

PRODUCT

DATA SHEET



Bending
Cutting
Welding
Marking

2025-2026

HIGHTECH INDUSTRY GROUP

BUILD . TO LEAD .

HT R3

CNC ROUTER ENGRAVING MACHINE

Q-SERIES



Sturdy Structure
Industrial-grade
welded steel base for
high stability;
precision-machined
XY-axis guide rails for
durability and
accuracy.

High-Speed Drive
System, High-Torque
Spindle , 3.2 kW
water-cooled spindle
ensures precision even
at high speeds.

Grid-Flow Vacuum
Bed with dual 2×2.2
kW pumps for strong
holding, Vacuum
table design,
maintenance-free,
compatible with all
materials.



MDRCNC SOFTWARE

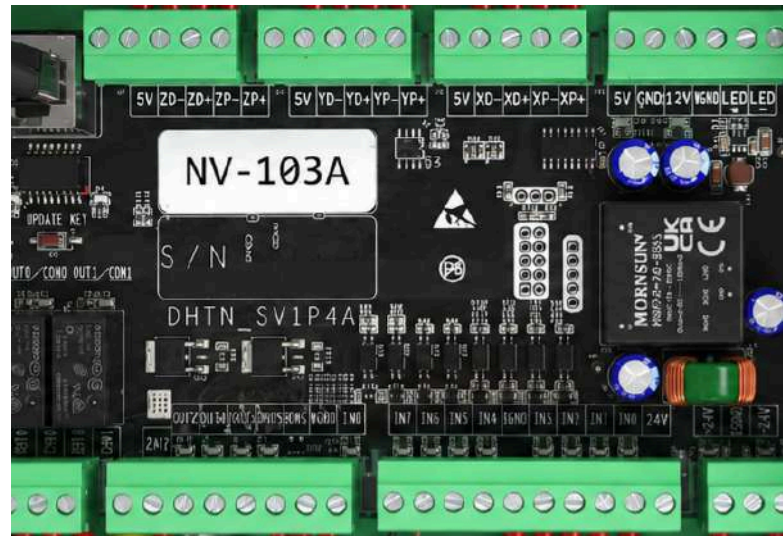
CNC MDR SOFTWARE IS USER-FRIENDLY, FEATURING A STRAIGHTFORWARD INTERFACE AND CLEARLY VISIBLE FUNCTION BUTTONS FOR IMMEDIATE PRODUCTIVITY.

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

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

3.2 KW WATER-COOLED SPINDLE

FOR UNMATCHED PRECISION, THE MACHINE FEATURES A 3.2 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

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.



2×2.2 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.

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.



4-8 ZONE VACUUM CONTROL SYSTEM

THIS MULTI-ZONE VACUUM CONTROL SYSTEM ALLOWS INDEPENDENT OPERATION OF 4 TO 8 VACUUM AREAS THROUGH DEDICATED CONTROL VALVES. EACH ZONE CAN BE TURNED ON OR OFF INDIVIDUALLY, OPTIMIZING SUCTION EFFICIENCY, REDUCING ENERGY LOSS, AND IMPROVING MATERIAL HOLDING PERFORMANCE.





FREQUENCY SYSTEM

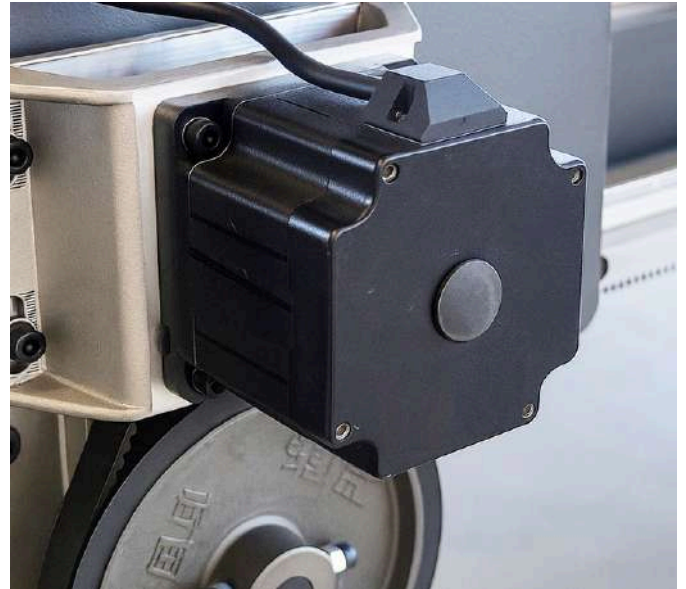
EXPERIENCE UNWAVERING STABILITY. A MILITARY-GRADE FILTERING SYSTEM SHIELDS OUR 3.0 KW FREQUENCY CONVERTER.

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

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.



PARTS



PRECISION GEAR RACKS

EXPERIENCE REMARKABLY SMOOTH HIGH-SPEED PERFORMANCE.

THIS IS ACHIEVED BY PRECISION GEAR RACKS (MODULE 1.25, GROUND ON THREE SIDES) DRIVING ALL THREE AXES, WHICH ELIMINATE VIBRATION FOR STABLE OPERATION.



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 2.0 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.

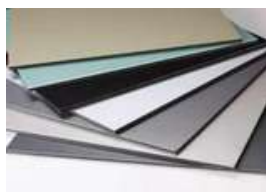
THE ADJUSTABLE BASES ON ALL SUPPORT LEGS ALLOW FOR PERFECT LEVELING ON ANY FLOOR, WHILE THE BUILT-IN RUBBER PADS PROVIDE RELIABLE PROTECTION AGAINST STATIC ELECTRICITY.

Technical Parameters

Model	HT-R3 Q
Working Bed Size	1300*2500/1500*3000
Feeding Height	200mm
Packing Size	3530*2210*1720mm/3650*2250*1860
Packing Weight	860KG/1325KG
Working Voltage	Single Phase AC 220V 50Hz / 110V 60Hz
Input G Code Format	.nc, .tap, .gcode, .cnc, .txt
Driver	Leadshine Micro-step Drive
Cabinet	Inside Electrical Control Cabinet
Safety	Dual-Side Safety Radar Protection System
Spindle	3.2 kW Water-Cooled Spindle
Guide	2.0 Square Linear Guides
Control System	NV-103A controlsystem+Wireless Controller
Z Axis Tool Setting	Automatic Tool Setter
Frequency System	3.0 kW Frequency Converter
Motor System	Leadshine Micro-stepping Motor
Gear Racks	Module 1.25
Lubrication System	Automatic Lubrication System Oils
Working Table	Vacuum table
Applicable Material	PVC, Wood, MDF, Acrylic, Polycarbonate, ACP Aluminum



PVC



ACP



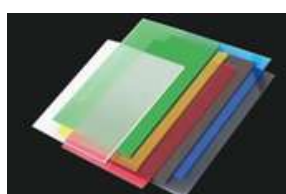
MDF

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

 Canada, Hightech Industry Canada


 United Kingdom, Hightech Signage Solutions LTD

 Mexico, Hightech Industry operated by Imprime iya

 Iran, Hightech Industry operated by Aluone

 Brazil, Hightech Industry operated by Banner Jet

 India, Mehta Hightech Industries L.L.P

 IRAQ, BAGHDAD, Hightech Industry operated by AL Sabagh

 Dubai, Hightech Blue LLC

 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