

Techno CNC Systems

Smooth Play-Free Motion

Superior Cut Quality

Minimal Maintenance

Machine Longevity

The Techno Venture Plus CNC Router is designed for high volume production shops with demanding applications that require high throughputs. Features include all steel construction, precision linear rails and bearings, precision helical rack-n-pinion on the X and Y axes with a ballscrew Z axis drive, PC based Osai industrial CNC controller with easy to use system interface, 12 HP precision HSD Italian spindle and multi-zone vacuum t-slot table. 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 electronic components are housed in the Nema double-door cabinet which allows for easy access. Our product is manufactured abroad with state-of-the-art engineering techniques allowing us to sell this high-quality precision machine at a very economical price. This engineered masterpiece is the result of years of experience in the CNC router market and ideal for mid and large volume production shops.



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

- 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
- 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.

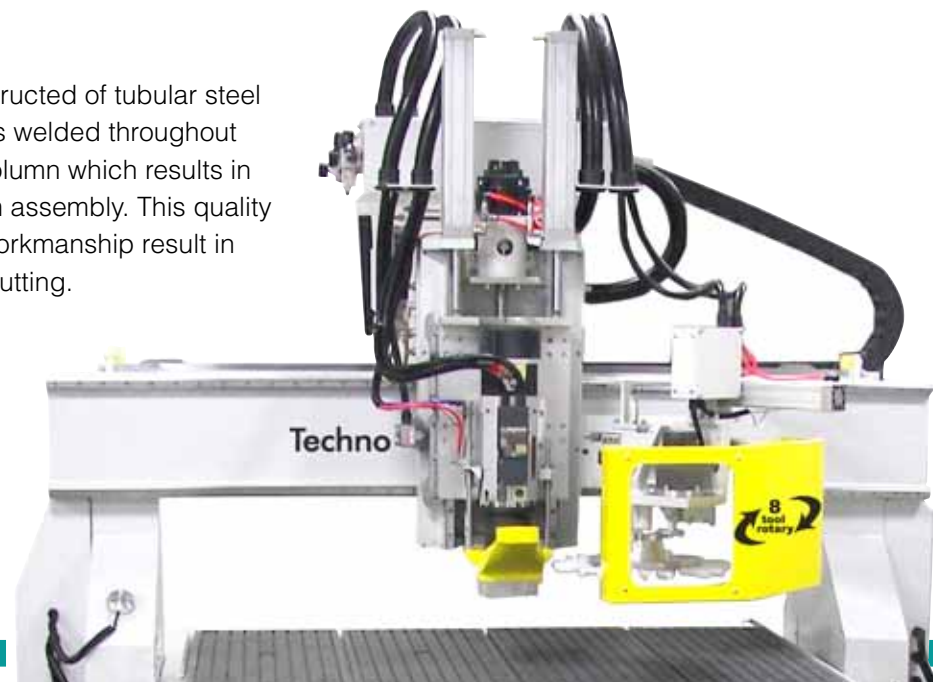


Gantry Support (Uprights)

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.

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.



Pneumatic Material Alignment Stops

The Venture Plus 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

Drive Train Assembly

The Venture Plus Series uses precision helical gear 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. The precision gearbox is directly coupled to the Servo motor and pinion. This eliminates belt stretch inaccuracies assuring high-speed machining while the system positions the spindle accurately.



Drive Motors

The Venture Plus Series CNC Router utilizes high-powered AC servo motors powered by Delta Drives. These motors are brushless AC servo's, therefore, requiring no regular maintenance, thus, reducing any maintenance downtime.



Spindle

The Venture Plus Series machine comes standard with a 12 HP 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.



Tooling

The Venture Plus Series machine includes an 8-position rotary carousel that moves with the machine while the gantry travels. The use of a carousel speeds up tool changes assuring faster cycle times increasing production capability.

Tool Calibration

The automatic tool calibration pad allows for easy and accurate tool length offset position for single and multiple tool changes through the program.



CONSTRUCTION FEATURES



Control Panel Functions

The main functionality for the Venture Plus Series is accessible on the front panel of the enclosure.



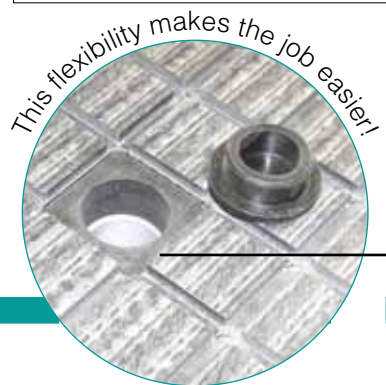
Electronics

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.



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.

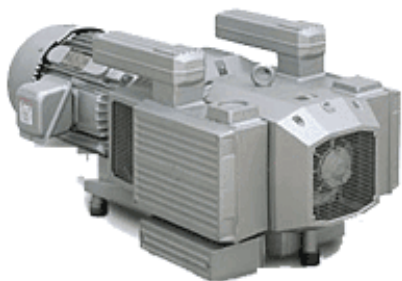


This flexibility makes the job easier!

In areas along the open zone where the vacuum is not required, simply utilize rubber plugs to close off the unused vacuum ports in the outer zones.

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



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.



T-Slot Profile

Venture Plus 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.