

**Venture** CNC Router is manufactured using global state-of-the-art techniques with advanced engineering and workmanship, built to last with all steel construction and superior components. Key features are a 12 HP HSD high frequency automatic tool changer that comes complete with a pneumatically retractable vacuum hood, a multi-zone vacuum t-slot table, a precision helical rack-n-pinion on the X and Y axes with a ballscrew Z axis drive, and PC based Osai industrial CNC controller with easy to use system interface. THK bearings and rails are used on all three axes providing smooth, playfree movement. High-powered maintenance free, brushless AC servo motors and Delta drives provide efficient, powerful, fast and accurate motion. The XY drives include a precision gear box that is directly coupled to the Servo motor and pinion. This provides high speed precision motion. All of the electrical components are housed, wired and tagged in a doubled-door Nema enclosure and are easily accessible. Increased production capabilities with superior cut quality make this model perfect for high volume production shops.

**NEW**



The use of a carousel speeds up tool changes assuring faster cycle times increasing production throughput.

**Venture CNC Router**

- 12 HP HSD automatic tool changer spindle with an 8-position rotary carousel
- Maintenance free brushless AC servo motors and drives
- 4-Zone vacuum t-slot table
- Pneumatic material placement stops (Optional)
- Hand-held pulse generator with rotary hand wheel controls the axis selected
- PC with flat screen monitor, keyboard and mouse
- Open architecture works with all industry standard CAD/CAM software

## CONSTRUCTION FEATURES



### Base Frame

The base frame is fabricated from heavy-duty tubular steel that is welded, precision machined and stress relieved so that the foundation remains true and steady over the operational life of the machine.



### Gantry

The gantry is constructed of tubular steel with reinforcing ribs welded throughout the length of the column which results in a steady firm beam assembly. This quality engineering and workmanship result in smooth precision cutting.



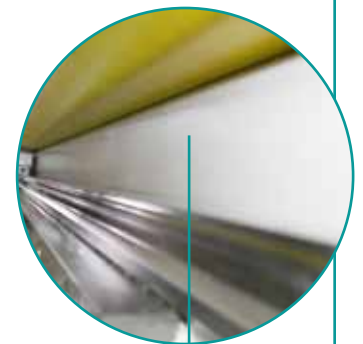
### Gantry Support (Uprights)

The Gantry uprights are cast iron with heavy duty gussets formed into the casting. Each support is machined for housing the various drive assemblies including motors, bearings, belts, and wiring harnesses.



### Bearings

THK bearings and rails are used on all three axes. These superior quality components complement the overall construction by providing smooth play-free motion. This results in superior cut quality, requires minimal maintenance, and increases the machines longevity.



THK Carriage and Rails

These bearings are capable of carrying loads in excess of 8,000 lbs. per carriage



### Pneumatic Material Alignment Stops (Optional)

The Venture Series machine comes standard with three material pneumatic alignment stops. These pins allow the operator to bank the edge of the material against them precisely aligning the material to the machine origin.

## CONSTRUCTION FEATURES

### Linear Racks

The Venture Series uses precision Helical racks on the X- and Y-axes. The mounting of the rack is inverted to help keep dust and debris from building up on the drive system, this assures smooth motion and long term reliability.



### Drive Motors

The Venture Series CNC Router utilizes AC Servo motors powered by Delta Drives. These motors require no regular maintenance — therefore, reducing any maintenance downtime.



### Spindle

The Venture Series machine comes standard with a 12HP HSD high frequency automatic tool changer. This precision spindle requires no maintenance, uses industry standard ER collets and ISO 30 tool holders. Fully programmable speeds from 6000 to 24000 RPM, and comes complete with pneumatically retractable vacuum hood.



### Tool Calibration

Automatic tool calibration pad allows for easy and accurate “Z” zero position for single and multiple tool changes through the program.



## CONSTRUCTION FEATURES



### Control Panel Functions

The main functionality for the Venture Series is accessible on the front panel of the enclosure. Your tools can be placed right on top and the hand-held pulse generator conveniently hangs on the side.

- Main Power Switch
- Emergency Stop
- Power On
- Power Off
- Computer Power
- System Power
- USB Port



### Hand-held Pulse Generator

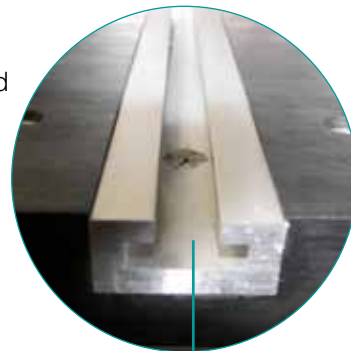
The Rotary hand wheel, attached to the machine, will control the axis that is selected on the wheels dial. All other functions are disabled when this is active.

The Setup Introduction manual provides information that will have users cutting parts in minutes.



### Electronics

All the electrical components are housed and wired in a doubled-doored Nema 4 electrical enclosure. This allows for easy access and service when needed. All wiring is tagged so that when service is required, the customer can easily navigate the cabinet. In addition, the cabinet serves as a work bench for the tools required.



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T-Slot Profile

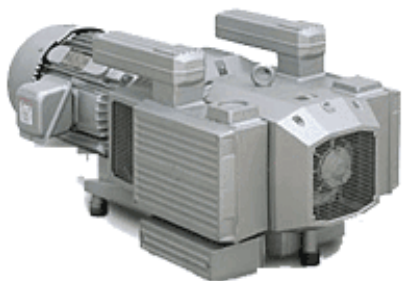
Venture Series includes a heavy-duty aluminum T-slot profile in multiple locations across the table surface. This T-slot accepts Industry Standard M8 T-nuts.

### Vacuum Table

The vacuum plenum table surface is multi-zoned which allows the operator to easily switch from full sheet processing to smaller part processing, (which requires a smaller segmented area). Zones can be turned off easily via control valves on the front of the machine. Gasketing can also be routed to accommodate various material sizes and styles.



### Vacuum Pump



- (1) 10HP TEFC (totally enclosed fan-cooled). Rotary Vane Vacuum Pump
- Available in 230/460V, 50-60Hz, 3 ph or single phase
- Comes standard with motor starter, vacuum gauge, primary and secondary filter, check valve and all necessary plumbing to connect to router
- Rated for 173 CFM, 25" Hg, 81dB for very quiet operation