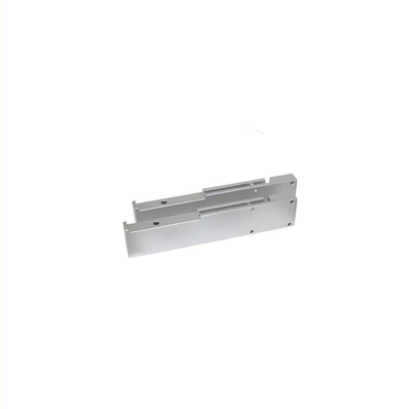
Custom CNC Milling Parts for Automotive and Electronics The Ultimate Precision Manufacturing Solution for Complex Components

Our Product Introduction

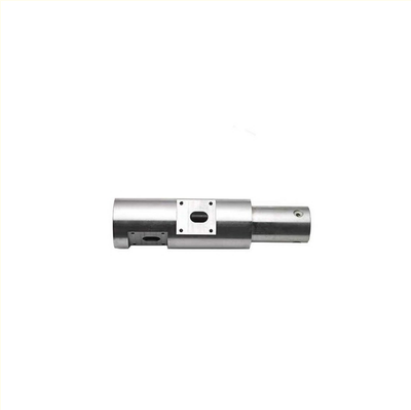
Basic Information

- Place of Origin: Shenzhen China
- Brand Name: Xianheng
- Certification: ISO9001:2015
- Model Number: ML-CNC-073
- 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

- Cnc Machining Or Not: CNC Machining
- Type: CNC Milling
- Material Capabilities: Copper, Aluminum, Bronze, Stainless Steel, Brass
- Surface Treatment: Anodized, Anodizing, Anodize/natural, Sandblast, Silk-screen
- Service: OEM/ODM, OEM ODM Metal Stamping, Customized OEM OEM ODM, OEM Service
- Tolerance: 0.01mm, 0.05 Mm, +/-0.005, 0.003-0.05mm
- Application: Machinery, Automotive, Laptop, Industrial Equipment, Engineering
- Color: As Per Customers' Requirement



More Images

Our Product Introduction

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

Product Description

What We Can Provide

Custom CNC Milling Parts for Automotive and Electronics The Ultimate Precision Manufacturing Solution for Complex Components

Description of Custom CNC Milling Parts for Automotive and Electronics The Ultimate Precision Manufacturing Solution for Complex Components

In the fast-paced automotive and electronics industries, the demand for high-precision, complex components with tight tolerances and superior surface finishes is ever-increasing. Custom CNC (Computer Numerical Control) milling has emerged as the gold standard for manufacturing these intricate parts, offering unmatched accuracy, efficiency, and versatility. By leveraging advanced multi-axis machining, high-speed cutting tools, and real-time monitoring, CNC milling transforms raw materials into mission-critical automotive components (e.g., engine blocks, transmission gears, ECU housings) and miniaturized electronic parts (e.g., connectors, heat sinks, sensor brackets) with sub-micron precision.

Specification of Custom CNC Milling Parts for Automotive and Electronics The Ultimate Precision Manufacturing Solution for Complex Components

Product Name	High Quality Copper Steel Stainless Brass Material CNC Milling Parts Services
Material	Aluminum, Stainless Steel, Copper, Brass, Titanium, Galvinized, Nylon, ABS, POM etc.
Surface Treatment	Zinc Plating, Painting, Mirror Polished, Brush Polished, Powder Coating, Electroplating, Anodizing, Sandblasting etc.
Processing	Laser Cutting, Precision Stamping, Bending, CNC Punching, Threading, Riveting, Drilling, Welding, Painting, Assembly etc.
Drawing Format	3D/CAD/DWG/IGS/STEP/PDF/JPG
OEM Service	Accept

Quality Control

1. Checking the raw material after they reach our factory------- Incoming quality control (IQC)
2. Checking the details before the production line operated
3. Have full inspection and routing inspection during mass production---In process quality control(IPQC)
4. Checking the goods after they are finished---- Final quality control(FQC)
5. Checking the goods after they are finished-----Outgoing quality control(OQC)

Application Of Custom CNC Milling Parts for Automotive and Electronics The Ultimate Precision Manufacturing Solution for Complex Components

1. Auto Components Hardware Parts Auto Parts
2. Communication Equipment
3. Industrial Equipment
4. Medical EquipmentsMechanical Parts
5. Ship Accessories
6. Electrical Equipment
7. Mechanical Equipment

Why Choose Us

Advantages

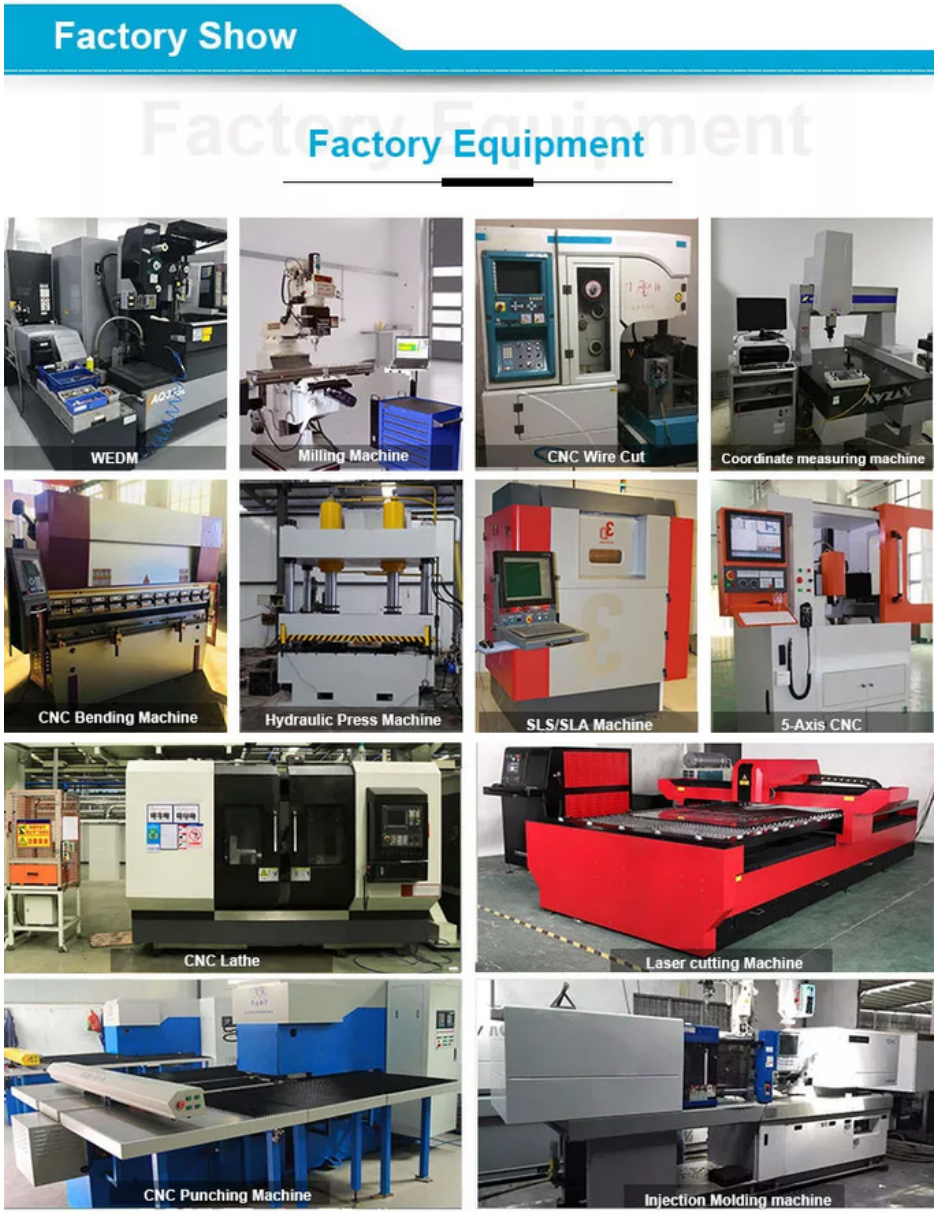
2. High-Speed Efficiency & Reduced Lead Times
CNC milling machines operate with sub-micron accuracy, ensuring parts meet extremely tight tolerances (e.g., ±0.005mm to ±0.01mm). This level of precision is critical in automotive applications like fuel injector nozzles, where even a 0.01mm deviation can affect combustion efficiency, or in electronics, where connector pins must align perfectly for reliable electrical contact.
Example: A CNC-milled automotive cylinder head achieves a surface finish of Ra 0.2–0.4µm, ensuring optimal sealing and thermal conductivity.
Example: In electronics, miniaturized RF connectors are machined to ±0.008mm tolerances, preventing signal loss in high-frequency applications.
Unlike manual machining, CNC eliminates human error, delivering consistent, repeatable results even in high-volume production.

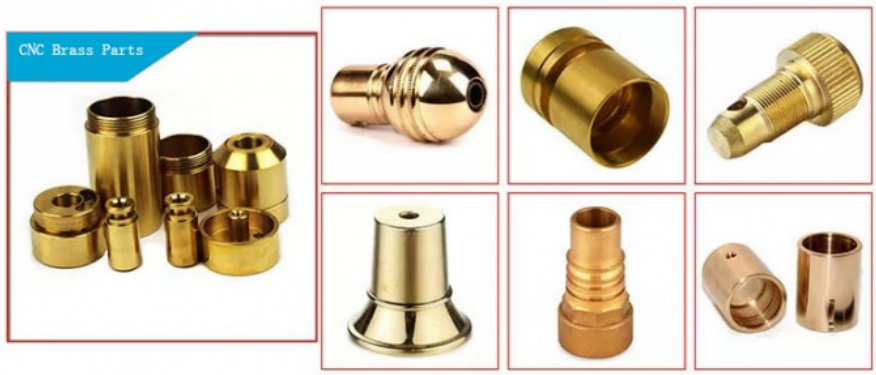
2. High-Speed Efficiency & Reduced Lead Times
Modern CNC milling machines feature high-speed spindles (10,000–40,000 RPM) and ultra-fast feed rates, slashing cycle times by up to 50% compared to conventional methods. This efficiency is further enhanced by multi-axis machining (3-axis, 5-axis, even 7-axis), which allows complex geometries to be produced in a single setup, reducing repositioning errors and secondary operations.

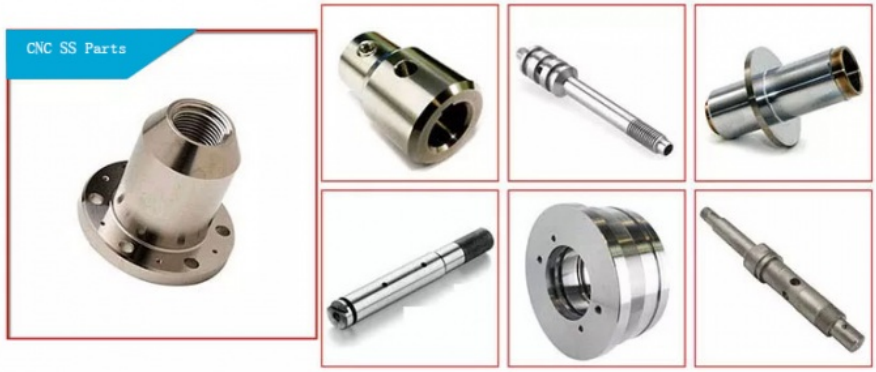
Example: A 5-axis CNC mill can produce a turbine blade for an automotive turbocharger in one clamping, eliminating the need for manual grinding or polishing.
Example: Electronic heat sinks with intricate fin structures are machined in minutes instead of hours, accelerating product development cycles.
This rapid turnaround is essential for automotive and electronics manufacturers competing in fast-moving markets.

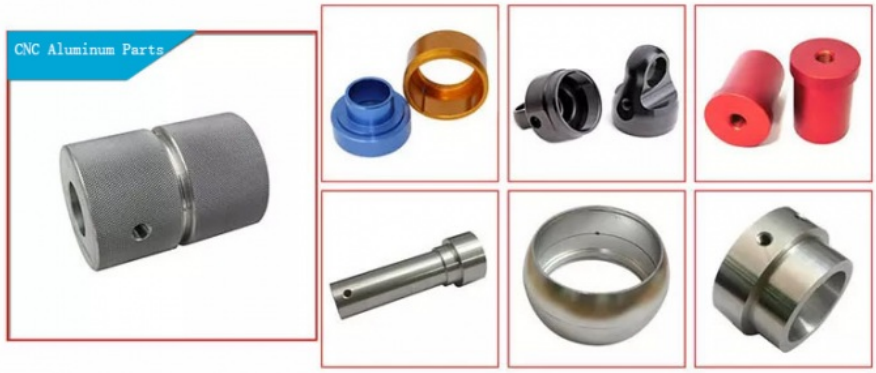
3. Design Flexibility & Rapid Prototyping
CNC milling excels in customization, allowing engineers to modify designs on-the-fly by adjusting CAD models and G-code programs. This flexibility supports rapid prototyping, enabling same-day iterations for testing new automotive components (e.g., lightweight suspension arms) or refining electronic enclosures for ergonomic fit.
Example: An automotive manufacturer can test multiple versions of a brake caliper in days, optimizing it for weight reduction and thermal performance before full-scale production.
Example: In electronics, CNC-milled prototypes of wearable device housings can be evaluated for comfort and durability before mass manufacturing.
This agility reduces development costs and accelerates time-to-market, giving companies a competitive edge.

4. Material Versatility & Superior Surface Quality
Custom CNC milling supports a wide range of materials, from soft aluminum alloys (for lightweight automotive parts) to hardened steels (for durable gears) and high-performance plastics (for insulated electronic components). Advanced cooling and lubrication systems minimize thermal distortion, ensuring dimensional stability even when machining heat-sensitive materials like titanium or PEEK.
Example: CNC-milled titanium valve springs for high-performance engines maintain consistent tension under extreme heat and pressure.
Example: Electronic connectors machined from liquid crystal polymer (LCP) exhibit excellent dimensional stability in harsh environments.









FAQ

Q: How can I customize my products ?
A: Please describe your project. Include the following information so that we can provide an accurate quote: Part Name, 3D CAD Drawing, Quantity, Material, Color, Finishing.

Q: How can I know my products going on ?
A: We will offer a detailed production schedule and send weekly reports with digital pictures and videos which show the production process.

Q: Can You sign a confidentiality greement ?
A: We can sign a confidentiality agreement according to your needs.

Q: What is your terms of payment ?
A: 30% in advance ,70% balance before shipment. Other terms negotiable.

Q: Are you a trading company or factory?
A: We are direct factory with 20 experienced engineers and more than 80 employees as well approximate 3,000 square meters workshop area.

Q: What shall we do if we do not have drawings?
A: 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, Height, Width), CAD or 3D file will be made for you if placed order.

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