



fancort industries, inc.

TM



PCB Depaneling Solutions
For Scored or Tab-Routed Panels

Pre-Scored Board Machines

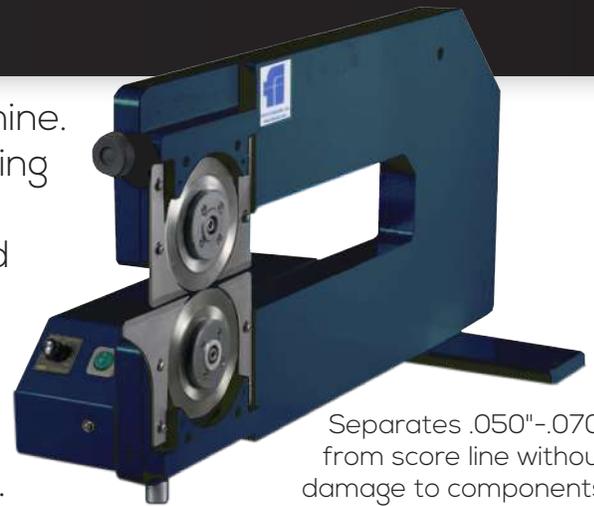
Economical Machines for Low to Moderate Volumes

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

- ▶ Separate boards with this simple, ergonomic machine.
- ▶ 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 VPD3-1M

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

Options:

- ▶ Overload protection M
- ▶ Microprocessor Board
- ▶ Relay
- ▶ Photoelectric Safety Se
- ▶ Proximity Sensor
- ▶ Sensor Reflector



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

Pre-Scored Board Machines

Economical Machines for Low to Moderate Volumes

Higher Volume

Model VPD3C-1

- ▶ Round knife, motor driven against lower linear knife, for reduced stress.
- ▶ Separate boards with components 1mm from the score line and as thin as .030".
- ▶ Separates boards with components 2mm from the score line.
- ▶ 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 VPD2-400

- ▶ Wedge-shaped knives shear the entire groove without bending or tension. Independent lab tests
- ▶ show less than 200 microstrains of stress measuring compression and tension.
- ▶ Separates boards up to 330mm x 2.5mm thick.
- ▶ VPD5-500P for separating metallized boards or FR4 boards of any length.
- ▶ Minimum board thickness of 0.6mm.
- ▶ Shears boards safely with parts as close as 0.5mm to the score line, including ceramic capacitors.
- ▶ Operator foolproof! Panels cannot be inserted into the knives except on the score line.
- ▶ Pneumatically driven.
- ▶ Handles high components up to 1".
- ▶ Dimensions 700mm x 230mm x 375mm, weight 125kg.



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

Routed Boards

Low Volume

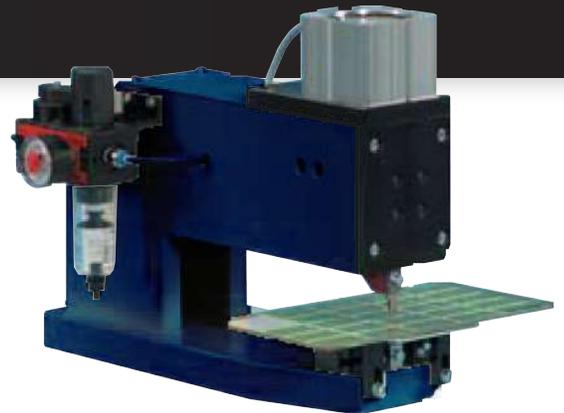
Model NTR & NTR-2

- ▶ Single knife machine removes tabs.
- ▶ Change knives in less than 3 minutes.
- ▶ Foot switch and scrap tray.
- ▶ NTR-1 cuts up to .093" thick PCB.
- ▶ NTR-2 cuts up to .125" thick PCB.



Model NTP-1

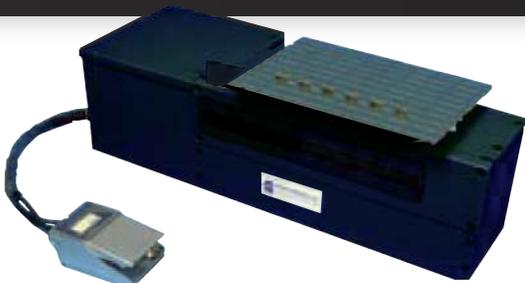
- ▶ Single knife machine cuts along board edge.
- ▶ Separates hard to reach tabs.
- ▶ Cuts board up to .080" thick.
- ▶ Two locating pins maintain board position.
- ▶ Rugged C frame design.
- ▶ Vertical cutting motion.
- ▶ No scrap.



Moderate Volume

Model PS-MR-1

- ▶ Cut up to six tabs at once.
- ▶ Minimal stress to board or components.
- ▶ Pneumatic operation.
- ▶ Easy knife adjustment.



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 metalized boards up to .100" or more depending on depth of score lines.
- ▶ Two models:
VPD5-330P for panels up to 330mm.
VPD5-500P for panels up to 500mm.
- ▶ Openend saw for processing panel so fun 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 2000 Series

- ▶ Three robot models with working area up to 20"x20"
- ▶ Powerful vacuum system collects dust and debris.
- ▶ Easy to program with teach pendant, and very low maintenance
- ▶ Dedicated fixtures.
- ▶ Extremely low stress; ideal for small, densely populated boards, round or oddshaped boards.
- ▶ Optional light curtain or full enclosure.



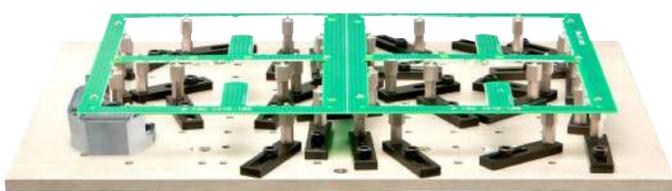
Vacuum System

- ▶ 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.



UE1 Universal Platform

Introducing Fancort's Universal Platform (UE1). The UE1 is a highly flexible and productive machine designed for a range of batch processes. The ergonomic proportions and automatic overhead door make it comfortable, productive, and most importantly Collaborative Ready when paired with a machine attendance robot.

UE1 can be configured as a batch machine for robotic soldering, PCB routing, dispensing, press fit, laser marking, screw fastening or just about anything.

Features

► Multi-functional Robots

The enclosure can safely house multi-functional gantry and desktop robots which are compatible with off-line programming and Gerber data file import via optional PC software.

► Vision Equipped.

UE1 comes equipped with an on-board PC based flexible machine vision system which can be configured to perform fiducial alignment, bar code reading, dimensional inspection, pattern recognition based quality checks.

► Industrial Touch Screen GUI

Standard touch screen interface makes programming the vision system straight forward with the ability to extend the machine desktop onto any windows 10 equipped laptop or PC.

► Industrial Teach Pendant.

Robot motion and job functions are easily configured via industrial teach pendant.

► Performance Specs (depends on Robot)

500 mm x 600mm x 200mm work area, up to 8kg payloads, speeds up to 800 mm/s, 3D linear and arc interpolation motion, up to 999 programs, up to 16 input/16 outputs, USB memory for teaching and data saving, built in 24v I/O power supply.



UE1 Universal Platform

Specifications

Number of Axes		3 Axes Synchronous Control	
Stroke	X Axis (mm)	300/400/500/600	
	Y Axis (mm)	300/400/500	
	Z Axis (mm)	50/100/150/200	
	R Axis (deg)	-	
Driver Motor	Stepping Motor		
	X Axis	Feedback Control	
	Y Axis		
	Z Axis		
R Axis	-		
Maximum Portable Load	Tool (kg)	8	
Maximum Speed <PTP Movement> ¹	X-Axis Stroke	300	500
	Y-Axis Stroke	400	600
	X Axis (mm/s)	700	800
	Y Axis (mm/s)	800	
	Z Axis (mm/s)	400	
	R Axis (deg/s)	-	
R Axis Acceptable Moment of Inertia (kg·cm ²)		-	
Repeatability (mm) ²	X Axis (mm)	±0.02	
	Y Axis (mm)	±0.02	
	Z Axis (mm)	±0.02	
	R Axis (deg)	-	
Mass (kg)	Robot	W:Y-Axis Stroke + 426 D:X-Axis Stroke + 309 H:Z-Axis Stroke + 357	
	Controller	170 x 310 x 300	
	Controller	7.5	

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