

NEW

Techno **CNC** Systems

5 Axis - CNC Working Center

The Techno Five Axis CNC Working Center is designed for high volume production shops with demanding applications that require high throughputs.

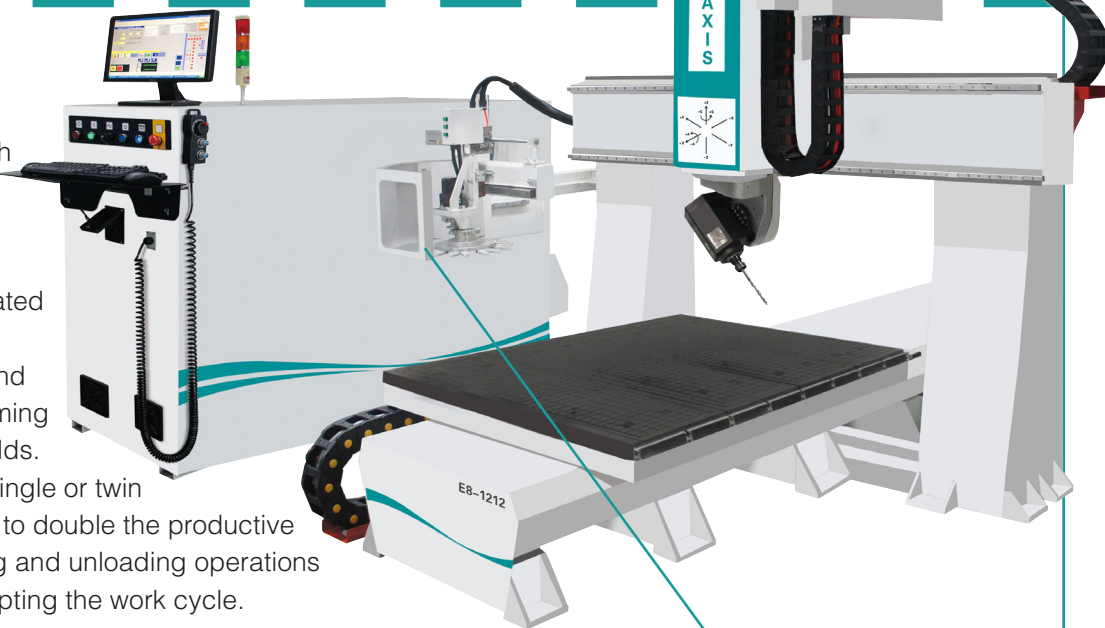
The 5 synchronizing interpolated axes are well suited for 3D curved surface positioning and simultaneous motion for trimming formed parts, patterns or molds.

The machine is available in single or twin moving tables and designed to double the productive efficiency by allowing loading and unloading operations on one station without interrupting the work cycle.

Features include all steel construction, THK HSR caged linear guide rails, precision helical rack-n-pinion on the **X axis** with a ballscrew **Y/Z axis** drive, PC based Osai industrial CNC controller with easy to use system interface, 9 HP precision HSD Italian spindle and multi-zone vacuum t-slot table, to name a few. Our product features state-of-the-art engineering techniques allowing us to sell this high-quality precision machine at a very economical price. The Y drive includes 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. This engineered masterpiece is the result of years of experience in the CNC router market.

Specifications

Process Area		
X-Axis Travel	48"	
Y-Axis Travel	96"	
Z-Axis Travel	20"	
Gantry Clearance	29.5"	
A-Axis Travel	+40°/-100°	
C-Axis Travel	±400°/-40°	
Single Table Size	50" x 98"	
Drive	Y helical rack and pinion drive, X/Z ball screw drive	
Table structure	Vacuum	Vacuum
Spindle power	9 HP	9 HP
Spindle speed	18000r/min	18000r/min
Tool magazine	Carousel	Carousel
Tool Position	8	8
Travelling speed	X Axis 1500 in/min	
	Y Axis 1500 in/min	
	Z Axis 800 in/min	

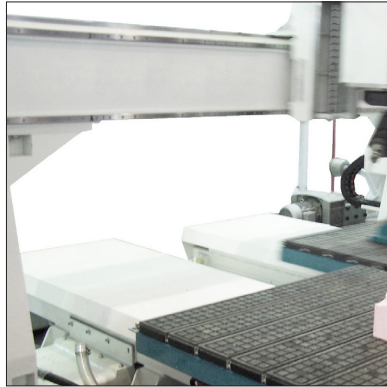


8 Tool Rotary Carousel

Techno Five Axis CNC Working Center 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.

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CONSTRUCTION FEATURES



Techno 5 Axis includes a heavy-duty aluminum T-slot profile in multiple locations across the table surface. This T-slot accepts Industry Standard M8 T-nuts.

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T-Slot Profile

Gantry

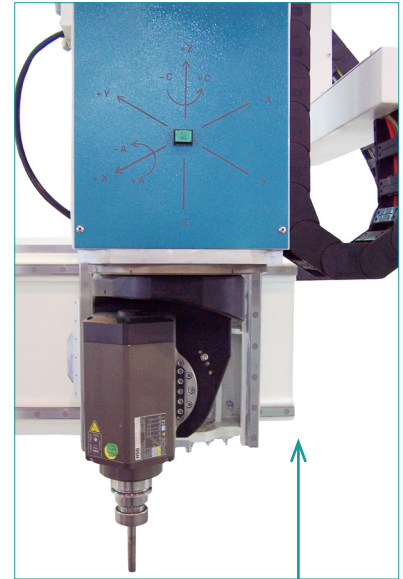
The gantry is constructed of tubular steel with reinforcing ribs welded throughout the length of the column which results in a steady firm beam assembly. This quality engineering and workmanship result in smooth precision cutting.

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, and wiring harnesses.

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).



Spindle

Techno Five Axis CNC Working Center comes standard with a 9 HP HSD high frequency automatic tool changer. This precision spindle requires no maintenance, uses industry standard ER collets and ISO 30 tool holders with fully programmable speeds from 6000 to 24000 RPM, and comes complete with pneumatically retractable vacuum hood.



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CONSTRUCTION FEATURES

Linear Racks

The Techno Five Axis CNC Working Center uses precision Helical gear racks on the X- and Y-axes. The use of Helical precision rack and pinion assures smooth precision cutting at high feed rates. In addition, the method in which the racks are mounted help reduce maintenance.

Drive Motors

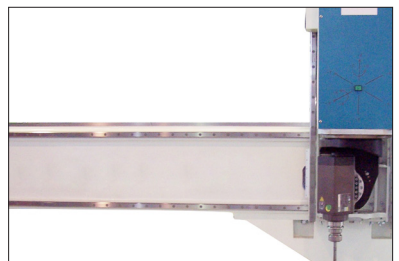
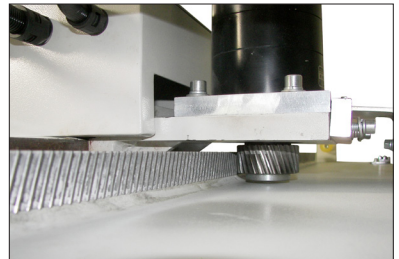
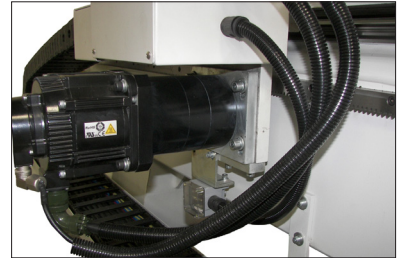
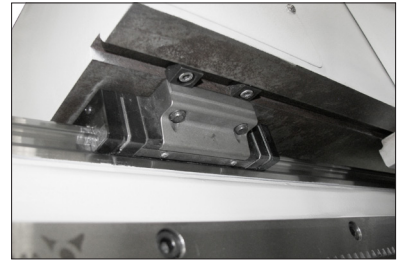
The Techno 5 Axis CNC machine utilizes high-powered AC Servo motors powered by Delta Drives. These motors are brushless, therefore, requiring no regular maintenance, thus, reducing any maintenance downtime.

Drive Train Assembly

The **X drive includes** a precision gearbox which 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.

Bearings

The Techno Five Axis CNC Working Center uses THK HSR bearings. 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



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 Pump

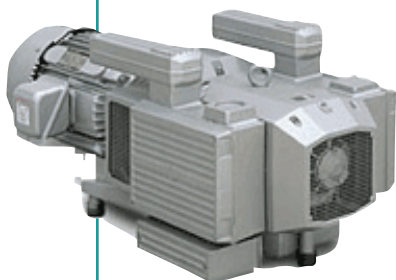
- TEFC (totally enclosed fan-cooled). Rotary Vane
- Vacuum Pump

Available in 230/460V, 50-60Hz, 3 ph or single phase

Comes standard with motor starter, vacuum gauge, primary and secondary

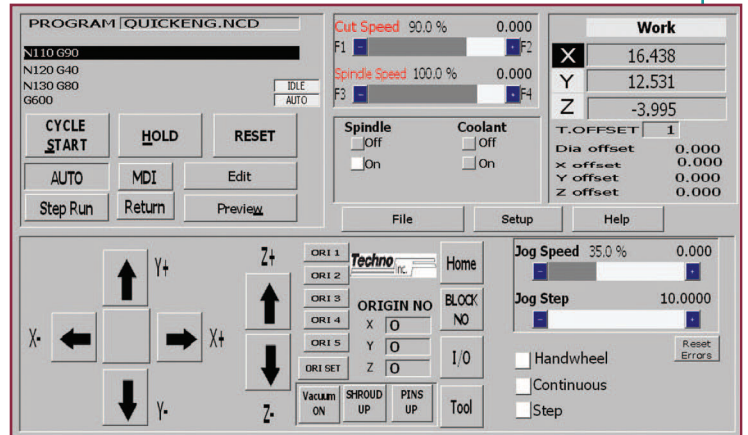
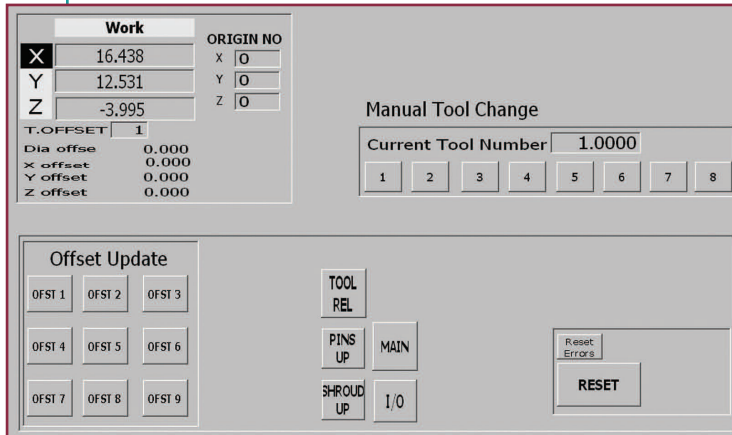
- filter, check valve and all necessary plumbing to connect to router

Rated for ultra quiet operation



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CNC Windows-Based G-Code Interface is included with each Techno Five Axis machine and is an indispensable tool in any CNC Router application. Its open architectural design accepts G-Code files from any industry standard CAD/CAM software package. The jogging buttons, speed controls and run displays are all visible on the main page. The intuitive single-screen design and functions are easy to use and remember. Customers that are new to automation find the Techno CNC Interface easy to learn and operate. Most are up and running in less than one day. Customers soon discover that just because the Techno CNC Interface is easy to use does not mean that it is not a comprehensive CNC program.



Several impressive features include:

- Built-in editor for shop floor modifications
- Machine feed rate and spindle override control
- Continuous step jogging, or convenient hand-held pulse generator can be used to fine tune positional locations
- Mechanical homing location controls (at any corner of the machine)
- No DNC link required
- Allows for up to 10 fixture offsets
- I/O machine status display
- Skip function to return to program positions (in case of tool bit failure)
- Convenient vacuum pump switches on interface
- Real time file execution even if overrides used.



Hand-held Pulse Generator

The hand-held pulse generator allows the operator to maneuver around when setting up tooling.

