

# HEAD-4-2m Industrial 5-Axis CNC Machining Center

Full English Product Datasheet (PDF-ready)

## 1. Product Overview

### HEAD-4-2m Industrial 5-Axis CNC Machining Center

- **Model:** HEAD-4-2m
- **Type:** 5-axis gantry CNC machining center
- **Application:** High-precision machining for large-scale woodworking, composite materials, foam, molds, aerospace patterns, non-metallic materials
- **Structure:** Heavy-duty gantry frame, 4-head independent 5-axis machining system
- **Certification:** CE certified
- **Warranty:** 12 months / 1 year

## 2. Key Features (3 Core Selling Points)

- **4-Head 5-Axis Simultaneous Machining**

Four independent 5-axis milling heads work synchronously, enabling multi-station, high-efficiency processing of complex 3D contours.

- **Large 2m Working Area**

Extra-large 2000mm+ working table, ideal for oversized workpieces and batch production.

- **High Precision & Industrial Stability**

Heavy-duty construction, imported linear guides & ball screws, positioning accuracy  $\pm 0.01\text{mm}$ , stable long-term operation.

## 3. Technical Specifications

### 3.1 Machine Dimensions

- **X-axis travel:** 2000mm (2m)
- **Y-axis travel:** 4000mm (customizable)

- **Z-axis travel:** 300–500mm
- **Table size:** 2000×4000mm
- **Machine size:** ~4500×2200×3700mm
- **Net weight:** ~8500–11,000kg

### 3.2 Performance

- **Spindle power:** 5.5–9kW / head
- **Spindle speed:** 0–24,000rpm
- **Rapid speed:** X/Y 50m/min; Z 20m/min
- **Positioning accuracy:** ±0.01mm
- **Repeat accuracy:** ±0.005mm
- **Tool holder:** ISO30 / HSK63
- **Tool change:** Automatic / manual

### 3.3 Control System

- **Controller:** Syntec / FANUC / Siemens (optional)
- **Axis control:** 5-axis full interpolation
- **Display:** 10.4–15" LCD
- **Supported formats:** G-code, UG, Mastercam, ArtCAM

### 3.4 Power & Environment

- **Voltage:** 380V/3P/50Hz (customizable)
- **Total power:** ~30–45kW
- **Air pressure:** 0.6–0.8MPa
- **Working temperature:** 5–40°C

## 4. Material & Application Range

- **Suitable materials:**
  - Wood (solid wood, plywood, MDF)
  - Foam (EPS, EPP, polyurethane)
  - Composites (FRP, carbon fiber, phenolic board)
  - Plastic, acrylic, resin, non-metallic soft metals

- **Main industries:**
  - Mold making (foam molds, wood molds)
  - Aerospace (aircraft pattern, model)
  - Automotive (interior trim, prototype)
  - Musical instrument, sculpture, 3D curved parts
  - Large furniture, woodworking components

## 5. Standard Configuration

- Heavy-duty gantry steel structure
- 4 sets 5-axis independent milling heads
- Imported linear guide rails & ball screws
- Servo motors & drivers
- Industrial CNC controller
- Automatic lubrication system
- Dust extraction interface
- Emergency stop & safety protection
- Water cooling / air cooling spindle
- Tool set (standard tools)

## 6. Optional Equipment

- ATC (automatic tool changer)
- Vacuum adsorption table
- Dust collector system
- Oil mist collector
- 6th axis extension
- Rotary table
- Water cooling system
- Remote monitoring module

## 7. Advantages Summary

- **High efficiency:** 4 heads = 4× productivity

- **Flexible:** 5-axis for complex 3D surfaces
- **Stable:** Heavy frame for industrial 24h running
- **Precise:** Micron-level machining accuracy
- **Easy operation:** User-friendly CNC system
- **Wide application:** For large non-metallic & composite materials

(注：文档部分内容可能由 AI 生成)