

## T7 ATC-1325 Technical Proposal



**Actual Machine Photos**



## ● About us

### Hangzhou Joyhigh Intelligent Equipment Co., Ltd.

Founded in 2010 and headquartered in Hangzhou, China, we specialize in designing and manufacturing premium CNC equipment for global markets. Our comprehensive product range includes:

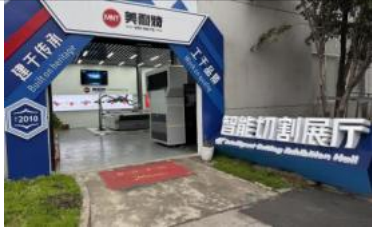
- High-Speed Vision-Guided Router Series
- High-Precision Machining Centers
- Multi-Functional Intelligent Cutting Systems
- Fiber Laser Cutting Machines
- CO<sub>2</sub> Laser Cutting Solutions

### Manufacturing Excellence

Operating from an **5,000 m<sup>2</sup> facility** in Yuhang Liangzhu, our vertically integrated production features:

- Sheet Metal Fabrication Workshop
- Precision Assembly Center
- Dedicated R&D Departments for:
  - ◆ Software Development
  - ◆ Mechanical Engineering
  - ◆ Machine Tool Processing

Supported by **35+ skilled professionals**, we maintain an annual production capacity valued at **¥40 million** with streamlined manufacturing processes refined over a decade.

|                                                                                     |                                                                                     |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |
| Factory                                                                             | Showroom                                                                            | Future factory                                                                        |
|  |  |  |
| Precision testing instruments                                                       | Production room                                                                     | Warehouse                                                                             |



## ● Technical Parameters (standard machine)

| No. | Content                                  | Specification             |                                 | Notes   |
|-----|------------------------------------------|---------------------------|---------------------------------|---------|
| 1   | Cutting Area                             | X-axis                    | 1,300mm                         | /       |
|     |                                          | Y-axis                    | 2,500mm                         | /       |
|     |                                          | Z-axis                    | 100mm                           | /       |
| 2   | Machine Bed Indicators                   | Positioning accuracy      | 0.05mm/300mm                    | /       |
|     |                                          | Positioning repeatability | 0.05mm/300mm                    | /       |
|     |                                          | Maximum speed             | 80m/min                         | /       |
|     |                                          | Maximum processing speed  | 35m/min                         | /       |
|     |                                          | N.W.                      | About 1000kg                    | /       |
|     |                                          | Power voltage             | AC380V/50Hz/3Ph                 | /       |
| 3   | Worktable                                | Sectioned panel workable  | 4-zone vacuum hold-down surface | /       |
|     |                                          | Load weight               | 500kg                           | /       |
| 4   | CNC System                               | MNT                       | Transferred by cable            | /       |
| 5   | ATC                                      | Linear-type               | 9 stations                      | /       |
| 6   | Drive System                             | X-axis                    | Leadshine servo drive           | /       |
|     |                                          | Y-axis                    | Leadshine servo drive           | /       |
|     |                                          | Z-axis                    | Leadshine servo drive           | /       |
| 7   | Motorized Spindle (Frequency Conversion) | Spindle                   | Water cooling 5000              | S&A     |
|     |                                          | Speed                     | 40,000RPM                       | /       |
|     |                                          | Voltage                   | 4kw                             | /       |
|     |                                          | Dynamic Balance Grade     | G2.5                            | /       |
|     |                                          | Frequency Converter       | MNT                             | /       |
| 8   | Guide Rail                               | X-axis                    | Square guide rail (25)          | LAPPING |
|     |                                          | Y-axis                    | Square guide rail (25)          | LAPPING |
|     |                                          | Z-axis                    | Square guide rail               | LAPPING |
| 9   | Transmission                             | X-axis                    | Screw rack                      | LAPPING |
|     |                                          | Y-axis                    | Screw rack                      | LAPPING |
|     |                                          | Z-axis                    | Ball screw                      | TBI     |
| 10  | Single Edge Cutter                       | Ø3.175, Ø4, Ø6            | /                               | /       |
| 11  | Air Pump                                 | 250m³/H                   | 1 pcs                           | 7.5kw   |

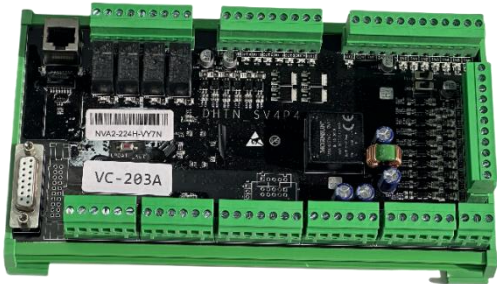
## ● Configurations

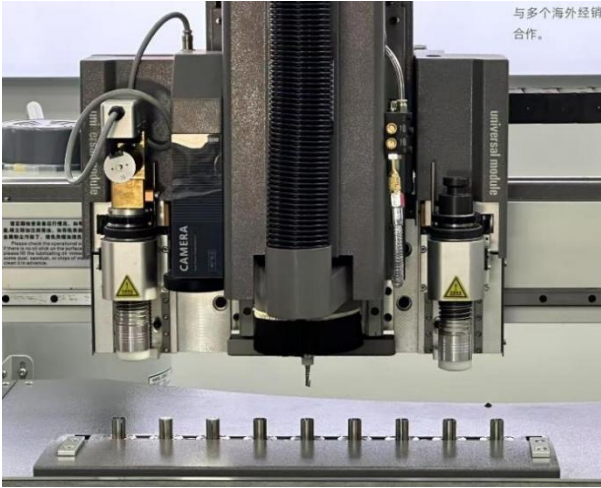
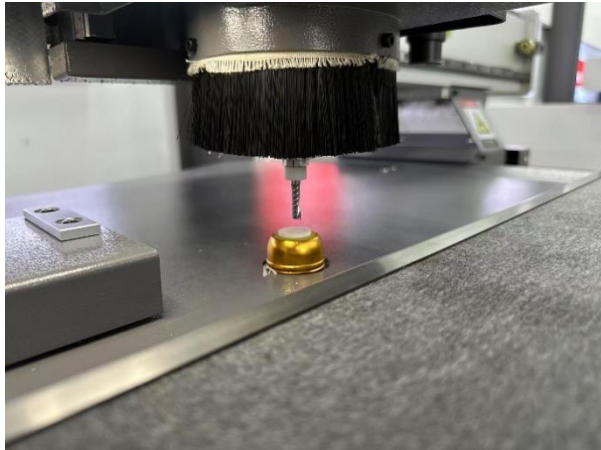
|                  | Items                          | √/O(option) | Notes                                                  |
|------------------|--------------------------------|-------------|--------------------------------------------------------|
| <b>Machine</b>   | Servo motor & drive            | √           | Leadshine                                              |
|                  | Guide rail                     | √           | LAPPING                                                |
|                  | Rack & pinion transmission     | √           | /                                                      |
|                  | Ball screw                     | √           | /                                                      |
|                  | Electrical circuitry           | √           | /                                                      |
|                  | Machine frame                  | √           | inline steel-structure bed,<br>aluminum gantry         |
|                  | Felt platform                  | √           | /                                                      |
|                  | Auto-lubrication               | √           | /                                                      |
|                  | Camera                         | √           | /                                                      |
|                  | Two universal modules          | √           | EOT & UCT                                              |
|                  | Auto-alignment                 | √           | /                                                      |
|                  | Safety device (anti-collision) | O           | /                                                      |
|                  | Emergency bottom               | √           | /                                                      |
|                  | Frequency converter            | √           | /                                                      |
|                  | ATC                            | √           | 9 stations                                             |
| <b>Operation</b> | Software                       | √           | MNT                                                    |
|                  | Auto-typesetting software      | O           | MNT                                                    |
|                  | Computer                       | O           | /                                                      |
| <b>Parts</b>     | Air pump                       | √           | 7.5kw                                                  |
|                  | Power transformer              | O           | /                                                      |
|                  | Dust collection                | √           | Collector + holder + Pipe                              |
|                  | Chiller                        | √           | S&A 3000                                               |
| <b>Tools</b>     | Electrical oscillating tool    | √           | /                                                      |
|                  | Universal cutting tool         | √           | /                                                      |
|                  | Spindle                        | √           | 4kW                                                    |
|                  | Pneumatic oscillating tool     | O           | /                                                      |
|                  | Creasing tool                  | O           | /                                                      |
|                  | V-cut tool                     | O           | /                                                      |
|                  | kiss-cut tool                  | O           | /                                                      |
|                  | Rotary tool                    | O           | /                                                      |
| <b>Others</b>    | Warranty                       | √           | 1 year for machine,<br>software update for<br>lifetime |
|                  | Training                       | √           | online & on site                                       |
|                  | After-sales service            | √           | online & on site                                       |



## ● Details

| ITEM                     | PICTURE                                                                              | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aviation Aluminum Gantry |    | <p>1. Adopts high-quality aviation aluminum material with integral extrusion molding process.</p> <p>2. The finished crossbeam features high strength and excellent mechanical properties.</p> <p>3. Extruded aluminum comes with low internal stress, resisting deformation during long-term operation.</p> <p>4. It delivers high precision, light weight and superior dynamic response.</p> |
| Air Pump                 |    | <p>7.5kW aluminum turbo vacuum pump delivers stable negative pressure for the vacuum adsorption table of CNC engraving machines, ensuring machining accuracy, improving clamping efficiency, with wide compatibility, low energy consumption and maintenance-free operation.</p>                                                                                                               |
| Guide Rail               |  | <p>High-precision ground guide rails deliver high-precision smooth transmission for CNC engraving machines, ensuring positioning and machining accuracy, with wear resistance, low friction, stable operation and long service life.</p>                                                                                                                                                       |

|                |                                                                                     |                                                                                                                                                                                                                                                                                                                     |
|----------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reducer        |    | <p>Low energy consumption, fast acceleration, superior performance, reducer efficiency up to 95%; minimal vibration, noise-free operation, maintenance-free.</p>                                                                                                                                                    |
| Servo System   |   | <p><b>Control Capabilities:</b><br/>Pulse/Bus network control functions enable easy and rapid installation; robust variable load control capability combined with practical motion control functionality delivers efficient, smooth equipment operation, optimizing production efficiency and output value.</p>     |
| Chiller        |  | <ol style="list-style-type: none"> <li>1. S&amp;A CW-3000 chiller provides efficient temperature control and heat dissipation.</li> <li>2. It suppresses thermal deformation to ensure high-precision machining.</li> <li>3. Supports long-term continuous operation and extends component service life.</li> </ol> |
| Control System |  | <p><b>High-End High-Speed Motion Control System</b><br/>With proprietary intellectual property technology, it delivers precise cutting head movement and smooth, seamless curve motion.</p>                                                                                                                         |

|                                                  |                                                                                     |                                                                                                                                                                                                                           |
|--------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>ATC System</p>                                |   | <p><b>Cutting Tools:</b><br/>Features dozens of interchangeable cutting heads with an extensive range of blade options. Suitable cutting heads and blades can be selected based on specific industries and materials.</p> |
| <p>Tools<br/>Calibrating<br/>Device</p>          |  | <p>Users should set material thickness, then directly operate the machine for carving milling and cutting <b>without manual tools calibrating</b>, which has been completed automatically by software.</p>                |
| <p>Strong<br/>Vacuum<br/>Cleaning<br/>System</p> |  | <p>Due to unique design of vacuum cover and suctionpipe, chips can be <b>removed easily</b> only by an ordinary vacuum cleaner with small power, which saves both space and energy.</p>                                   |



Vacuum  
Adsorption  
Platform



Designed with adsorption tabletop piping system, partition setting and honeycomb tabletop covered with **imported felt**, it has advantages of perfect flatness, good permeability and strong suction, which effectively prevents workpieces from moving in process of cutting.

Independent  
Computer  
Operation  
(Optional)



Integrated Emergency Stop Button & Mouse-Operated HMI;  
User-friendly interface enables rapid parameter setup for cutting operations;  
Provides dedicated PC installation space.



## ● Optional Tools and Applications

| Tools                                                               | Applications                                                                                                                                                                                                          |
|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ultra-frequency electric oscillating tool</b><br>(standard)      | <p>All kinds of corrugated, cardboard, KT board, gray board, composite materials, etc</p>                                           |
| <b>Non-oscillating tool</b><br>(standard)                           | <p>Flexible materials less than 3mm thickness.</p>                                                                                 |
| <b>Milling tool</b><br>(standard)                                   | <p>Acrylic, aluminum composite panel and MDF, etc within 20mm thickness.</p>                                                      |
| <b>Ultra-frequency pneumatic oscillating tool POT</b><br>(optional) | <p>various soft and composite materials such as sponge foam, multi-layer leather, non-woven fabric, rubber and KT board,etc.</p>  |

|                                             |                                                                                                                                                                                                              |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Wheel cut tool</b><br>(optional)         | <p>Flexible materials such as UV fabric, carbon fabric, glass fabric and textiles, etc.</p>                                |
| <b>Multi-angle V-Cut tool</b><br>(optional) | <p>Can make V-cut angles of 15°, 22.5°, 30° and 45° for cardboard less than 20mm thickness.</p>                            |
| <b>Creasing tool</b><br>(optional)          | <p>Used in packaging industry for making cartons and boxes of corrugated board, cardboard and pp hollow board, etc.</p>  |
| <b>Kiss-cut tool</b><br>(optional)          | <p>All kinds of stickers, vinyl, engineering reflective film, etc.</p>                                                   |