

MATRIX CNC

# CNC ROUTER MACHINE

Unmatched Precision and Efficiency



MXCR-A APS SERIES

Authorized Dealer

شركة ديجيتال ستار  
DIGITAL STAR COMPANY

## Source of Digital Solutions...

Welcome to Digital Star, your trusted partner in the world of cutting-edge printing solutions. As a leading printing machines, materials, and ink authorized dealer in The Kingdom of Saudi Arabia (KSA), we pride ourselves on delivering state-of-the-art technology that empowers to achieve unparalleled levels of efficiency and quality.

At Digital Star, we understand the pivotal role that printing machinery plays in the success of your operations. With a commitment to innovation and excellence, we curate a diverse range of top-tier printing machines to meet the unique needs of our clients. Our product line-up reflects the latest advancements in the industry.

As a responsible printing machines supplier, we prioritize sustainability. Our commitment to eco-friendly practices is reflected in the products we offer, promoting energy efficiency and environmentally conscious manufacturing processes. When you choose Digital Star, you're not just investing in cutting-edge technology – you're partnering with a company that values the planet as much as your success.



**MXCR-A APS SERIES**

## PRODUCT OVERVIEW

The APS Series is built on the heavy duty design, and takes CNC machining to the next level of heavy weights. The APS Series offers Precision Cut, and High Speed Cutting. With the cutting speed over 30 meters (1,180 inches) per minute, and a rapid travel of 60 meters (2,300 inches) per minute, your APS Series will set the pace of production speed at your shop.

The APS Series is equipped with a 9KW(12HP) air-cooled spindle and an 12-tool high speed tool changer for the complex multi-tasks you give it. Loading of material is accurate every time with built in pop-up pins and controllable dust hood with built-in machine lubrication system. Zoned vacuum table also included (options and upgrades available). The main advantage of the machine is the tool rack moving together with the machine gantry, which will save the tool change time. The machine can cut about 50 pcs of wood board per 8 hour.

### APPLICABLE MATERIALS

It can process wood, MDF, chipboard, plywood, OSB, melamine board, etc. It is widely used in the furniture making industry. And it also can process acrylic, plastic, soft metal and many other different materials.

### ADVANTAGES

- Smallest industrial footprint in the industry
- No assembly required. Start cutting on the same day as setup
- 9KW(12 HP) ATC Air-Cooled Spindle
- 12-Tool Linear ATC Tool Changer
- Helical Rack & Pinion Gearing and ball screw
- AC Servos with automatic calibration

### FEATURES

1. Linear tool changer moving with gantry saves more time than the tool changer fixed at the backend;
2. Automatic tool change air cooling spindle changes tools without machine stopping and manual assistant;
3. Quality CNC Kits makes machine run well and long life time;
4. Automatic pushing device for the finished workpiece saves the time and effort of unloading;
5. Double vacuum dust collecting system makes woodworking place cleaner;
6. The automatic loading and unloading system, and the boring head is for option.

### AVAILABLE SIZES (WORKING AREA)

1300 * 2500 mm	1500 * 3000 mm
2000 * 3000 mm or 2100 * 3000 mm	2000 * 4000 mm or 2100 * 4000 (with 2 sets of vacuum pump)

### OPTIONAL ITEMS

- 1) 5.5KW Dust collector: Double bags
- 2) Change the LNC controller to Syntec 60W-E controller
- 3) Upgrading the Chinese spindle to Italy HSD 9kw spindle
- 4) Drilling bank
- 5) Oil mist Coolant System

## PRODUCT DETAILS



### TAIWAN LNC 4 AXIS CONTROLLER WITH BIG SCREEN

- With Big screen
- Controllable single path 4 axis
- Interpolation is available for a variety of wood processing needs
- Support a variety of woodworking machine standard features
- Woodworking machine exclusive operation interface
- Support U disk
- Use keyboard + mouse operation
- Support all kinds of pulse type drivers



### 12-POSITION TOOL RACK

The MATRIX APS Series CNC Series machine includes an 12-position tool rack. The tool rack move together with the machine gantry, which will save the tool change time. When changing the tool, the cylinder will punch the tool rack out and then change the tool. After the tool change is finished, the tool rack go back and then the spindle start to work.



### CNC TOOL CALIBRATION

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



### THICK STEEL 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.



### 9KW HIGH FREQUENCY AUTOMATIC TOOL CHANGER SPINDLE

**(ITALY HSD SPINDLE IS FOR OPTIONAL)**

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



### LEADSHINE SERVO DRIVE MOTORS 1500W

Composed of: Leadshine Servo Drive Motors 1500W servo drives and the servos move in all axes.

With this motor, the machine can realize high-precision machining at high speed.



### JAPAN SHIMPO GEAR REDUCER

The MATRIX APS Series Series CNC Router utilizes Japan Shimpo gear reducer. These gear reducers are with high precision, and it can increase torque, therefore make the motor



### HIWIN SQUARE & RACK PINION XY AXIS

The machine adopts Taiwan Hiwin square rail, which is more than twice durable. And the use of high quality helical rack pinion, makes it high precision..





### Z AXIS HIGH PRECISION TBI BALLSCREW

The machine uses high precision TBI Ballscrew on Z axis to ensure the machine with higher precision and longer service life.

The TBI Ballscrew has the following advantages:

- \* High Reliability
- \* High Rigidity and Preload
- \* Smooth Operation
- \* High Durability



### DOUBLE VACUUM BRUSH

The machine comes with a vacuum brush at the back of the machine beam. The function of the vacuum brush is to absorb the small wood chips that have just been cut. Prevents the scum from affecting the vacuum sucking function. It will make the machine vacuum suck the material more firmly.



### BETTER VOLTAGE ADAPTABILITY: 380V-460V

Programmable bipolar signal input, compatible with AC and DC signal inputs.

- DC input voltage range 15-56VDC, compatible with 24, 36, 48VDC
- AC input voltage range 12-54VAC, compatible with 36, 48VAC



### NEW — CNC MACHINE TOOL HOLDER CLAMP

The MATRIX APS Series CNC Machine comes equipped with a tool holder clamp fixture, providing a much easier way of inserting and tightening the CNC router bits into your tool holder. This method is safer and easier than using the common procedure of tightening the collet nut with two wrenches while the tool holder is still in the spindle.



### PNEUMATIC MATERIAL ALIGNMENT STOPS

The MATRIX APS Series ATC Series CNC 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.

Figure on the right illustrates the CNC Router material alignment pins pop open and close for easy sheet alignment



### INDEPENDENT BIG CONTROL CABINET

All the electrical components are housed and wired in a independent 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.



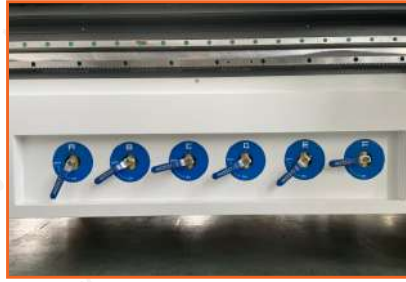
### AUTOMATIC LUBRICATION SYSTEM

The function of the automatic oil pump is mainly to perform regular quantitative oiling on the easily wearable guide rail, ballscrew and the rack gear. It is by the digital controller to control the lubrication pump working cycle; lubrication time and intermittent time.



### HEIGHT ADJUSTMENT FOOT

Its main function is to be able to make good connections together between the various components of equipment, in order to maintain the machinery and equipment to maintain the level of state, can also avoid the machine will appear to tilt or move back and forth in the run time

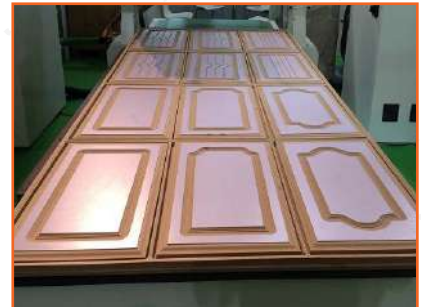
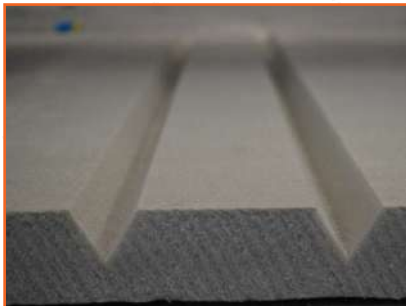
**VACUUM TABLE****VACUUM FUNCTION SWITCH****7.5KW VACUUM PUMPS**

The APS Series CNC Router has a 1 inch thick phenolic vacuum table surface mounted onto the steel base frame, keeping a rigid and consistent platform for your sheets and parts to be supported.

The vacuum 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.

The APS Series Machine also includes a heavy-duty aluminum T-Slot profile in multiple locations across the table surface. This T-Slot accepts Alpha's square M6 T-nuts.

7.5kw dry Rotary Vane Vacuum Pump Comes standard with motor starter, vacuum gauge, primary and secondary filter, check valve and all necessary plumbing to connect to router.

**PRODUCT SAMPLES****Sign making****Door Making****Cabinet making****Decorative Partition Making****Aluminum Processing****Furniture Making****Foam Cutting****Acrylic Processing****Musical Instrument Making**



# PRODUCT SPECIFICATION

Model	Standard Specifications APS Series
X,Y,Z Working Area (mm)	1300*2500/ 1500*3000/ 1500*3200/ 2100*3000/ 2100*4000
Spindle Power	9kw ATC air cooling spindle
Tool Shank	ISO 30
Collet	ER32
Table Surface	Vacuum and T-slot
X,Y,Z Traveling Positioning Accuracy	±0.02/2000mm
X,Y,Z Rail and Transmission	X Y axis helical gear transmission, Z axis Taiwan TBI Ball Screw
Max. Rapid Travel Rate	60m/min
Max. Working Speed	40m/min
Spindle Speed	0-24,000RPM
Drive Motors	LeadshineShine servo motor and driver 1500w
Working Voltage	AC380V/3PH/50Hz(option:220V)
Command Language	G Code
Operating System	Taiwan LNC
Interface	USB
Software Capabilities	Option: Vectric Aspire, Type3, Ucamcam, Artcam, Solidworks, etc.
Running Environment	Temperature: 0°C~45°C
	Relative Humidity: 30%~75%
Machine Dimension	2.2*3.6*2.7m

\*Specifications are subject to change without prior notice, all rights reserved.

## SYSTEM REQUIREMENTS (PC's)

Refer to the appropriate section below for the minimum and recommended computer system requirements necessary to use this machine.

Operating System*	Windows 10 (64 Bit) or Later
Processor	i7 - 2.6 GHz or faster
Memory (RAM)	Min. 8GB
Video Card and Monitor	1280x1024 or Higher Resolution
Working Hard Disk Space	1 TB SSD or more recommended
Graphics Card	2GB or more (Optional)
Optical drive	DVD-ROM
Other requirements	Ethernet connection for network capable printers
	Available USB ports
Recommended Brand	Lenovo / Dell

\* Note: You can use a laptop or desktop computer

\* Use the original operating system and software. If you are using pirated operating system or software, we are not responsible for any damage to Machine workings, and also the warranty terms will become void.

## POWER REQUIREMENTS

Voltage Regulator	5000W Stabilizer
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## Terms and Conditions

01. Payment to be made in SAR currency.
02. Payment Terms : As mentioned in Quotation.
03. Bank Charges: Any bank charges relevant to the above transactions will be to your account.
04. Any charges, duties, taxes or levies at the ports of entry will be to our account.
05. The charges of loading, boarding and local conveyance of the technician will be to our account.
06. Any required electrical, mechanical and civil site preparation should be done by the customer according to our engineer's requirements.
07. Digital Star Company will not be held responsible for delays caused by any damage in the equipment due to shipment, unloading accidents & any related reasons, which is beyond our control.
08. Warranty will be applicable as per our Warranty Policies. The Warranty will be valid after signing of Warranty P
09. Service will be free of cost within 06 months from the date of installation.
10. Any claim will be invoice directly to you then we will send for claiming procedure which will take 45-60 days, if the claim got approved credit note will issued directly.
11. Delivery: As mentioned in quotation

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