

# 3-AXIS CNC ROUTER & LOCKDOWEL INSERTION MACHINE

**MODEL: PET 2440-LD**



The **PET 2440-LD** is the only machine in the industry with VERTICAL ROUTING CAPABILITIES on the bottom surface of the panel which guarantees accuracy of 0.1mm 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 Lockdowel fastener component on the edge of the panel and vertical routing within 100mm of the panel bottom surface edge.

- (1) Vertical high speed router
- (2) Horizontal high speed routers
- (4) Independent vibrating feeders
- (4) Independent injectors consisting of: (1) 5mm spring pin, (1) 5mm mini barbed channel lock, (1) 8mm spring pin and (1) 8mm barbed channel lock
  - Parametric programming with full visual edit control
  - (4) Zones with laser part recognition
- (4) Independently adjustable table supports on linear guides for long part support
  - (1) On-the-fly laser part measurement
    - Wireless barcode reader
    - Wireless keyboard and mouse
  - Lockdowel component storage cabinet
  - Pro Edge Technology's TeleService Support



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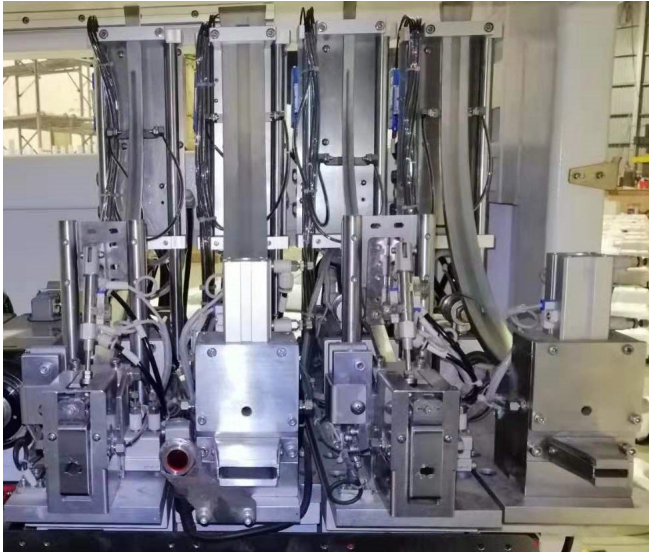
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Showroom (by app't): 3114 37th St E • Palmetto, FL 34221

# MODEL: PET 2440-LD

The **PET 2440-LD Router and Fastener Insertor** is ideal for either the high production panel processing shop or the custom production shop.

The versatile **PET 2440-LD** 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) 5mm and (1) 8mm spring pin, and (1) 5mm mini and (1) 8mm barbed channel lock fastener.
- 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.
- (10) spring pin, (14) 8mm barbed channel lock and (17) 5mm mini barbed channel lock fasteners are auto loaded into the injector, at one time.
- Photo eye detection ensures the fastener is properly loaded into injector before firing, eliminating misfires.
- 5mm and 8mm spring pin injector rods have been redesigned so the spring pin is injected with a smoother insertion and accuracy while exiting the injector.



## Stainless Steel Injector Magazines

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



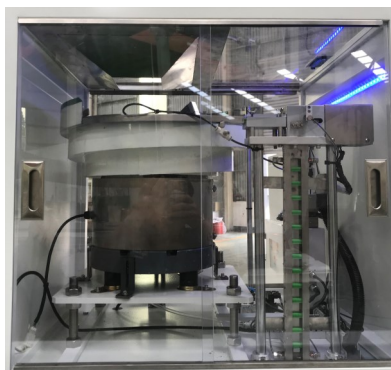
## Laser Measuring Device

- Used for on-the-fly measuring of part.
- Selectable through software.
- Used in conjunction with the parametric programming.



## Dust Collection Unit

- 150mm main inlet.
- 3 Independently selectable dust ports for routers.
- For superior dust collection.



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



**5mm & 8mm Spring Pin Feeder with NEW Jam-free design.**



**5mm Mini & 8mm Barbed Channel Lock Vibrator with Auto-Rotating Fastener Feeder.**

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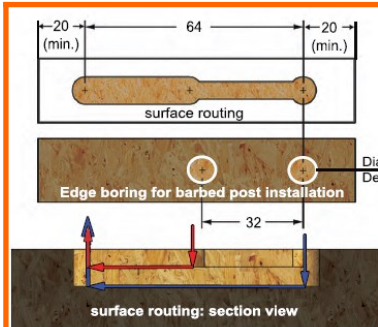


Switching over to the Lockdowel Fastener System has NEVER been easier or at a more affordable price.

The **PET 2440-LD** is the **only** machine in the industry with **VERTICAL ROUTING** capabilities on the bottom surface of the panel which guarantees the accuracy of 0.1mm 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.

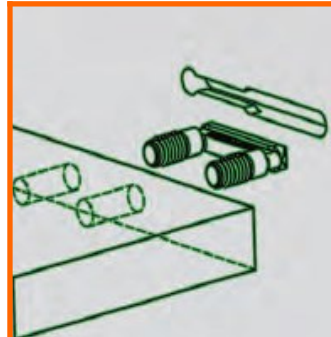
### Benefits of vertical routing:

- 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 0.1mm in routed depth.
- REPEATABLE accuracy.



### Samples of Lockdowel routing using the VERTICAL ROUTER

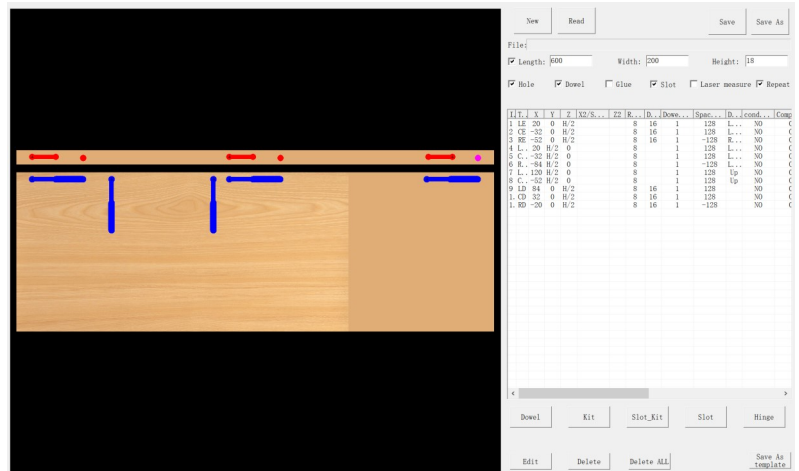
1. Lockdowel Channel Lock key slot.
2. Boring for barbed post installation.
3. Surface routing.



### Using Lockdowel fasteners increases your assembly rate time by 60%.

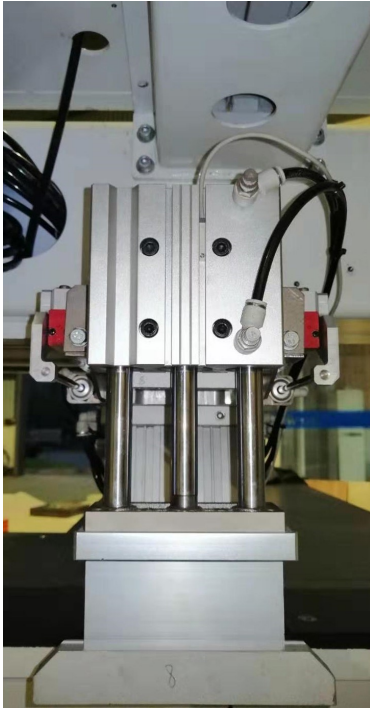
Drawing illustrates the Lockdowel Channel Lock key slot construction assembly method. The depth accuracy of the key slot is imperative for a quick and easy assembly of the components.

Samples of macros and parametric programming with visual graphics. Each line of code will highlight the visual graphic so editing is quick and easy.



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The **PET 2440-LD** 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 120mm passed the edge of the table allowing the vertical router 100mm of programmable Y-axis routing. All positions have position sensor monitoring for machine safety.

The **PET 2440-LD** 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.

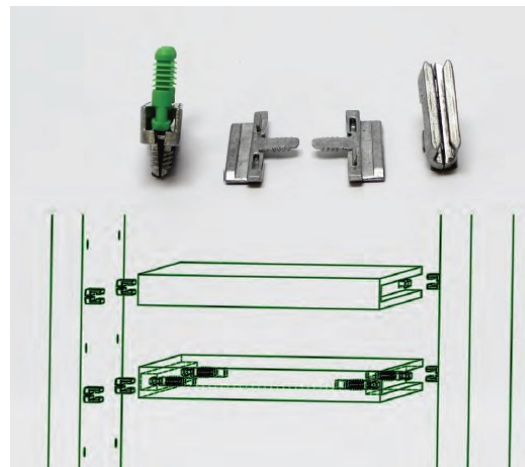
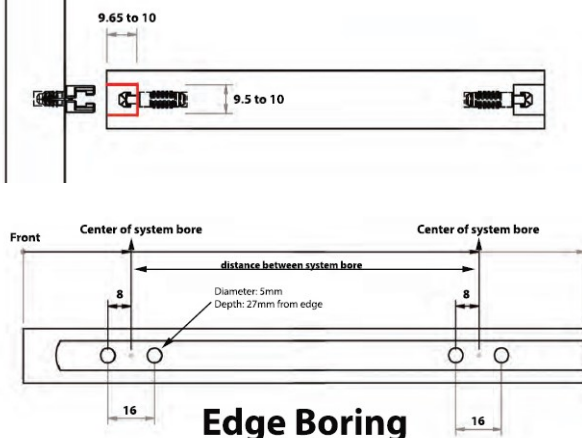
The hold-down clamps are manually adjustable along 2-linear guideways in the X-axis and the pneumatically programmed back-stop travels on 2-prismatic guideways in the Y-axis.



The 2 independently selectable horizontal routers offer a wide range of edge processing for Lockdowel fasteners. Sampled below shows the "Blind Adjustable Shelf Tightening System" which includes: edge routing, edge drilling and blind dados. This key feature is suited best for the closet and cabinet industry that utilizes adjustable shelves. Not only are shelves fully adjustable with this system but the shelves themselves help maintain the construction integrity.

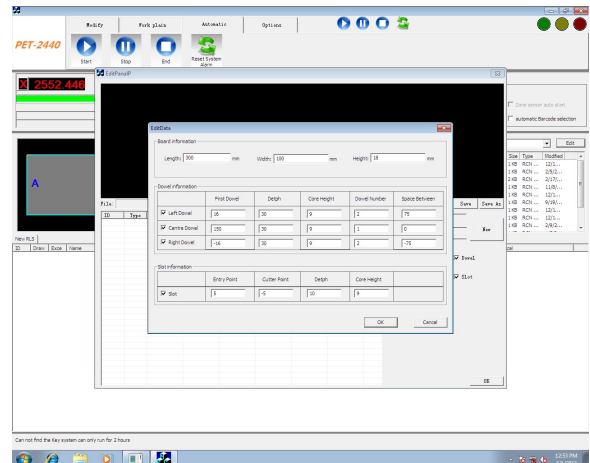
This is **ONLY** one sample of the many possibilities for edge processing!

### Edge Routing




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- User friendly programming screens
  - Simulator and graphics
- Cost conscious software learning curve



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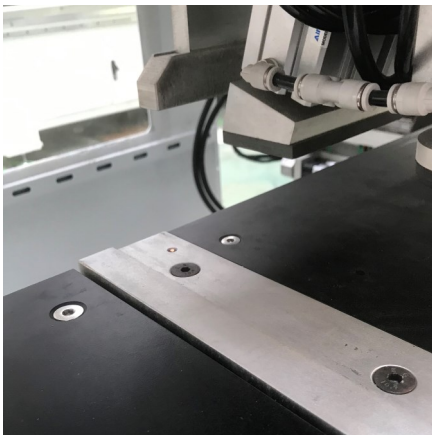


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4 **phenolic tables**, 150mm x 1500mm, are mounted on linear guides and can be moved to accommodate large panels or pushed to either side to open up the work space area of the machine.



**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)	2440 mm / 96"
MAXIMUM THICKNESS OF PART	50 mm / 2"
4 INDEPENDENT ZONES	600 mm / 23.6"
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 Y = 10 m/min / 32 fpm Z = 10 m/min / 32 fpm
PROGRAMMABLE LIMITS FOR X, Y & Z	X = 2440 mm / 96" Y = 80 mm / 3.15" Z = 50 mm / 2"
4 INDEPENDENT VIBRATOR FEEDERS	5mm spring pin, 5mm mini barbed channel lock, 8mm spring pin, 8mm barbed channel lock
AUTOMATIC LASER MEASUREMENT SYSTEM	Selectable on/off through program
4 HORIZONTAL EDGE INJECTORS	5mm spring pin, 5mm mini barbed channel lock, 8mm spring pin, 8mm barbed channel lock
CYCLE SPEED	60 cycles per minute (drills or dowel inserts)
FIBER OPTIC SENSORS	For Lockdowel 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!!**