



fancort industries, inc.

TM



PCB Depaneling Solutions
For Scored or Tab-Routed Panels

Pre-Scored Board Machines

Economical Machines for Low to Moderate Volumes

Fancort offers 5 models of pre-scored PCB depaneling machines starting with low volume manual units working up higher volume motorized units. All are designed to minimize board stress and the potential for component damage. We also offer two units for simulating metalized boards especially those found in LED manufacturing.

Low to Moderate Volume

Model VPD2-400

- ▶ Heavy frame for stability and precision linear bearing ensures proper blade alignment for many years.
- ▶ Easy adjustment and positive locking of guides and knives for different thickness boards.
- ▶ Infinitely adjustable speed control.
- ▶ Maximum board length of 16".
- ▶ Automatic parallel adjustment of blades.
- ▶ Edge distance guide for separating scored boards.



Separates .050"-.070" from score line without damage to components.

Moderate Volume

Model VPD3-M

- ▶ Use both round and linear knives to reduce stress.
- ▶ Manually Operated.
- ▶ Linear bearing ensures proper blade alignment.
- ▶ Adjustable table height.
- ▶ Safety guides in front of moveable knives.



Separates .050"-.070" from score line without damage to components.

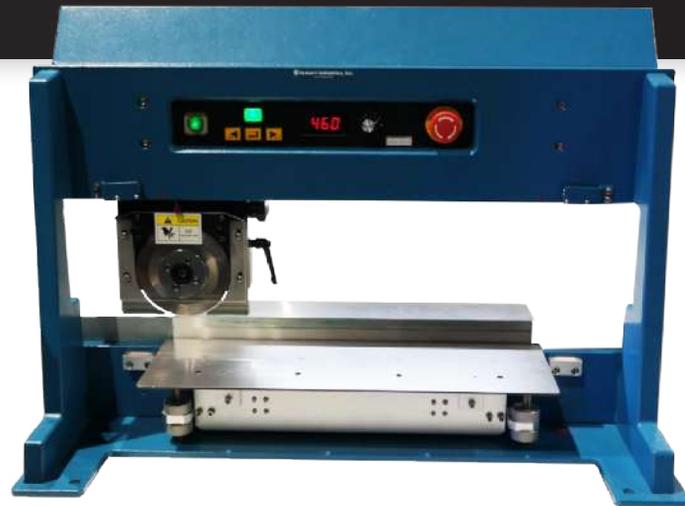
Pre-Scored Board Machines

Economical Machines for Low to Moderate Volumes

Higher Volume

Model VPD3-1S

- ▶ Round knife, motor driven against lower linear knife, for reduced stress.
- ▶ 16" cutting area.
- ▶ Heavy frame for stability and precision linear bearing ensures proper blade alignment for many years, with enamel beige paint.
- ▶ Flat on one side of knives allows for separation of boards with components along one side of score line.
- ▶ Wide table on either side of the linear knife measures 6.25" X 20".



Separates .030"-.040" from score line without damage to components.

High Volume

Model VPD5-330

- ▶ Wedge-shaped knives shear the entire groove without bending or tension.
- ▶ Separates panels up to 0.1" thick.
- ▶ Minimum board thickness of 0.024".
- ▶ Shears boards safely with parts as close as 0.5mm to the score line, including ceramic capacitors.
- ▶ Operator fool proof! Panels cannot be inserted into the knives except on the score line.
- ▶ Pneumatically driven.



Separates .020" from score line without damage to components.

Routed Boards



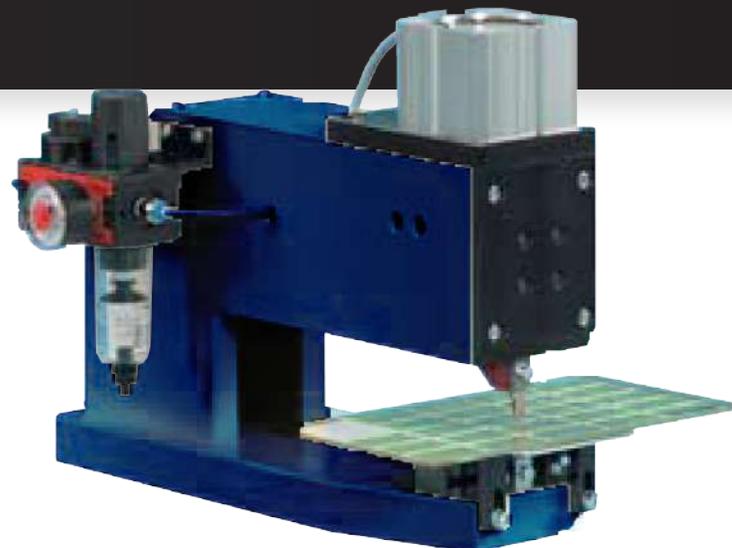
Low Volume

Model NTR-2

- ▶ Single knife machine removes tabs.
- ▶ Change knives in less than 3 minutes.
- ▶ Foot switch and scrap tray.
- ▶ NTR-2 cuts up to .125" thick PCB.

Model NTP-1

- ▶ Separates hard to reach tabs.
- ▶ Cuts board up to .080" thick.
- ▶ Two locating pins maintain board position.
- ▶ Rugged C frame design.
- ▶ Vertical cutting motion.



Metalized Board Depanelers

Designed to separate metallized boards with knives measuring 300mm. Boards longer than 330mm can be separated because the machine is open on both ends and boards can be fed through in more than one cycle.

A longer machine is also available: Model VPD5-500P has 500mm length blades. Performance of these machines may vary depending on the depth and alignment (top and bottom) of score lines. Score line depth should be 25-30% of the overall board thickness.

Model VPD5-500P

- ▶ Powerful pneumatics and cams allow this machine to separate FR-4 and most metallized boards up to .100" or more depending on depth of score lines.
- ▶ Two models:
VPD5-330P for panels up to 13".
VPD5-500P for panels up to 20".
- ▶ Openend saw for processing panel limited length.
- ▶ Score line top and bottom must be perfectly aligned and score depth should be 25-30% of total board thickness to work properly and ensure longer wear on the knives.



Stress and Depaneling Scored Boards

| Machine: | Safe Distance from score line: |
|----------------------------|--------------------------------|
| VPD2-400 (Pizza Cutter) | .060" |
| VPD3-1 or 1M | .040" |
| VPD5 | .020" |

Desktop Robotic Routers

Universal or Dedicated Fixtures and Fiducial Recognition

Fancort offers a wide choice of PCB routers including two desktop models that are available with twin tables for increased through-put. The two desktop routers only differ in the use of fixtures. The "up-vac" model can use our adjustable fixture making it ideal for CM's with a high mix of panels. The "down-vac" model is designed for use with dedicated fixtures where the production runs are longer, there is no time lost in fixture set-up, and no risk of an operator making the wrong set-up.

High Volume, No Stress

Janome JR 3000 RU

- ▶ High precision spindle motor performs stress free cutting for smooth and easy depaneling.
- ▶ Cuts straight lines, curves and angles.

New functions:

- ▶ When the robot's cumulative work hours exceed the limit you set, the switchbox LED shows you it is time to replace the router bit.
- ▶ Editing function which lets you offset the router bit's diameter.
- ▶ USB camera teaching (Optional)



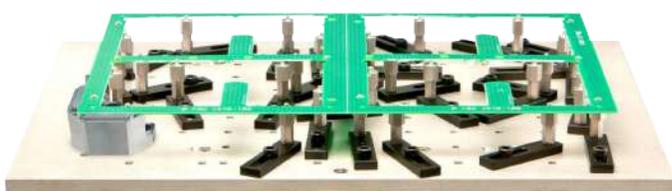
Vacuum System

- ▶ Powerful vacuum system draws dust and debris from the vacuum box into the vacuum reservoir.



Adjustable Fixture

- ▶ Consists of master base plate to fit robot base with holes tapped on one inch centers.
- ▶ 25 removable post supports attach to the base that can be moved in an arc to position the posts in the routed slots.
- ▶ Removable posts are turned down at the end to a diameter that fits into the routed slot.



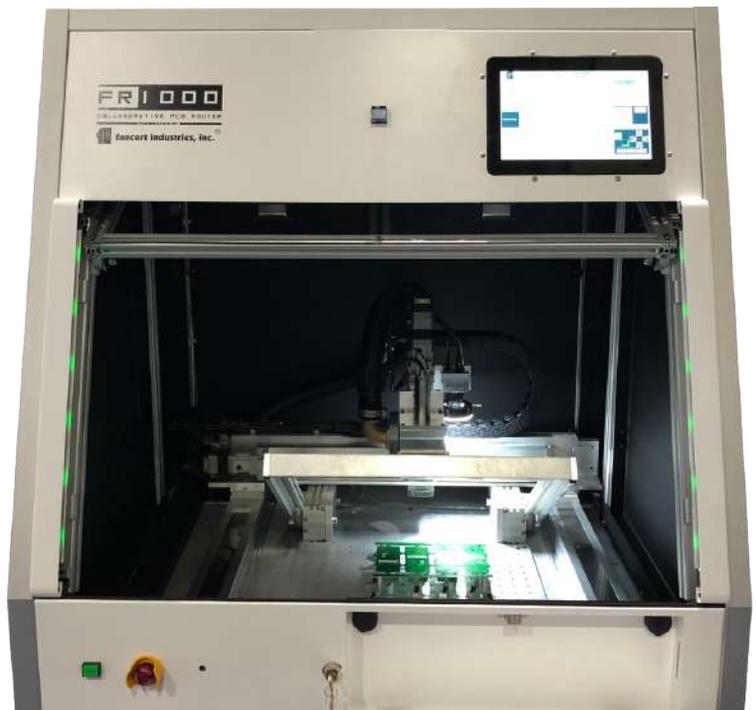
FR-1000 Stand Alone PCB Router

Introducing Fancort's FR-1000 stand alone collaborative ready PCB router machine, specially designed as a low cost solution to meet medium volume PCB depaneling requirements with a machine that provides the mechanical properties necessary for reliable accurate depaneling.

The FR-1000 is capable of depaneling boards up to 457 mm x 355 mm and up to 3 mm thick, single working area machine with top vac dust removal system, and 350 watt high speed spindle.

Features

- ▶ Large panel size: 457mm x 355mm.
- ▶ Powerful gantry system.
- ▶ Easy vision jog and teach programming.
- ▶ Small overall footprint.
- ▶ Vac filtering for ultra clean operation.
- ▶ Fiducial mark vision alignment.
- ▶ Vision based bar code and pattern recognition program selection.
- ▶ Manufactured in the USA/NJ by Fancort Industries, backed with one year warranty.
- ▶ Fancort universal collaborative fixture automatically opens when boards are finished routing to improve productivity and reduce operator fatigue, includes two high torque pneumatic rotary actuators, universal base plate, standoff pins, and adjustable hold down bars.
- ▶ Fixture comes standard equipped.



Specifications

- Manipulator

Configuration: X, Y, & Z axis.

Manipulator Motors: 3 axis stepper motors.

Manipulator Repeatability: ± 0.02 mm.

- Routing Capability

Non routing speed: 800 mm/s.

Routing speed: up to 25mm/s max depending on material, cutting quality and tool diameter.

Repeatability: $< \pm 0.02$ mm straight lines, curves & interpolated profiles.

- Workstation

Panel Size: 457 mm x 355 mm (18.0" x 14.0").

Panel Thickness: 0.5 mm – 3.0 mm.

Getech

Engineered for reliability and repeatability

Low to Medium volume PCB production, machinery designed for customers with technical demands of their machinery but limited volumes. They require the same uncompromised performance but with manual loading and unloading, intuitive UI and easy to operate.

High demand PCB production, machinery designed for medium to high volume production requirements and PCB thickness up to 6mm. Includes machinery design for super massive PCBs up to 1.0M in length.

Stand Alone Routers

Stand alone router machines specially designed to depanelize printed circuit board assemblies (PCBA) into individual assemblies.

- ▶ Semi Automatic Router Machine: GSR2280
- ▶ Laser Singulation System: GLSS
- ▶ Semi Automatic Sawing Machine: GSS1200
- ▶ Economic Semi Automatic Router Machine: ESR1280E
- ▶ Semi Automatic Router Machine: GSR
- ▶ Economic Semi Automatic Router Machine: ESR1200
- ▶ Economic Semi Automatic Router Machine: ESR1380E

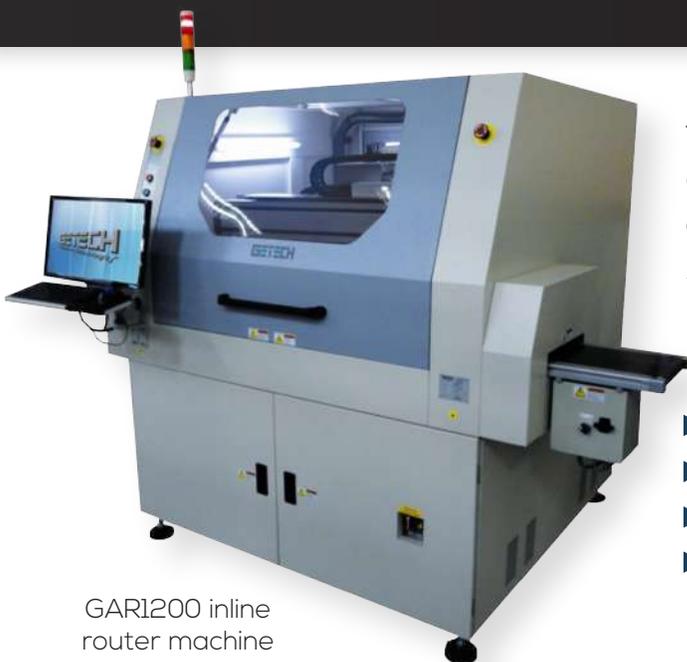


GSS1200 Semi Automatic
Sawing Machine

Inline Routers

In-Line PCB Production: Machinery designed for in-line PCB production and continuous operation. PCB thickness up to 8 mm with automatic offload to downstream conveyance systems.

- ▶ Bottom Router: GBR
- ▶ Getech Automatic Router Machine: GAR1200
- ▶ Inline Router with Board Handling Machine: RBM
- ▶ Inline Dicing Machine: IDM



GAR1200 inline
router machine

HG Tech Laser Depaneling

High-performance UV laser cold light source

Fancort is excited to offer laser depaneling equipment from HG Tech. HG Tech is a world leader in the field of laser technology with machines in many of the leading electronics CM's as well as a large presence in the industrial metal cutting business. This expertise allows HG Tech to build standard machines with a choice of laser source and machine structure to best fit a wide range of applications.

PCB Laser Depaneling Machine

Adopted with high-performance UV laser cold light source, high-precision CCD image positioning technology and self-developed visual laser control software, the FPC flexible PCB laser cutting machine of HGLASER perfectly implements contour cutting, drilling of FPC and PCB, and precision processing of composite membrane.

- ▶ Inline and batch machines available.
- ▶ Standard machine includes fiducial recognition camera.
- ▶ CE certification is standard.
- ▶ Ideal for FPC and thin FR4 PCB boards.



Desktop Laser Markers

Fancort offers desktop versions of the CO2 and fiber laser markers for low volume high mix customers who need to mark PCB's and metals without the need to invest in high cost floor mounted or in-line machines.

- ▶ Easy to learn software platform used for in-line and high volume machines.
- ▶ Machines for marking metal and plastics.
- ▶ Great for machine labels and custom marking on machine buttons etc.

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