



## Repeatability Versatility of High-Precision CNC Metal Machining Parts for Aluminum Stainless Steel Brass Components

Our Product Introduction

for more products please visit us on [cnc-metalmachining.com](http://cnc-metalmachining.com)

### Basic Information

- Place of Origin: Shenzhen China
- Brand Name: Xianheng
- Certification: ISO9001:2015
- Model Number: CNC-XG-074
- 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:  $\pm 0.005\text{mm}$
- Transport: By Air, By Sea, By Express, Etc.



### More Images



## Product Description

### What We Can Provide

Repeatability Versatility of High-Precision CNC Metal Machining Parts for Aluminum Stainless Steel Brass Components

#### Description Of Repeatability Versatility of High-Precision CNC Metal Machining Parts for Aluminum Stainless Steel Brass Components

CNC machines operate based on pre-programmed instructions that control the movement of cutting tools with extreme accuracy. Once the initial program is set up and optimized for a particular part design, the machine can replicate the same cutting operations time and time again. For example, in the production of aluminum brackets for an electronic device, every bracket produced will have the exact same dimensions, hole placements, and surface finishes, ensuring that they fit perfectly within the assembly. This consistency is crucial for maintaining product quality and performance, especially in industries where precision and interchangeability are essential, such as aerospace and medical device manufacturing.

#### Material Of Repeatability Versatility of High-Precision CNC Metal Machining Parts for Aluminum Stainless Steel Brass Components

|                          |   |
|--------------------------|---|
| <b>Process</b>           | CNC Turning, CNC Milling, Laser Cutting, Bending, Spinning, Wire Cutting, Stamping, Electric Discharge Machining (EDM), Injection Molding   |
| <b>Materials</b>         | 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.  |
| <b>Surface Treatment</b> | 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. |
| <b>Tolerance</b>         | ±0.002 ~ ±0.005mm   |
| <b>Surface Roughness</b> | Min Ra 0.1~3.2  |

#### Application Of Repeatability Versatility of High-Precision CNC Metal Machining Parts for Aluminum Stainless Steel Brass Components

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 Repeatability Versatility of High-Precision CNC Metal Machining Parts for Aluminum Stainless Steel Brass Components

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. Cost - Efficiency

Reduced Scrap Rates: Due to the high repeatability of CNC machining, the number of defective or out-of-tolerance parts is

minimized. This leads to a significant reduction in material waste, as less raw material is discarded during the production process. For instance, when machining stainless steel components for a large - scale industrial project, consistent part quality means that fewer parts need to be remade, saving on both material and labor costs.

**Streamlined Production:** The ability to produce identical parts repeatedly allows for more efficient production planning. Manufacturers can set up production lines with confidence, knowing that each part will meet the specifications. This reduces the need for frequent adjustments and rework, resulting in shorter lead times and lower overall production costs.

## 2. Quality Assurance

**Uniform Product Quality:** Repeatability ensures that every part produced has the same level of quality. In industries where product reliability is critical, such as the automotive and medical sectors, this consistency is invaluable. For example, in the production of aluminum engine components, uniform dimensions and surface finishes guarantee that each part will perform as expected, reducing the risk of product failures and recalls.

**Traceability and Accountability:** With repeatable production processes, it is easier to trace the manufacturing history of each part. If a quality issue arises, it can be quickly identified and addressed by reviewing the production data and the specific machine settings used for that batch of parts. This enhances accountability within the manufacturing process and helps to maintain high - quality standards.

## 3. Design Flexibility and Innovation

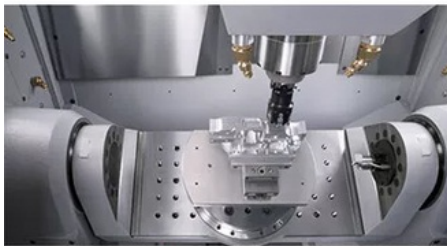
**Rapid Prototyping:** The versatility of CNC machining allows designers to quickly create prototypes of new parts from different metals. Designers can experiment with various shapes, sizes, and features without the need for expensive and time - consuming tooling changes. This accelerates the product development cycle, enabling companies to bring new products to market faster. For example, in the consumer electronics industry, designers can use CNC machining to prototype aluminum and brass cases for new devices, testing different designs for ergonomics and aesthetics.

**Customization:** Manufacturers can easily customize parts to meet the specific needs of individual customers. Whether it's a small change in dimensions, a different surface finish, or the addition of unique features, CNC machining can accommodate these requirements. This level of customization is particularly important in niche markets and for specialized applications, giving companies a competitive edge.

## 4. Supply Chain Reliability

**Stable Production:** The repeatability of CNC machining provides a stable and reliable source of parts for the supply chain. Customers can rely on consistent delivery times and part quality, which is essential for maintaining production schedules and meeting customer demand. For example, in the aerospace industry, where just - in - time delivery is critical, the ability to produce high - quality, repeatable parts ensures that aircraft assembly lines run smoothly.

**Scalability:** The versatile nature of CNC machining allows for easy scalability of production. Whether a company needs to increase production volumes to meet growing demand or reduce production for a specific product line, CNC machines can be adjusted accordingly. This flexibility helps companies to adapt to changing market conditions and maintain a competitive position in the industry.



### High Precision

**5-Axis CNC & Imported machines  
with accuracy  $\pm 0.02-0.10\text{mm}$**



### Fast Lead Time

**Multiple 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 Equipment



WEDM



Milling Machine



CNC Wire Cut



Coordinate measuring machine



CNC Bending Machine



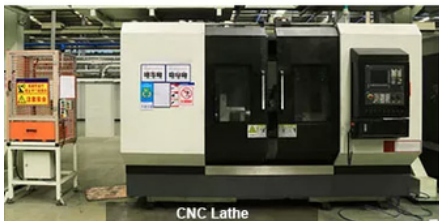
Hydraulic Press Machine



SLS/SLA Machine



5-Axis CNC



CNC Lathe



Laser cutting Machine



CNC Punching Machine



Injection Molding machine

## 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, Height, Width), CAD or 3D file will be made for you if placed order.



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