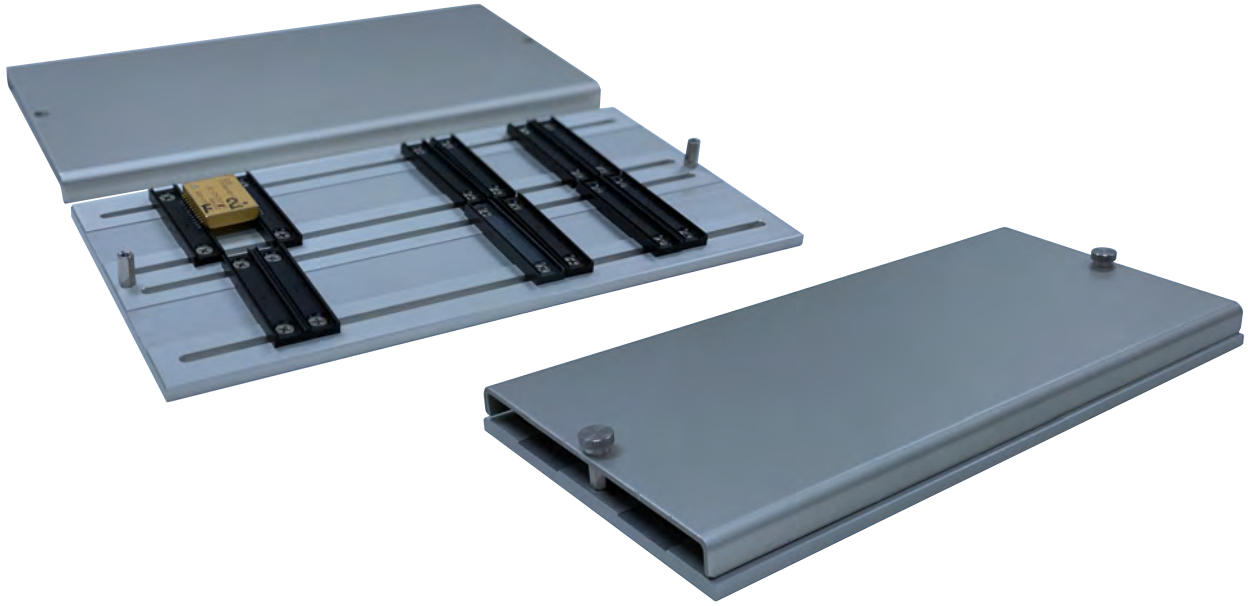
PRODUCTION ACCESORIES

Adjustable Matrix Trays

Reusable aluminum tray with moveable ESD safe supports for most two and four-sided packages. Each tray comes with a cover with ESD foam in a static-shielded bag that fastens securely to the base. Each tray holds up to 10 devices. P/N AMT – 6x12QP or FP.



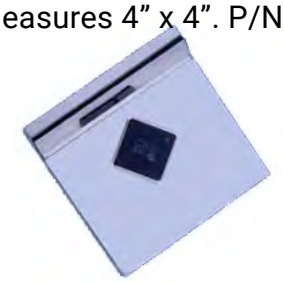
Standoff Measuring Tool

A precision instrument measures the finished standoff height on any surface-mounted device simply and accurately. It can also measure the lead exit position on an unformed device so you can set the standoff control on Fancort form and trim tools. HC-1.

PRODUCTION ACCESORIES

Coplanarity Mirror

For coplanarity, a precision tool visually inspects leads on each side of a formed device. The optically perfect mirror is angled on the tool so the operator can easily perform this inspection. Small and compact. It measures 4” x 4”. P/N CI-1.

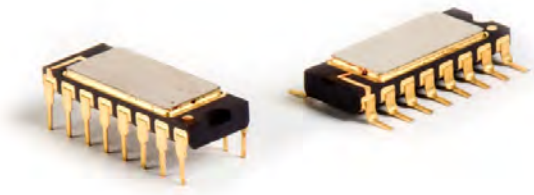


Heavy-Duty Vacuum Pen

This vacuum pen is designed with heavier packages that require extra holding power for loading into Fancort tools. It comes with three vacuum cups of different diameters, and the tip is angled for ease of use. P/N: HP-100.

Custom Applications

Fancort will design and build tooling for various complex lead forming requirements. Here are some examples of the types of tooling we've made. Contact us to discuss your application.



CUSTOM APPLICATIONS

Custom Applications

Omega-Style Bend

Reverse Gullwing

Staggered Through-hole

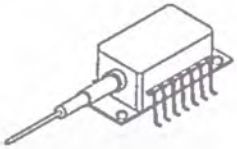
Progressive Lead Frame

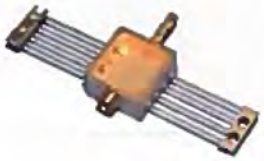
Fiber Optic Device

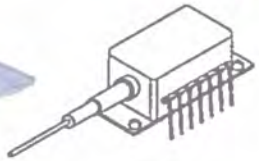
Through-hole DIP to SMD

Custom Applications
in Car Form

Optical Component Forming







Roler Forming

Custom Application
Omega-Style Bend

TO-220 One-Sided Omega Bend

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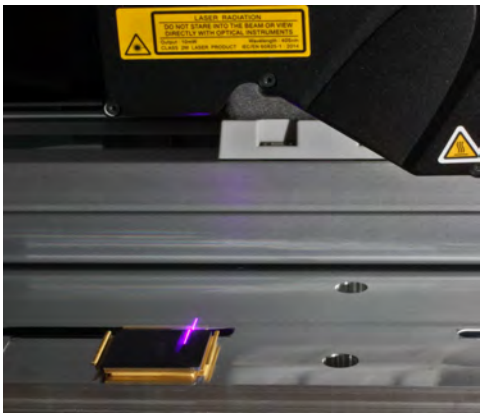
3D VISION INSPECTION

3D Vision Inspection

Introducing Fancort's Veri-Spec 3D, a high-resolution/precision 3D vision inspection system for SMT gullwing lead-forming. The Veri-Spec 3D uses a fully featured HMI where new parts can be introduced in seconds. Options include data logging to internal and/or external databases and seamless integration into the robotic Fancort Tinning Cell and SmartFlex.

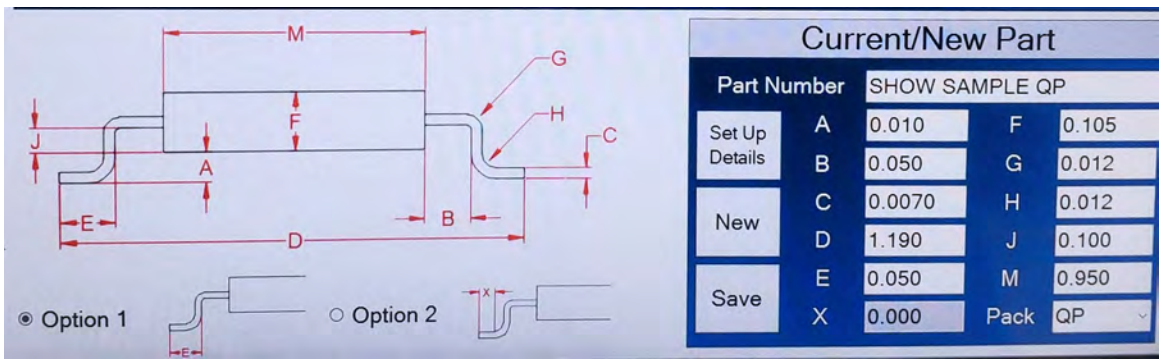


New Veri-Spec 3D

Machine vision inspection system explicitly designed for SMT lead forming inspection and compliance with customer SMT library.

Parameterized Inspection

The SMT Vision inspection station will be able to take Flat Packs or Quad Flat Packs and automatically inspect the leads based on a set of user-entered parameters. This means entirely new packages can be introduced to the inspection system and be ready to inspect within seconds. The 3D vision inspection system can inspect parts based on user-defined tolerances. Recipes can save package dimensions and tolerance settings, allowing part changes to be one click away.



3D VISION INSPECTION

Customizable Experience: Choose what data to view and save

User Interface

User interface can display simplified “GO/NO-GO” indications or be set to display advanced measurement viewing and visualizations.

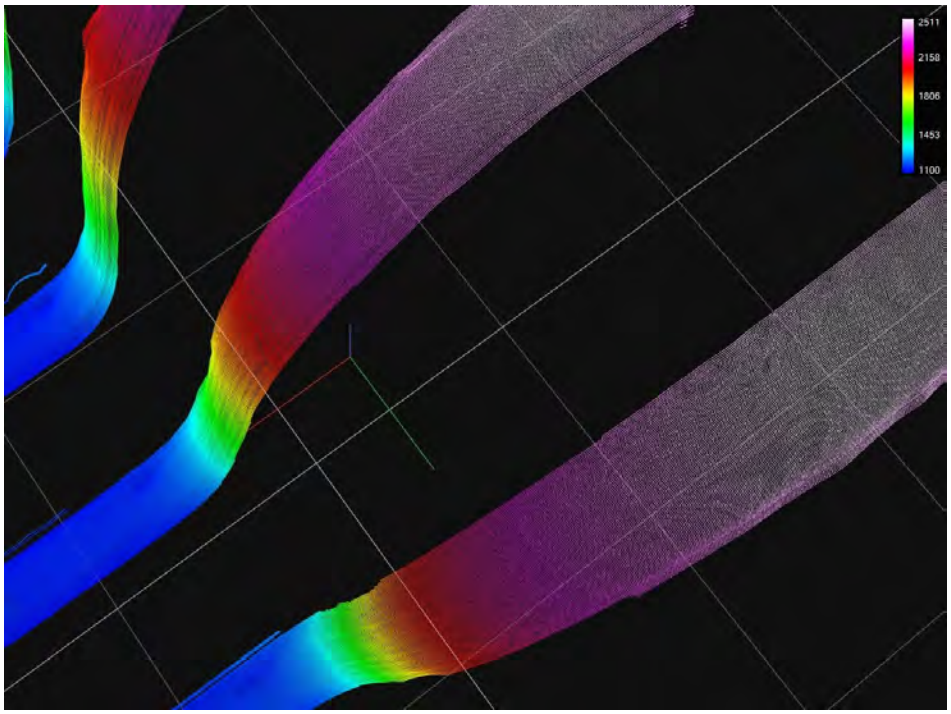
Data Logging

All process data can be logged locally and/or remotely to a SQL server. Logging options can be chosen to include only the data relevant to the customer.

- MEASUREMENT VALUES
- PROCESS SETTINGS AND VALUES
- 3D POINT CLOUD DATA
- PART NUMBERS AND CUSTOM DATA

Process Control

Viewable control charts for tracking process stability under the influence of a range of factors.



INDUSTRIAL PRESSES

Adjustable Column Presses

Fancort's adjustable column pneumatic presses are designed for light assembly work from 2 to 1900 pounds of pressure. These pneumatic air presses have a small footprint, side-mounted controls, adjustable column, speed control, and a keyway for easy tool mounting.

C-Frame Presses

Fancort's C-Frame air presses are quiet, heavy-duty, and deliver smooth operation. Designed for applications requiring 1 ton of pressure or more. These sturdy pneumatic air presses come in a wide range of applied force.

Custom Presses and Tooling

Fancort designs and builds custom presses and turnkey tools that are press-fit and heated with automated PLC controls.

Janome Servo Presses

Fancort offers Janome stand-alone and custom servo presses from 50 to 5000 kg for highly accurate speed, distance, time, and force control. Janome Servo Presses Include SPC data collection.

AEROSPACE. ELECTRONICS. MILITARY. MEDICAL. AUTOMOTIVE. INDUSTRIAL

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FIVE DECADES OF TOOLING & AUTOMATION

ABOUT US

Fancort Industries is a vertically integrated Manufacturer, Distributor, and Integrator/ machine builder of world-leading equipment. We are the world-leading SMT lead forming equipment manufacturer, master distributor of advanced robotic soldering equipment, and certified system integrator for Cognex, Fanuc, and Universal Robots.

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