

PRODUCT DATA SHEET



2025-2026

HIGHTECH INDUSTRY GROUP

BUILD . TO LEAD .

HT R1

CNC ROUTER ENGRAVING MACHINE

Q-SERIES



Space-Efficient Workspace
Features a versatile 600mm x 900mm work area that handles professional-scale projects while maintaining a compact footprint for small-to-medium workshops.

Precision & Stability
Built with a rigid cast iron frame and high-precision ball screws to minimize vibration, ensuring smooth finishes

Versatile Material Processing
Supports 1.5kW–2.2kW spindles to easily cut and engrave wood, acrylic, PVC, offering maximum ROI for startups.



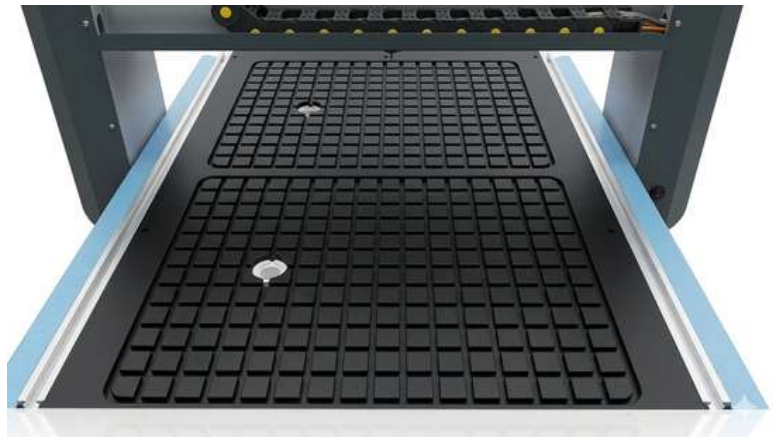
CONTROL CABINET

MAXIMIZE YOUR FLOOR SPACE WITHOUT COMPROMISING ON POWER. OUR 'HIGHTECH' SERIES CONTROL CABINET OFFERS AN ALL-IN-ONE ARCHITECTURE THAT SIMPLIFIES YOUR WORKFLOW. WITH INTEGRATED VACUUM ADSORPTION AND PRECISION DRIVING CAPABILITIES, IT DELIVERS RELIABLE, HIGH-PERFORMANCE CONTROL IN A SLEEK, ERGONOMIC PACKAGE

PARTS

VACUUM GRID CNC BED

THE VACUUM GRID CNC BED DELIVERS STRONG, EVENLY DISTRIBUTED SUCTION TO SECURELY HOLD SHEETS DURING CUTTING AND ROUTING. ITS GRID DESIGN IMPROVES AIRFLOW EFFICIENCY AND MATERIAL STABILITY. IDEAL FOR ACRYLIC, PVC, ALUMINUM, AND MDF, IT ENHANCES MACHINING ACCURACY, REDUCES VIBRATION, AND INCREASES OVERALL CNC PRODUCTIVITY.



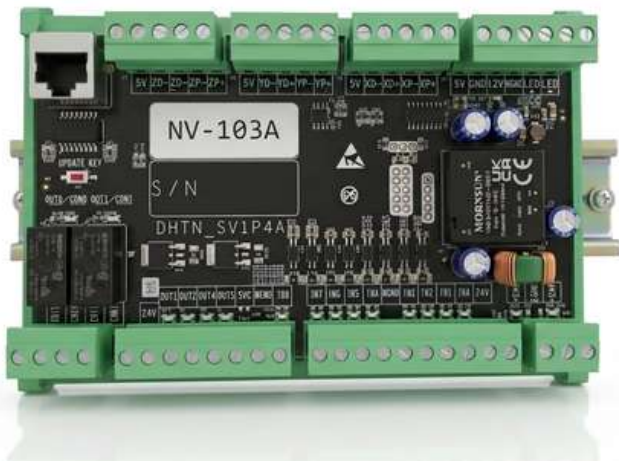
2.2 KW VACUUM PUMP

HIGH-CAPACITY SIDE-CHANNEL VACUUM PUMP FOR CNC TABLES. PROVIDES STRONG, STABLE SUCTION TO SECURELY HOLD SHEETS DURING CUTTING AND ROUTING. OIL-FREE, LOW MAINTENANCE, ALUMINUM HOUSING WITH EFFICIENT COOLING. IDEAL FOR ACRYLIC, PVC, ALUMINUM, AND MDF APPLICATIONS. SUPPORTS CONTINUOUS OPERATION WITH RELIABLE PERFORMANCE FOR INDUSTRIAL WORKSHOPS.

MDRCNC SOFTWARE

CNC MDR SOFTWARE IS USER-FRIENDLY, FEATURING A STRAIGHTFORWARD INTERFACE AND CLEARLY VISIBLE FUNCTION BUTTONS FOR IMMEDIATE PRODUCTIVITY.

IT SEAMLESSLY HANDLES MULTI-LAYER 3D PROCESSING, DELIVERING RAPID AND PRECISE ENGRAVING AND CUTTING, WHILE SUPPORTING VARIOUS FILE FORMATS.



NV103A CONTROL BOARD

ENGINEERED FOR PROFESSIONALS, OUR SYSTEM ENSURES STABILITY WITH ITS INDUSTRIAL-GRADE HARDWARE AND CARD-BASED CONTROLLER.

THE MULTI-WINDOW INTERFACE AND EXCEPTIONAL COMPATIBILITY WITH POPULAR CAD/CAM TOOLS STREAMLINE YOUR ENTIRE DESIGN-TO-PRODUCTION PROCESS.

PARTS

450A DRIVER SYSTEM

EXPERIENCE EXCEPTIONAL PERFORMANCE POWERED BY THE SYNERGY OF A LEADSHINE HIGH-SPEED XYZ-AXIS DRIVE SYSTEM AND A 450A DRIVER.

THIS ROBUST SETUP PROVIDES THE HIGH TORQUE AND STABILITY NEEDED FOR OUTSTANDING PRECISION, FASTER SPEEDS, AND A SIGNIFICANTLY EXTENDED MACHINE SERVICE LIFE.





SAFETY PROTECTION

(AVAILABLE OPTIONS)

DUAL-SIDE SAFETY RADAR PROTECTION SYSTEM

YOUR SAFETY COMES FIRST. OUR DUAL-SIDED RADAR SYSTEM CONSTANTLY MONITORS THE MACHINE'S SURROUNDINGS.

IT WILL INSTANTLY AND AUTOMATICALLY STOP IF SOMEONE OR SOMETHING GETS TOO CLOSE, GIVING YOU PEACE OF MIND AND PREVENTING POTENTIAL INJURIES.

PARTS

2.2 KW SPINDLE

FOR UNMATCHED PRECISION, THE MACHINE FEATURES A 2.2 KW WATER-COOLED SPINDLE DESIGNED FOR HIGH TORQUE.

THIS ROBUST SYSTEM GUARANTEES ACCURATE CUTTING PERFORMANCE AND MAINTAINS PART INTEGRITY EVEN AT TOP SPEEDS.



Z AXIS CALIBRATION

(AVAILABLE OPTIONS)

SAVE TIME ON EVERY JOB! FOR ANY MATERIAL THICKNESS, YOU SET THE WORKPIECE ORIGIN JUST ONCE.

THEN, WHEN CHANGING BITS, A RAPID Z-AXIS AUTO-CALIBRATION IS ALL THAT'S NEEDED TO RESUME PRECISION WORK, WITHOUT RESETTING YOUR ORIGIN.

FREQUENCY SYSTEM

EXPERIENCE UNWAVERING STABILITY. A MILITARY-GRADE FILTERING SYSTEM SHIELDS OUR 3.7 KW FREQUENCY CONVERTER.

GUARANTEEING SMOOTH, UNINTERRUPTED OPERATION AND PROTECTING YOUR MACHINE'S PERFORMANCE AND PRECISION.



BALL SCREW

BALL SCREW TRANSMISSION DELIVERS HIGH EFFICIENCY, RIGIDITY, AND PRECISION FOR CNC ENGRAVING BY UTILIZING ROLLING FRICTION.

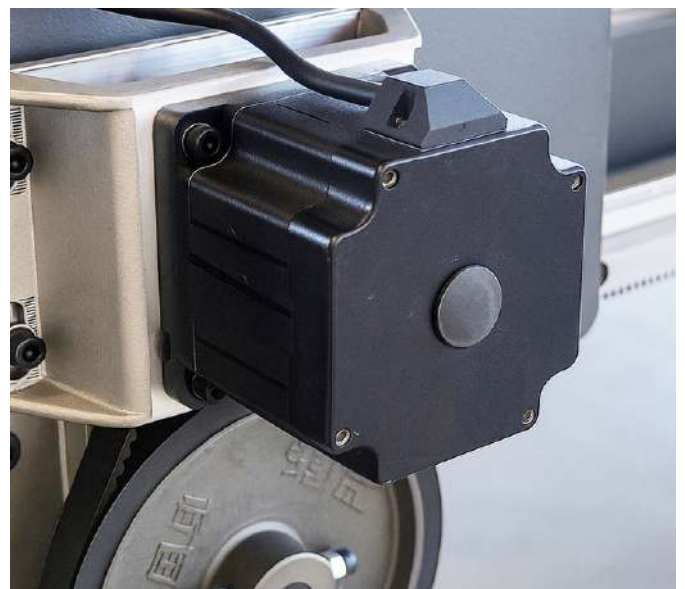
IT EFFECTIVELY ELIMINATES BACKLASH TO ENSURE MICRON-LEVEL POSITIONING ACCURACY WHILE SIGNIFICANTLY EXTENDING SERVICE LIFE THROUGH MINIMAL WEAR, MAKING IT THE IDEAL SOLUTION FOR HIGH-SPEED AND HIGH-PRECISION MACHINING.

PARTS

MOTOR SYSTEM

THE HIGH-PERFORMANCE MOTORS ON THE XYZ AXES ARE CENTRAL TO THIS CAPABILITY.

THESE MOTORS DELIVER HIGH TORQUE, EXCEPTIONAL SPEED, AND REMARKABLE STABILITY, ENSURING LONG-TERM ACCURACY AND ENHANCING THE MACHINE'S OPERATIONAL LIFESPAN.





AUTOMATIC LUBRICATION

SAY GOODBYE TO MANUAL GREASING.

THE PROGRAMMABLE AUTOMATIC LUBRICATION SYSTEM OILS THE RAILS AT SET TIMES, ENSURING BUTTERY-SMOOTH MOTION AND PROTECTING YOUR MACHINE, ALL WHILE SAVING YOU VALUABLE TIME AND RESOURCES.

PARTS

SQUARE LINEAR GUIDES

FOR PRECISE MOVEMENT, THE X AND Y AXES USE 20mm SQUARE LINEAR GUIDES.

WHILE THE Z-AXIS IS EQUIPPED WITH A TBI BALL SCREW FROM TAIWAN, ENSURING HIGHLY ACCURATE CUTTING.



LEVELING FOOT

ENSURE STABLE OPERATION AND PROTECT YOUR MACHINE.

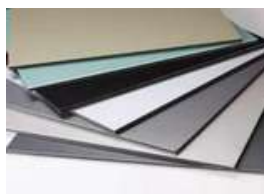
THE ADJUSTABLE BASES ON ALL SUPPORT LEGS ALLOW FOR PERFECT LEVELING ON ANY FLOOR, WHILE THE BUILT-IN RUBBER PADS PROVIDE RELIABLE PROTECTION AGAINST STATIC ELECTRICITY.

Technical Parameters

Model	HT-R1 Q
Working Bed Size	600*900mm
Working Size	600*900*80mm
Packing Size	153*105*115cm (1.85m³)
Packing Weight	250KGS
Working Voltage	Single Phase AC 220V 50Hz
Control System	MDR CNC Router Control Software
Input G Code Format	.nc, .tap, .gcode, .cnc, .txt
Driver	Lead Shine
Cabinet	Independent Electrical Control Cabinet
Safety (Available Options)	Dual-Side Safety Radar Protection System
Spindle	2.2 kW Water-Cooled Spindle
Guide	20mm Square Linear Guides
Control System	NV 103A controlsystem+Wireless handle dsp
Z Axis Tool Setting	Floating Tool Setting
Frequency System	3.7 kW Frequency Converter
Motor System	Stepper Motor
Gear Racks	Precision (Module 1.25, Ground on three sides)
Lubrication System	Automatic Lubrication System Oils
Working Table	1x2.2 KW Vacuum table
Applicable Material	PVC, Wood, MDF, Acrylic, Polycarbonate, ACP Aluminum



PVC



ACP



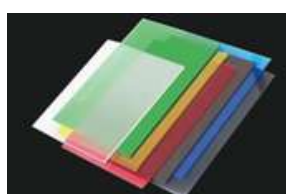
MDF

ACRYLIC

POLYCARBONATE

WOOD

ALUMINUM



ABOUT US

BUILD . TO LEAD .



Based in Weifang, Shandong, our modern manufacturing base covers over 12,000 m² and integrates research, development, production, and testing in one facility — ensuring stability, efficiency, and quality at every stage.

Hightech provides professional installation, training, and lifetime technical support. Our responsive service team and spare-parts centers ensure fast solutions and long-term reliability for every customer.



Equipped with advanced CNC machining centers, laser cutting systems, precision welding equipment, and intelligent assembly lines, Hightech continuously upgrades its technology to meet global industrial standards.

Driven by passion and professionalism, our international team of engineers, designers, and sales specialists works together to deliver innovative machines and trusted partnerships worldwide under the Hightech brand.





CONTACT US



USA, Hightech Industry INC USA



United Kingdom, Hightech
Signage Solutions LTD



Iran, Hightech Industry
operated by Aluone



India, Mehta Hightech
Industries L.L.P



Dubai, Hightech Blue LLC



Canada, Hightech Industry Canada



Mexico, Hightech Industry
operatedby Imprime iya



Brazil, Hightech Industry
operated by Banner Jet



IRAQ, BAGHDAD, Hightech Industry
operated by AL Sabagh



Indonesia, Hightech operated by
PT Digital Prima Imaging



NO. 6188 WEICHANG ROAD, WEICHENG DISTRICT, WEIFANG CITY, SHANDONG PROVINCE, CHINA



INFO@HTINDUSTRYCO.COM



WWW.HTINDUSTRYCO.COM



+86 156 2166 0575 / +86 156 2166 0576