Advanced Multi-Axis Machining Centers for Custom CNC Metal Machining Parts with Real-Time Monitoring and Performance

Our Product Introduction

Basic Information

- Place of Origin: Shenzhen China
- Brand Name: Xianheng
- Certification: ISO9001:2015
- Model Number: CNC-XG-084
- Minimum Order Quantity: 1 pcs
- Price: USD $0.1-$1.99
- Packaging Details: Carton, As Customers'packaging requirements
- Delivery Time: Samples 7-10 days, Mass production 20-25 days
- Payment Terms: T/T, Western Union, MoneyGram
- Supply Ability: 10000 pcs per week

Product Specification

- Application: Automotive, Aerospace, Medical, Etc.
- Drawing Format: CAD, PDF, JPG, Etc.
- Inspection: 100% Inspection Before Shipment
- Lead Time: 7-15 Days
- MOQ: 1 Piece
- Material: Metal
- Package: Carton Box, Wooden Box, Etc.
- Payment Term: T/T, L/C, PayPal, Etc.
- Process: CNC Machining
- Size: Customized
- Surface Treatment: Polishing, Sandblasting, Anodizing, Etc.
- Tolerance: ±0.005mm
- Transport: By Air, By Sea, By Express, Etc.

More Images

Our Product Introduction

for more products please visit us on cnc-metalmachining.com

Product Description

What We Can Provide

Advanced Multi-Axis Machining Centers for Custom CNC Metal Machining Parts with Real-Time Monitoring and Performance

Description Of Advanced Multi-Axis Machining Centers for Custom CNC Metal Machining Parts with Real-Time Monitoring and Performance

Advanced multi-axis machining centers represent the pinnacle of precision engineering, integrating cutting-edge CNC (Computer Numerical Control) technology with multi-axis motion capabilities (typically 4-axis, 5-axis, or more) to produce complex metal components with unparalleled accuracy and efficiency. These systems are equipped with real-time monitoring and performance optimization features, enabling manufacturers to achieve superior quality, reduce lead times, and enhance operational transparency.

Material Of Advanced Multi-Axis Machining Centers for Custom CNC Metal Machining Parts with Real-Time Monitoring and Performance

Processing	CNC Turning, CNC Milling, Laser Cutting, Bending, Spinning, Wire Cutting, Stamping, Electric Discharge Machining (EDM), Injection Molding
Materials	Aluminum: 2000 series, 6000 series, 7075, 5052, etc.
	Stainless steel: SUS303, SUS304, SS316, SS316L, 17-4PH, etc.
	Steel: 1214L/1215/1045/4140/SCM440/40CrMo, etc.
	Brass: 260, C360, H59, H60, H62, H63, H65, H68, H70, Bronze, Copper
	Titanium: Grade F1-F5
	Plastic: Acetal/POM/PA/Nylon/PC/PMMA/PVC/PU/Acrylic/ABS/PTFE/PEEK etc.
Surface Treatment	Anodized, Bead Blasted, Silk Screen, PVD Plating, Zinc/Nickel/Chrome/Titanium Plating, Brushing, Painting, Powder Coated, Passivation, Electrophoresis, Electro Polishing, Knurl, Laser/Etch/Engrave etc.
Tolerance	±0.002 ~ ±0.005mm
Surface Roughness	Min Ra 0.1~3.2

Application Of Advanced Multi-Axis Machining Centers for Custom CNC Metal Machining Parts with Real-Time Monitoring and Performance

1. Computers and Laptops: Skived heatsinks are widely used in computer processors, graphics cards, and other internal components to dissipate heat generated during intense computing tasks. They help prevent overheating and maintain optimal performance.

2. LED Lighting: LED lights generate heat, and efficient cooling is essential to maintain their longevity and brightness. Skived heatsinks are used in various LED lighting applications, including residential, commercial, and automotive lighting systems.

3. Audio Amplifiers: High-power audio amplifiers generate significant heat during operation. Skived heatsinks are employed to cool down the amplifier circuitry, ensuring stable performance and minimizing distortion.

Features Of Advanced Multi-Axis Machining Centers for Custom CNC Metal Machining Parts with Real-Time Monitoring and Performance

1. Efficient Heat Dissipation: Aluminum is a highly efficient conductor of heat, and skived heatsinks are designed to maximize the surface area for heat dissipation. The skived fin structure enhances the heatsink's ability to transfer heat away from the electronic components.

2. Thin and Lightweight: Skived heatsinks are manufactured using a precision machining process that allows for the creation of thin and lightweight fins. This design makes them suitable for applications where space and weight are critical considerations.

3. Customizable Fin Geometry: The skiving process allows for the creation of intricate and customizable fin geometries, which can be tailored to specific thermal requirements and airflow conditions. This flexibility ensures optimal performance for various applications.

Why Choose Us

Advantages

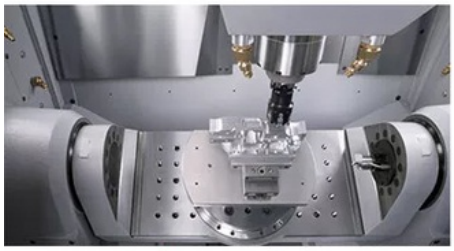
1. Unmatched Precision for Complex Parts
Why it matters: Traditional 3-axis machines struggle with undercuts, deep cavities, and contoured surfaces. Multi-axis systems

rotate the workpiece or tool, enabling single-setup machining of complex parts with tight tolerances (±0.005 mm or better).
Example: A 5-axis center can machine a turbine blade's twisted profile in one pass, avoiding errors from multiple repositioning.

2. Real-Time Monitoring Boosts Efficiency & Quality
Why it matters: IoT-enabled sensors provide live feedback on spindle health, tool wear, and thermal stability, allowing operators to intervene before defects occur.
Example: A sensor detects excessive vibration during a deep-hole drilling operation, triggering an automatic feed rate adjustment to prevent tool breakage.
Outcome: Reduces scrap rates by up to 30% and extends tool life by 20–40%.

3. Faster Cycle Times & Higher Throughput
Why it matters: High-speed machining (HSM) and optimized tool paths slash cycle times by 50–70% compared to conventional methods.
Example: A 5-axis machine can rough and finish a mold cavity in 4 hours vs. 12 hours on a 3-axis system.
Outcome: Higher productivity and faster delivery for high-mix, low-volume production.

4. Cost Savings Through Automation & Reduced Waste
Why it matters: Automated tool changing, pallet systems, and real-time monitoring minimize labor costs and material waste.
Example: A multi-axis center with a 120-tool magazine can run unattended for 24+ hours, reducing labor costs by 40%.
Outcome: Lower per-part costs and improved ROI for high-value components.



High Precision

5-Axis CNC & Imported machines with accuracy ±0.02-0.10mm

Fast Lead Time

Multipe CNC machines, skillful workers, guarantee fast lead time

Strictly Confidential

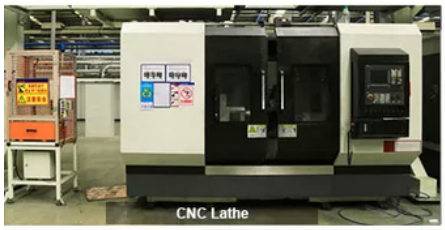
We will protect the customers'design and the customer can request a confidentiality agreement

Quality Inspection

We have a strict quality inspection process to ensure the quality of our products

Factory Show

Factory Equipment



FAQ

Q1: Where can I get product & price information?
A1:Send us inquiry e-mail, we will contact you as we receive your mail.

Q2: How long can I get the sample?
A2:Depends on your specific items, within 3-7 days is required generally.

Q3: What kinds of information you need for quote?
A3:Kindly please provide the product drawing in PDF, and will be better you can provide in STEP or IGS.

Q4: What are the payment terms?
A4: We accept 50% as payment deposit, when the goods is done, we take photos for your check and you then pay the balance.

Q5: Are you a trading company or factory?
A5:We are direct factory with 10 experienced engineers and more than 650 employees as well approximate 2,000 square ft. workshop area.

Q6: What shall we do if we do not have drawings?
A6:Please send your sample to our factory, then we can copy or provide you better solutions. Please send us pictures or drafts with dimensions (Length, Hight, Width), CAD or 3D file will be made for you if placed order.

Shenzhen Xianheng Technology Co.,Ltd

0086-13682614486 shawn@xianheng-tech.com cnc-metalmachining.com

Room 8-1409, Xingji jiayuan building 8-9#, HongXing community, Songgang street, Bao'an District, Shenzhen City China