

MATRIX CNC

CNC ROUTER MACHINE

Unmatched Precision and Efficiency



MXCR-1325 APS SERIES

Authorized Dealer

شركة النجم الرقمي للألات و المعدات

DIGITAL STAR MACHINERY AND EQUIPMENTS

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 Riyadh – 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.

About Us



MXCR-1325 APS

PRODUCT OVERVIEW

The Matrix ATC CNC Router machine is all steel construction, providing the rigid foundation required for ultra-smooth routing results. The Matrix ATC CNC Router machine includes a 9KW(12HP) automatic tool changer with 8-position tool rack, and a pneumatically operated dust collection hood that concentrates air flow at the cutter, which provides optimal dust collection performance. The multi-zone vacuum t-slot table is constructed from very hard PVC, which is very stable material, and holds tight tolerances for precision cutting. The Matrix ATC CNC Router is connected to a 7.5KW (10HP) Rotary vane vacuum pump, which has very quiet operation. The Matrix ATC CNC Router is powered by hybrid servo drive motors, and is controlled via easy to use and learn hand held controller.

APPLICABLE MATERIALS

It can process wood, MDF, particleboard, OSB, plywood, acrylic, plastic, soft metal and many other different materials.

AVAILABLE SIZES (WORKING AREA)

1300 * 2500 * 300mm	1500 * 3000 * 300mm
2000 * 3000 * 300mm	2000 * 4000 * 300mm (with 2 sets of vacuum pump)

OPTIONAL ITEMS

- 1) Oil mist coolant system(for aluminum processing)
- 2) Upgrade the spindle to 12kw water cooling spindle
- 3) Change controller to Syntec 60W-E 3 axis

PRODUCT DETAILS



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)

The Matrix ATC CNC Router machine comes standard with a 9kw HQD high frequency automatic tool changer spindle. 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.



EASY TO USE HAND-HELD DSP NK105 G3 CONTROLLER

The DSP hand controller is easy to operate, does not require additional connection to the computer, which makes the machine completely autonomous.

- 3 Axes controller, support multiple cylinders, and linear tool change.
- Emergency stop button can easily stop the machine
- Large storage space, strong U disk compatibility, fast read speed, and more reliable U disk processing
- Tool path Supported: .g/* .nc/* .u?/* .demo/* .iso/* .eng/* .cut/* .dxf/* .plt/* .txt
- Fixed calibration, Mobile calibration, First calibration & Calibration after tool change
- Software Language Chinese, English



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.



INVERTER

It is intended for control of drives where high accuracy of speed regulation and a wide range of control are required. They provide achievement of the maximum moment on the shaft of the spindle and the possibility of direct control of this moment.



LIMIT STOPPER

Limit switch also known as the travel limit switch, it is used to control the travel and limit protection of the machine. The machine comes with the mechanical limit, which is better than the photoelectric limit. It has longer service and not easy to get broken



SHIMPO GEAR REDUCER

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



HIWIN SQUARE RAIL ON XYZ 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..



XY AXIS HIGH QUALITY HELICAL RACK PINION

The Matrix APS 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.



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



8-POSITION TOOL RACK

The Matrix CNC Series machine includes an 8-position tool rack in the rear of the machine. The position of this rack allows for easy loading and unloading of material from either side of the machine.



CNC TOOL CALIBRATION

The Tool holder support mounting plate is milled by the CNC machining center. To make sure the tool holder is high precision



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.



DUST COLLECTOR

The Matrix ATC CNC Machine comes with a 3.5kw dust collector, which is powerful enough for collect the. It will make your workshop without dust.



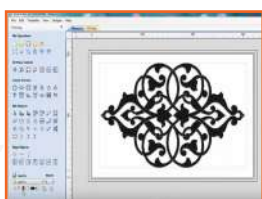
HEIGHT ADJUSTMENT FOOT

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.



ACCESSORY BOX

8 pcs of tool holders, wrench, a box of tools, cable, leveling bases, Lock holder, software in U-disk.



VECTRIC ASPIRE SOFTWARE

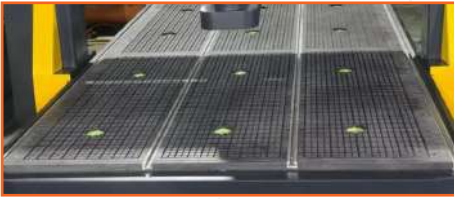
Aspire is built on the same platform as Vectric's VCarve Pro software, sharing the intuitive interface and ease of use for production design and routing. In addition to the powerful drawing and production routing tools of VCarve Pro, Aspire also has tools to let you transform 2D sketches, photos, drawing and digital artwork into detailed 3D relief models and then to calculate 3D Roughing and Finishing toolpaths to accurately cut these shapes.



NEW — CNC MACHINE TOOL HOLDER CLAMP

The Matrix APS 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.

HYBRID VACUUM AND T-SLOT TABLE



7.5KW VACUUM PUMPS



VACUUM FUNCTION SWITCH



The APS CNC Router has a 1 inch thick 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



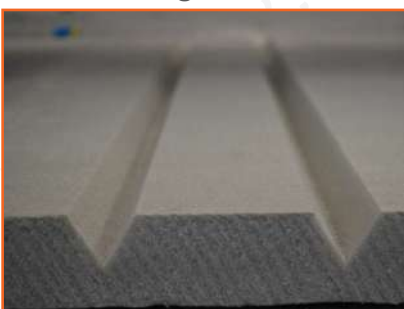
Aluminum Processing



Furniture Making



Foam Cutting



Acrylic Processing



Musical Instrument Making



PRODUCT SPECIFICATION

Model	Standard Specifications MXCR-1325 APS
X,Y,Z Working Area	1300*2500*300mm or others
Spindle Power	9kw ATC air cooling spindle
Spindle Speed	0-24,000RPM
X,Y,Z Traveling Re-positioning Accuracy	±0.01mm
X,Y,Z Traveling Working Accuracy	±0.15mm
Table Surface	Vacuum and T-slot
X,Y,Z Rail and Transmission	X Y axis helical gear transmission, Z axis Taiwan TBI Ball
Max. Rapid Travel Rate	30m/min
Max. Working Speed	20m/min
Drive Motors	Leadshine Hybrid servo motor and driver
Working Voltage	AC380V/3PH/50Hz(option:220V)
Command Language	G Code
Operating System	Weihong (Ncstudio) NK 105 G3
Interface	USB
Software Capabilities	Option: Vectric Aspire, Type3, Ucamcam, Artcam, Solidworks, etc.
Running Environment	Temperature: 0°C~45°C
	Relative Humidity: 30%~75%

*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 Machinery and Equipments 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 06 months from the date of installation from Digital Star Machinery and Equipments. Wear and tear, consumables are exempted and warranty can be claimed only if you use the Inks and Services from Digital Star Machinery and Equipments.
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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DIGITAL STAR MACHINERY AND EQUIPMENTS

IBN AL SAQA 8162 | AS SALHIYAH DIST | RIYADH - 12662



+966 11 229 4473



info@digitalstarksa.com



+966 11 229 4473



www.digitalstarksa.com