

## **HD** Series

EXTRAORDINARY VALUE & PERFORMANCE ... Since 1986, Techno has provided economical CNC cutting solutions. Our engineering creativity has always yielded affordable, quality equipment. The HD Series promises to follow suit. Our engineers have designed a product that can be manufactured abroad, allowing us to sell this machinery at a very economical price. The HD Series machine features all steel construction, precision linear rails and bearings, precision helical racks on the X and Y axes, with a ballscrew Z axis drive. In addition, the system includes brushless micro-stepper motors and controls with a very easy-to-use hand-held controller. The hand-held controller is so user-friendly that setup, installation and training is completed through our self-taught, step-by-step manuals. We guarantee you will be cutting parts the same day you connect power to the machine!



\*High-Quality Cut



- 4' x 4', 4' x 8' and 5' x 10' Stock sizes (Special sizes available upon request.)
- 4 HP HSD high-frequency collet spindle
- Maintenance free high precision brushless stepper drive motors
- Automatic tool calibration easy and accurate "Z" zero position for single and multiple tool changes
- 4-Zone vacuum table
- Easy to use hand-held micro stepper controller
- 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.



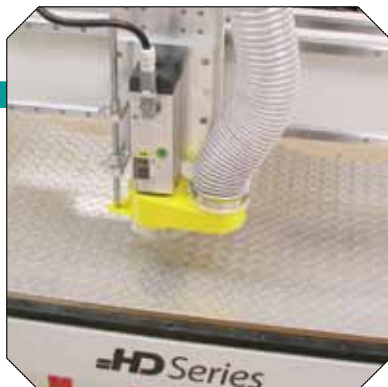
### Gantry

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.



Routing Aluminum



Routing Foam



Routing Wood Cabinet Making

## Drive Train Assembly

The Techno HD Series CNC Router 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, and this assures smooth motion and long term reliability. The precision gearbox is directly coupled to the stepper motor and pinion. This eliminates belt stretch inaccuracies assuring high-speed machining while the system positions the spindle accurately.

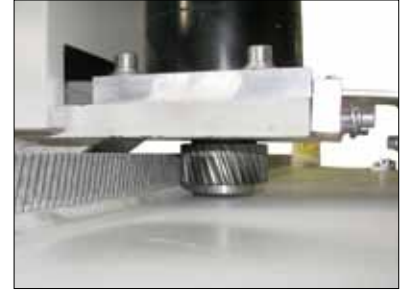
## Drive Motors

The HD Series CNC Router utilizes brushless micro-stepper motors. These motors require no regular maintenance, therefore reducing any maintenance downtime.

## Spindle

The HD Series machine comes standard with a 4 HP HSD high frequency collet spindle. These precision spindles require no maintenance, use industry standard ER collets, fully programmable speeds from 6000 to 18000 RPM, and comes complete with vacuum hood and wrenches.

## CONSTRUCTION FEATURES



## 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



- Main Power Switch
- Emergency Stop
- Power Enable
- Power Disable
- Spindle Inverter Readout
- Vacuum Controls
- USB Port

### Control Panel Functions

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



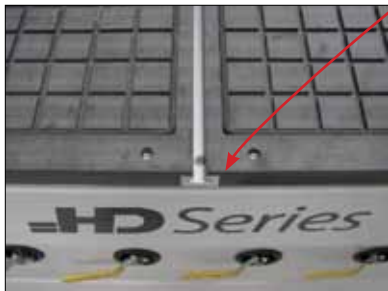
### Hand-held Controller

The hand-held controller is the heart of the operational system. This hand-held controller redefines the phrase "easy-to-use". Customers can be up and running the same day power is connected to the machine. Every controller has very easy-to-read, -understand, and -execute commands. 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.



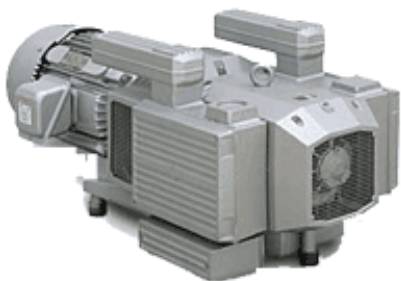
### Vacuum Table

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.

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T-Slot Profile

HD Series includes a heavy-duty aluminum T-Slot profile in multiple locations across the table surface. This T-Slot accepts Techno's square M6 T-nuts.

### Vacuum Pump



- (1) 9 HP 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