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FR-1000 Stand Alone PCB Router

Overview

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 406mm x 444mm and up to 3mm thick, single working area machine with top vac dust removal system, and 350 watt high speed spindle.

Features

- ▶ Large panel size: 406mm x 444mm.
- ▶ Powerful gantry system.
- ▶ Easy vision jog and teach programming.
- ▶ Small overall footprint.
- ▶ Vac filtering for ultra clean operation.
- ▶ Fiducial mark vision alignment.
- ▶ Manufactured in the USA/NJ by Fancort Industries, backed with one year warranty.
- ▶ Quick release for fast bit changeover.
- ▶ Fixture comes standard equipped as a universal fixture but can also easily accept dedicated tooling for fast change over for mixed environments.
- ▶ Optional pneumatic automatic door to help input and output of the panel either by a collaborative robot or by the operator.
- ▶ Standard built in safety light curtain across enclosure load/unload zone during operation.



Specifications

- Manipulator

Configuration: X, Y, & Z axis.

Manipulator Motors: 3 axis stepper motors.

Manipulator Repeatability: ± 0.02 mm.

- Routing Capability

Non routing speed: 800mm/s.

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

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

- Workstation

Panel Location: Adjustable fixture with ability to add dedicated fixture plates.

Loading: Manual or Collaborative Robot Loading.

Panel Size: 406mm x 444mm (16" x 17.5").

Panel Thickness: 0.5mm - 3.0mm.



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- Spindle System

Spindle Motor: 350 Watt High Power Spindle.
Max Speed: 60,000 rpm.
Tool Change: Manual tool change.
Cooling: Ambient cooled.
Router Bit: Shank size 3.175mm (1/8").

- Dust Filtration System

Power: 1.0 kw vacuum blower with HEPA filter.
Filtration: 3 stage filtration with disposable filter bag (10 microns).
Vacuum Location: Top vacuum on spindle.

- Vision System

High resolution CCD video teaching camera.
Fiducial correction.
High quality touch screen monitor GUI standard.

- Programming

On line: Vision assisted point to point manual teaching.
Editing Function: Dry run vision assisted/test run mode.
Variable Functions: Tool bit diameter compensation, Filter change interval (distance) setting.
Gerber File Import with PC software for offline programming.

- Safety Features

Full steel interlocked enclosure for noise, dust, and operator safety.

- Machine Dimensions & Utilities

Machine size: 1.00M x 1.00M x 1.8M.
Weight: 300 kg.
Power Supply: 120/1/60 V for machine and separate Vacuum.

OPTIONS:

Dedicated Fixture Plates.
High Power Vacuum.
Gerber File Import.
Cobot Mounting Station.
Pneumatic Automatic Door.

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