



## 3-AXIS CNC ROUTER & OVVO INSERTION MACHINE

**MODEL: PET CNC OVVO**

***“We don’t sell multiple machines to do a single operation, we  
sell one machine to do multiple operations ”***

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**After the sale, it’s the service that counts!!**

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# 3-AXIS CNC ROUTER & OVVO INSERTION MACHINE

## MODEL: PET CNC OVVO



The **PET CNC OVVO** is the only machine in the industry with VERTICAL ROUTING CAPABILITIES on the bottom surface of the panel which guarantees accuracy of +/- 0.05mm of router depth by making the bottom of the panel a TRUE zero reference point. This machine removes the need for expense floating head aggregates or a live Z-axis laser measurement device on a flat table router

-AND-

100% routing and insertion of any OVVO fastener component on the edge of the panel and vertical routing within 112mm of the panel bottom surface edge.

- (1) Vertical high speed router
  - (2) Horizontal high speed routers
  - (5) Independent vibrating feeders
- (5) Independent injectors consisting of: (1) OVVO PD 20 channel connector, (1) OVVO PD9 channel connector, (1) OVVO DH1 FACE injection within 30mm of PANELS edge, (1) 6mm X 40mm plastic dowel OVVO OD30 (1) 8mm barbed RD12 dowel connector OVVO RD12
  - Parametric programming with full visual edit control
  - (4) Zones with FIBER OPTIC part recognition
- (4) Independently adjustable table supports on linear guides for long part support
- (2) AUTOMATIC TOOL TOUCH OFF DEVICE for vertical and horizontal spindles
  - Wireless barcode reader
  - Wireless keyboard and mouse
  - OVVO component storage cabinet
- Pro Edge Technology's 24/7 TeleService Support



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# MODEL: PET CNC OVVO

The **PET CNC OVVO Router and Fastener Inserter** is ideal for either the high production panel processing shop or the custom production shop.

The versatile **PET CNC OVVO** allows for horizontal boring and fastener insertion in the panel's edge

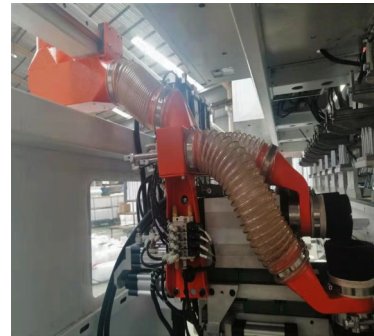
**AND**

has the added feature of being capable of routing vertically and horizontally to perform such features as blind dado, production of 5-piece doors, routing Soss hinges, hardware location, hinge cups, recessed hardware and much more.



## 4 Fastener Insertion Injectors

- Consisting of: (1) PD 20 Connector, (1) PD9 Connector, (1) 6mm Plastic Dowel OD640, (1) FACE DH1 and (1) 8mm barbed RD 12 connector
- All injectors are CNC controlled for accuracy and positioned forward by a pneumatic cylinder.
- Each injector is independently mounted on a heavy duty linear bearings and rail.
- (12) OD 30, (14) PD20 8mm barbed connectors and (17) DH1 fasteners are auto loaded into the corresponding injector magazine, at one time.
- Photo eye detection ensures the fastener is properly loaded into injector before firing, eliminating misfires.
- Injector rods have been specially designed so the connector is injected with a smoother insertion and accuracy while exiting the injector.



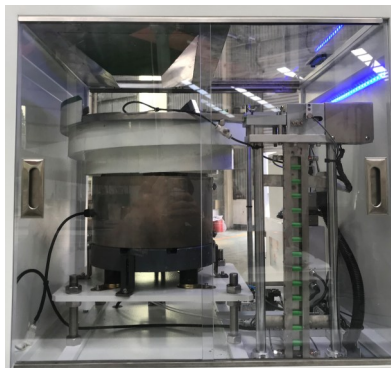
## Dust Collection Unit

- 100mm main inlet.
- 3 Independently selectable dust ports for routers.
- For superior dust collection.



## Stainless Steel Injector Magazines

- Each magazine is independently and automatically loaded during the operation of the work list.
- Each magazine holds approximately 20 fasteners.



**Vibrator and Automatic Magazine Fastener Feeder with a separate PLC controlled pendant for each feeder.**



**6mm DOWEL Feeder with NEW Jam-free design.**



**8mm Barbed PD20 connector Vibrator with Auto-Rotating Fastener Feeder.**

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## MODEL: PET CNC OVVO



**Switching over to the OVVO Fastener System has NEVER been easier or at a more affordable price.**

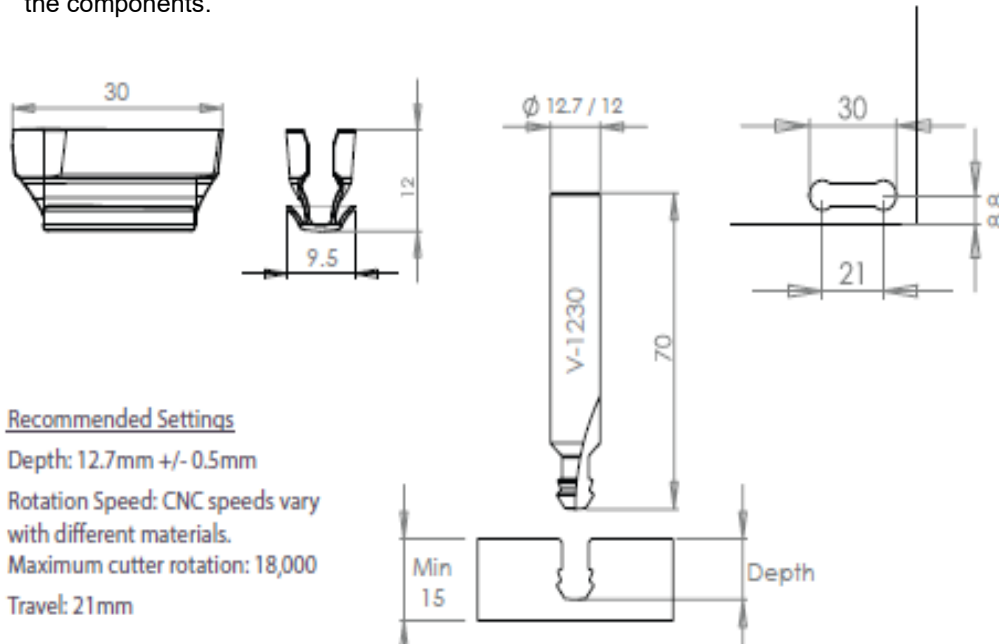
The **PET CNC OVVO** is the **only machine** in the industry with **VERTICAL ROUTING capabilities** on the bottom surface of the panel which guarantees the accuracy of  $\pm 0.05\text{mm}$  repeatability of routed depth by making the bottom of the panel a true zero reference point. By flipping the panel over and making the bottom the zero reference point, the variations in the plywood have been eliminated.

### Benefits of vertical routing:

- NO floating head aggregates or live z-axis laser measuring device purchase needed for your flat table router.
- ELIMINATE the variations in the plywood surface.
- A TRUE zero reference point on the bottom of the panel.
- ACCURACY of 0.05mm in routed depth.
- REPEATABLE accuracy.

**Using OVVO fasteners increases your assembly rate time by 60%.**

Drawing illustrates the OVVO V-1230 key slot construction assembly method. The depth accuracy of the key slot is imperative for a quick and easy assembly of the components.



# 3-AXIS CNC ROUTER & OVVO INSERTION MACHINE

## MODEL: PET CNC OVVO



The **PET CNC OVVO** is LEADING the industry with the ONLY programmable parts back-stop allowing for each station to work independent in an in-or-out position. This feature allows the panel to be placed 150mm past the edge of the table allowing the vertical router 112mm of programmable Y-axis routing. All positions have position sensor monitoring for machine safety.

The **PET CNC OVVO** has 4 working zones and each working zone has 2 sets of hold-down clamps with a maximum part thickness capacity of 50mm. Each set of clamps has 2 sets of cylinders to hold the part in position, 1 clamp comes straight down and 1 clamp comes down at a 30 degree angle, achieving the most secure clamping system in the industry.

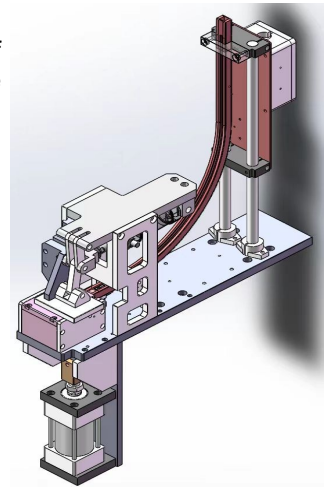
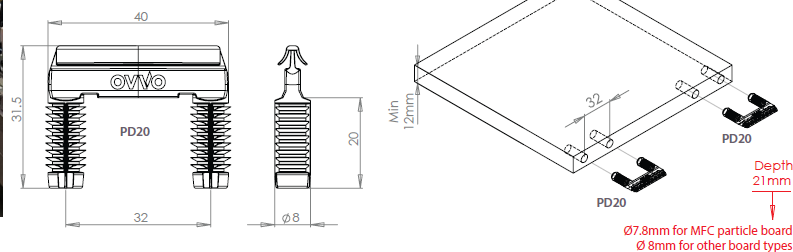
The hold-down clamps are manually adjustable along 2-linear guideways in the X-axis and the pneumatically programmed back-stop travels on 2-prismatic guideways in the Y-axis.

## DH1 INJECTOR

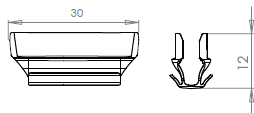


The 2 independently selectable horizontal routers offer a wide range of edge processing for OVVO fasteners. Sampled below shows the "Drilling and Milling for the V-1230 & PD 20 connector. This is ONLY one sample of the many possibilities for edge processing!

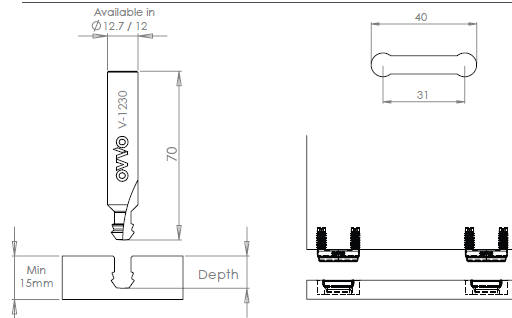
1. Drilling for V-1230PD-20



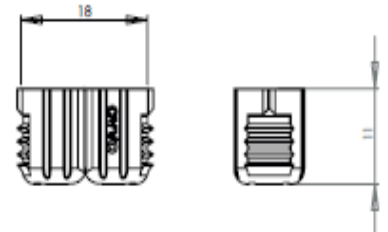
2. Milling for V-1230PH



**Recommended Settings**  
Plunge Depth: 13.2mm +/- 0.5mm  
Feed speeds vary with different materials.

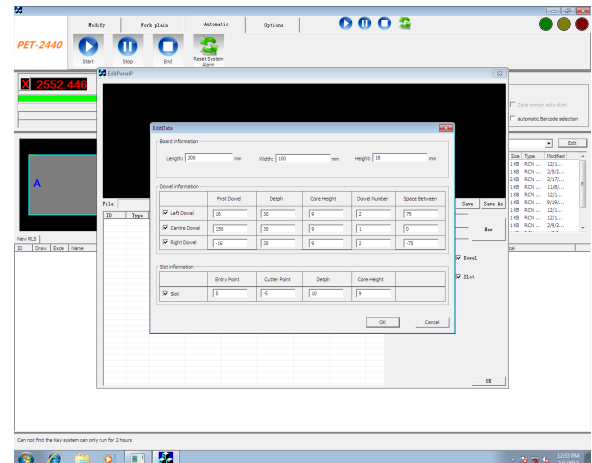


## DH1 & RD12



Intuitive software programming designed to eliminate programming errors and wasting costly materials by allowing the programmer to actually see the program run prior to actually executing the program with a cut simulator and graphics screen.

- [illegible]



- PET-2440**

File Edit View Tools Help About

Start Stop Exit Open

2D Cross Section

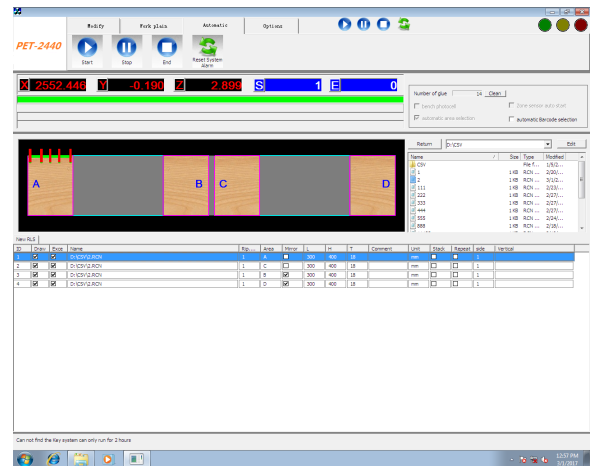
Number of plot: 14 (Open)

☐ Search all data ☐ Show warning about plot

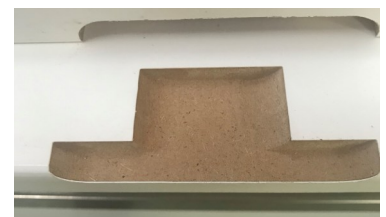
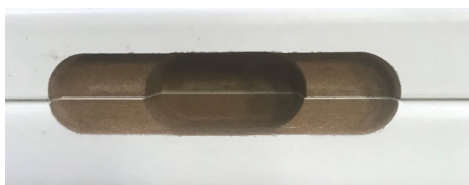
☐ Automatic area selection ☐ Automatic Perimeter selection

Return [F5] [F6]

| Name   | Z | Size  | Type | Unit            | Unit/ft         |
|--------|---|-------|------|-----------------|-----------------|
| Plot 1 | 1 | 145.0 |      |                 |                 |
| 1      | 1 | 145.0 | Area | mm <sup>2</sup> | mm <sup>2</sup> |
| 2      | 1 | 145.0 | Area | mm <sup>2</sup> | mm <sup>2</sup> |
| 3      | 1 | 145.0 | Area | mm <sup>2</sup> | mm <sup>2</sup> |
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| 11     | 1 | 145.0 | Area | mm <sup>2</sup> | mm <sup>2</sup> |
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| 46     | 1 | 145.0 | Area | mm <sup>2</sup> | mm <sup>2</sup> |
| 47     | 1 | 145.0 | Area | mm <sup>2</sup> | mm <sup>2</sup> |
| 48     | 1 | 145.0 | Area | mm <sup>2</sup> | mm <sup>2</sup> |
| 49     | 1 | 145.0 | Area | mm <sup>2</sup> | mm <sup>2</sup> |
| 50     | 1 | 145.0 | Area | mm <sup>2</sup> | mm <sup>2</sup> |
| 51     | 1 | 145.0 | Area | mm <sup>2</sup> | mm <sup>2</sup> |
| 52     | 1 | 145.0 | Area | mm <sup>2</sup> | mm <sup>2</sup> |
| 53     | 1 | 145.0 | Area | mm <sup>2</sup> | mm <sup>2</sup> |
| 54     | 1 | 145.0 | Area | mm <sup>2</sup> | mm <sup>2</sup> |
| 55     | 1 | 145.0 | Area |                 |                 |



A close-up photograph of a metal padlock. The padlock is dark-colored, possibly steel, and has a cylindrical body with a keyhole on the left and a shackle on the right. The word 'SINGAPORE' is embossed on the right side of the body, and the number '202' is embossed on the left side. The shackle is attached to the body via a series of internal bolts.

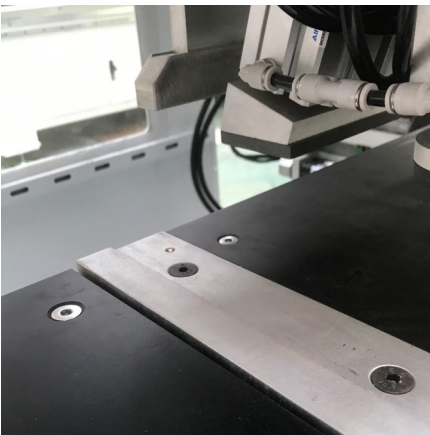


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4 **phenolic tables**, 150mm x 1500mm, are mounted on linear guides and can be moved to accommodate large panels or pushed to either side to open up the work space area of the machine.



**Photo eye protection** on each of the 4-zones.



Easy access, clean and well laid out **electrical control cabinets** with gaskets added to each door to prevent dust from entering.



**Wireless Barcode Reader**



**DELL Computer** and Monitor with 3 year service contract in America and wireless keyboard and mouse. Wireless keyboard can be used to assist in machine set-up, such as tool touch-off.



Large side **entry doors** with **safety interlock switches** to prevent X-Y-Z-axis movement while cleaning or maintaining machine.



The PLC controlled centralized lubrication system automatically applies oil to various lube points on the X-Y-Z-axis linear bearings. The system will inject oil thereby ensuring moving parts are lubricated properly thus increasing the equipment reliability and overall the plant productivity.

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### Specifications:

|                                        |                                                                                                                                          |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| MAXIMUM LENGTH OF PART (USING 1 ZONE)  | 2310 mm                                                                                                                                  |
| MAXIMUM THICKNESS OF PART              | 60 mm                                                                                                                                    |
| 4 INDEPENDENT ZONES                    | 600 mm                                                                                                                                   |
| CENTER STOP FOR ZONES 2 & 3            | Raised and lowered by CNC                                                                                                                |
| ELECTRO SPINDLE                        | 1.5 kW / 2 HP                                                                                                                            |
| VARIABLE SPEED OF ELECTRO SPINDLE      | 4,000 - 24,000 RPM                                                                                                                       |
| SPEEDS FOR X, Y & Z                    | X = 40 m/min / 131 fpm<br>Y = 10 m/min / 32 fpm<br>Z = 10 m/min / 32 fpm                                                                 |
| PROGRAMMABLE LIMITS FOR X, Y & Z       | X = 2440 mm / 96"<br>Y = 80 mm / 3.15"<br>Z = 50 mm / 2"                                                                                 |
| 5 INDEPENDENT VIBRATOR FEEDERS         | (1) PD 20 Connector (1) PD9 Connector (1) 6mm Plastic Dowel OD640, (1) FACE DH1 and (1) 8mm barbed RD 12 connector                       |
| AUTOMATIC LASER MEASUREMENT SYSTEM     | Selectable on/off through program                                                                                                        |
| 4 HORIZONTAL EDGE AND 1 FACE INJECTORS | • (1) PD 20 Connector 8mm (1) PD 9 Connector 6mm (1) 6mm or 8mm Plastic Dowel, (1) DH1 FACE INSERTION and (1) 8mm barbed RD 12 connector |
| CYCLE SPEED                            | 60 cycles per minute (drills or dowel inserts)                                                                                           |
| FIBER OPTIC SENSORS                    | For OVVO fasteners present to prevent misfires                                                                                           |
| 4 PHOTO SAFETY EYES                    | 1 in each zone for part placement                                                                                                        |
| OFFLINE PROGRAMMING                    | Software can be install on another computer for offline programming                                                                      |
| VOLTAGE                                | 10 kW / 220 V / 1 Ph                                                                                                                     |
| AMPS                                   | 40                                                                                                                                       |
| DIMENSIONS (APPROX.) L X W X H         | 3990 x 2880 x 2100 mm / 157" x 113" x 82"                                                                                                |
| WEIGHT (APPROX.)                       | 3000 kg / 6600 lb                                                                                                                        |



**BACKED BY OUR INDUSTRY LEADING**

**\* 2 YEAR \***

**PEACE-OF-MIND WARRANTY**

At Pro Edge Technology our core belief is:

**After the sale, it's the service that counts!!**